The entire works of Dr Thomas Sydenham : newly made English from the originals: wherein the history of acute and chronic diseases, and the safest and most effectual methods of treating them, are faithfully, clearly, and accurately delievered. To which are added, explanatory and practical notes, from the best medicinal writers.

Contributors

Sydenham, Thomas, 1624-1689
Swan, Angela, 1938-
Johnson, Samuel, 1709-1784

Publication/Creation

London : Printed for E. Cave, 1753.

Persistent URL

https://wellcomecollection.org/works/vvd933vz

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THE ENTIRE

WORKS

OF

Dr *Thomas Sydenham*,

Newly made *Engliſh* from the Originals:

WHEREIN THE

Hiſtory of *Acute* and *Chronic* DISEASES,

AND THE

SAFEST and moſt EFFECTUAL METHODS of treating them, are faithfully, clearly, and accurately delivered.

To which are added,

EXPLANATORY and PRACTICAL NOTES,

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With others by the TRANSLATOR:

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The THIRD EDITION, with all the NOTES inſerted in their proper Places.

By *JOHN SWAN*, M. D.

Syd'nham *a great, a mighty genius came,*
Who founded Med'cine on the nobleſt frame:
He ſtudy'd Nature thro', and Nature's laws,
Nor blindly puzzled for the peccant cauſe.
Father of phyſick HE—*Immortal Name!*
Who leaves the Grecian *but a ſecond fame.*

Sing forth, ye Muſes, *in ſublimer ſtrains,*
A new Hippocrates *in* Britain *reigns:*
With ev'ry healing plant his grave adorn,
Saviour of many millions yet unborn.

SEWEL.

LONDON: Printed for E. CAVE, at ST JOHN'S GATE.

M.DCC.LIII.

Edward Morris
Esqr.

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To Dr *SHAW.*

SIR,

AS you were pleas'd to permit me to prefix your name to the *former Edition* of this work, I hope I need make no apology for preſuming to aſcribe *this* to you; eſpecially as I have endeavour'd to render it leſs unworthy your patronage, by the conſiderable improvements it has received, by paſſing under the moſt accurate review I was capable of giving it.

I know, Sir, that no name, not even yours, would be ſufficient to ſcreen an ill performance from the cenſure it deſerves; and I know likewiſe that I ſhould immediately incur, what I moſt of all fear, your own cenſure, ſhould I allow myſelf particularly to ſpeak the many reſpectful things I cannot but think of you. I ſhall, therefore, only add, that had I been under no particular obligations to your friendſhip, I ſhould have hoped that a gentleman of the faculty, who, beſides his own valuable writings in the medical way, has labour'd ſo ſucceſsfully to oblige the world with the works of *Bacon* and *Boyle*, in a form the moſt commodious for general uſe, would naturally be inclin'd to ſmile on a tranſlation of his favourite SYDENHAM, tho' it ſhould not be ſupported by thoſe friendly prepoſſeſſions, which I am proud of telling the world I have reaſon to believe you have in favour of,

SIR,

Your moſt obliged, and

moſt obedient ſervant,

JOHN SWAN.

THE

TRANSLATOR'S PREFACE.

1. THE great character that Dr *Sydenham* has juſtly acquired, both at home and abroad, is ſo well known to thoſe who are converſant in the art of medicine, that it may ſeem unneceſſary to enlarge upon it here. We are told by the late celebrated *Boerhaave*, that none among the moderns engaged him longer, or improv'd him more than *Sydenham*, to whoſe merit he has left this atteſtation, that *He frequently perus'd him, and always with greater eagerneſs*; and aſſured his pupils, that *no phyſician, ſince the venerable* Hippocrates, *has wrote of diſeaſes with ſo much exactneſs* (a). And elſewere *he laments, that few if any of the modern writers on phyſick have attained to the perfection of the antients. I can only* (ſays he) *mention one great man,* THOMAS SYDENHAM, *the ornament of* England, *and the* Apollo *of the art, whom I never conſider but my mind preſents me with the genuine picture of an* Hippocratic *phyſician, and to whom phyſic is ſo much indebted, that all that I can ſay will fall ſhort of his merit.* (b)

2. Our author's works have been long eſteemed the beſt practical ſyſtem of phyſic extant, and as ſuch is chiefly followed at this day by the moſt eminent phyſicians in *Europe*. So great a regard has been paid to his name by his countrymen, that Dr *Pechey*'s tranſlation has paſſed through no fewer than ten editions; notwithſtanding the diſadvantages it labours under with reſpect to propriety, clearneſs, and accuracy; diſadvantages which ſome ingenious and eminent phyſicians have thought ſo great, as to render a new verſion not only deſirable, but neceſſary.

3. As to the preſent tranſlation, I have endeavoured to give it the free and eaſy air of an original, by adapting the diction to the genius and idiom of our language: and to make it ſtill more familiar have uſed as few terms of art as poſſible, and ſtudiouſly avoided

(a) *Meth. diſcend. art. med. p.* 497.

(b) *In oratione de commend. ſtud. Hippoc.*

avoided obſolete and unuſual phraſes, and in many places alſo I have ſhortened or varied the manner of expreſſion, for the ſake of propriety and perſpicuity, where-ever this could be done without injuring the author's ſenſe.

4. Our author's entire works were never, before the firſt edition of this work, publiſh'd together in *Engliſh*, nor any part of them *with explanatory and practical notes*, tending to illuſtrate his experienced methods of cure.—The notes which I have annex'd are many of them taken from the beſt modern writers (*c*); ſeveral were communicated to me by friends of the faculty, and ſome I have ventur'd to furniſh; ſo that, beſides Dr *Sydenham's* own judicious obſervations, the reader will here meet with the remarks of ſeveral eminent phyſicians upon moſt of the diſeaſes he treats of.

5. I think it the part of juſtice as well as of gratitude to inform the world, that many which I eſteem among the moſt valuable things to be found in the *additional notes to this Edition* were communicated to me by my much eſteemed friend Dr *Stonhouſe* of *Northampton*, who has had ſo many advantages for improving his experience in ſeveral infirmaries which he has attended both at *home* and *abroad*; and eſpecially in that in the town where he reſides: the principal care of which has lain on him ever ſince its foundation.

6. I doubt not but many of my readers will know him to have been the author of that truly uſeful LETTER TO A PATIENT, *lately publiſh'd, which has already paſs'd thro' many editions, and been tranſlated into Dutch for the uſe of the Infirmaries in Holland*; and in which he hath attempted to put the MINDS of the ſick into the happieſt ſituation:—a care, on my author's principles, well becoming the character of the wiſeſt phyſician (*d*). But if any ſhould think otherwiſe,

I

(*c*) Boerhaave, Hoffman, Baglivi, Ramazzini, de Gorter, Heiſter, Van Swietten, Geoffroy, Aſtruc, Mead, Shaw, Nicholls, Hoadly, Cheyne, Huxham, Hilary, Turner, Fuller, Wintringham, Arbuthnot, Clifton, Langriſh, Lewis, Lobb, Sharp, &c. &c. &c.

(*d*) As the frame of the mind, if I may uſe the expreſſion, is much more curious and artful than the ſtructure of the body; as conſiſting in an harmony of the moſt excellent and almoſt divine faculties; ſo if the conſtitution be any way diſordered, the evil

I know that my very worthy friend has learnt, according to *Sydenham*'s noble manner of thinking, "*to be ready to ſerve mankind, even at the expence of his own reputation*" (*e*).

7. The *firſt edition* of this work was illuſtrated with *marginal notes*, *a copious Index*, and the author's life; and was alſo divided into number'd paragraphs for the conveniency of references:— embelliſhments and advantages which no other edition ever had, and which we have heard with particular ſatisfaction were very acceptable to our readers; for which reaſon we have continued them in this *third* edition, and have inſerted the additional notes of the *ſecond* in their proper places.

8. The reader will meet with a few things in the notes interſpers'd through-out the work, which he may think require ſome apology; but if he conſiders that they are wrote in the taſte and manner of our author, who was one of the moſt ingenuous, candid, honeſt, and benevolent phyſicians of his time, or that ever liv'd perhaps, and deſign'd to illuſtrate ſome of his moſt uſeful obſervations, or to recommend them more ſtrenuouſly to the notice and practice of mankind, I perſuade myſelf that the freedom which I have occaſionally taken in expreſſing my real ſentiments plainly and candidly, will ſeem allowable enough, and no way deſerving cenſure.

9. I ſhall conclude with obſerving one thing in my favour, which is, that I have not added to the multiplicity of bad books, but endeavour'd to introduce a known good one to a larger acquaintance, and make it more extenſively uſeful, by rendering it more familiar, complete and intelligible. *J. S.*

evil muſt be ſo much the greater, the more excellent and delicate the workmanſhip was, whilſt it remained entire. *See p. 423 of our author.*

(*e*) For upon deliberate and equitable reflection, I find it is better to aſſiſt mankind than to be commended by them, and highly conducive to tranquillity of mind, popular applauſe being lighter than a feather, or a bubble, and leſs ſubſtantial than a dream *ib.* p. 458.

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The LIFE of

Dr *SYDENHAM.*

THOMAS SYDENHAM was born in the year 1634, at *Winford Eagle* in *Dorſetſhire*, where his father *William Sydenham* Eſq; had a large fortune. Under whoſe care he was educated, or in what manner he paſſed his childhood, whether he made any early diſcoveries of a genius peculiarly adapted to the ſtudy of nature, or gave any preſage of his future eminence in medicine, no information is to be obtained. We muſt therefore repreſs that curioſity which would naturally incline us to watch the firſt attempts of ſo vigorous a mind, to perſue it in its childiſh enquiries, and ſee it ſtruggling with ruſtic prejudices, breaking on trifling occaſions the ſhackles of credulity, and giving proofs in its caſual excurſions, that it was formed to ſhake off the yoke of preſcription, and diſpel the phantoms of hypotheſis.

That the ſtrength of SYDENHAM's underſtanding, the accuracy of his diſcernment, and ardour of his curioſity might have been remarked from his infancy by a diligent obſerver, there is no reaſon to doubt. For there is no inſtance of a man whoſe hiſtory has been minutely related, that did not in every part of life diſcover the ſame proportion of intellectual vigour; but it has been the lot of the greateſt part of thoſe who have excelled in ſcience, to be known only by their own writings, and to have left behind them no remembrance of their domeſtic life, or private tranſactions, or only ſuch memorials of particular paſſages as are, on certain occaſions, neceſſarily recorded in publick regiſters.

From theſe it is diſcovered, that at the age of eighteen, in 1642, he commenced a commoner of *Magdalen-Hall* in *Oxford*, where it is not probable that he continued long; he informs us himſelf, that he was withheld from the univerſity by the commencement of the war; nor is it known in what ſtate of life he en-

gaged, or where he reſided during that long ſeries of public commotion. It is indeed reported, that he had a commiſſion in the king's army, but no particular account is given of his military conduct; nor are we told what rank he obtained when he entered into the army, or when, or on what occaſion he retired from it.

It is, however, certain, that if ever he took upon him the profeſſion of arms, he ſpent but few years in the camp; for in 1648 he obtained at *Oxford*, the degree of batchelor of phyſick, for which, as ſome medicinal knowledge is neceſſary, it may be imagined that he ſpent ſome time in qualifying himſelf.

His application to the ſtudy of phyſick was, as he himſelf relates, produced by an accidental acquaintance with Dr *Cox*, a phyſician eminent at that time in *London*, who in ſome ſickneſs preſcribed to his brother, and attending him frequently on that occaſion, enquired of him what profeſſion he intended to follow. The young man telling him that he was undetermined, the doctor recommended phyſick to him, on what account, or with what arguments, it is not related; but his perſuaſions were ſo effectual, that Sydenham determined to follow his advice, and retired to *Oxford* for leiſure and opportunity to perſue his ſtudies.

It is evident that this converſation muſt have happened before his promotion to any degree in phyſick, becauſe he himſelf fixes it in the interval of his abſence from the univerſity, a circumſtance which will enable us to confute many falſe reports relating to Dr Sydenham, which have been confidently inculcated, and implicitely believed.

It is the general opinion, that he was made a phyſician by accident and neceſſity, and Sir *Richard Blackmore* reports in plain terms, [*preface to his treatiſe on the ſmall-pox*] that he engaged in practice without any preparatory ſtudy, or previous knowledge, of the medicinal ſciences; and affirms, that when he was conſulted by him what books he ſhould read to qualify him for the ſame profeſſion, he recommended *Don Quixote*.

That he recommended *Don Quixote* to *Blackmore*, we are not allowed to doubt; but the relater is hindered by that ſelf-love which dazzles all mankind, from diſcovering

covering that he might intend a ſatire very different from a general cenſure of all the antient and modern writers on medicine, ſince he might perhaps mean either ſeriouſly, or in jeſt, to inſinuate, that *Blackmore* was not adapted by nature to the ſtudy of phyſick, and that, whether he ſhould read *Cervantes* or *Hippocrates*, he would be equally unqualified for practice, and equally unſucceſsful in it.

Whatſoever was his meaning, nothing is more evident, than that it was a tranſient ſally of an inclination warmed with gaiety, or the negligent effuſion of a mind intent on ſome other employment, and in haſte to diſmiſs a troubleſome intruder; for it is certain that SYDENHAM did not think it impoſſible to write uſefully on medicine, becauſe he has himſelf written upon it; and it is not probable that he carried his vanity ſo far, as to imagine that no man had ever acquired the ſame qualifications beſides himſelf. He could not but know that he rather reſtored than invented moſt of his principles, and therefore could not but acknowledge the value of thoſe writers whoſe doctrines he adopted and enforced.

That he engaged in the practice of phyſick without any acquaintance with the theory, or knowledge of the opinions or precepts of former writers, is undoubtedly falſe; for he declares, that after he had, in purſuance of his converſation with Dr *Cox*, determined upon the profeſſion of phyſick, he *applied himſelf in earneſt to it*, and *ſpent ſeveral years in the univerſity* [aliquot annos in academicâ palæſtrâ] before he began to practiſe in *London*.

Nor was he ſatisfied with the opportunities of knowledge which *Oxford* afforded, but travelled to *Montpellier*, as *Deſault* relates [*diſſertation on conſumptions*] in queſt of farther information; *Montpellier* being at that time the moſt celebrated ſchool of phyſick: So far was SYDENHAM from any contempt of academical inſtitutions, and ſo far from thinking it reaſonable to learn phyſick by experiments alone, which muſt neceſſarily be made at the hazard of life.

What can be demanded beyond this by the moſt zealous advocate for regular education? What can be expected from the moſt cautious and moſt induſtrious

ſtudent,

ſtudent, than that he ſhould dedicate *ſeveral years* to the rudiments of his art, and travel for further inſtructions from one univerſity to another?

It is likewiſe a common opinion, that SYDENHAM was thirty years old before he formed his reſolution of ſtudying phyſick, for which I can diſcover no other foundation than one expreſſion in his dedication to Dr *Mapletoft*, which ſeems to have given riſe to it by a groſs miſinterpretation; for he only obſerves, that from his converſation with Dr *Cox* to the publication of that treatiſe *thirty years* had intervened.

Whatever may have produced this notion, or how long ſoever it may have prevailed, it is now proved beyond controverſy to be falſe, ſince it appears that SYDENHAM having been for ſome time abſent from the univerſity, returned to it in order to purſue his phyſical enquiries before he was twenty four years old, for in 1648 he was admitted to the degree of batchelor of phyſick.

That ſuch reports ſhould be confidently ſpread, even among the cotemporaries of the author to whom they relate, and obtain in a few years ſuch credit as to require a regular confutation; that it ſhould be imagined that the greateſt phyſician of the age arrived at ſo high a degree of ſkill, without any aſſiſtance from his predeceſſors; and that a man, eminent for integrity, practiſed medicine by chance, and grew wiſe only by murder, is not to be conſidered without aſtoniſhment.

But if it be on the other part remembered, how much this opinion favours the lazineſs of ſome, and the pride of others; how readily ſome men confide in natural ſagacity, and how willingly moſt would ſpare themſelves the labour of accurate reading and tedious enquiry, it will be eaſily diſcovered how much the intereſt of multitudes was engaged in the production and continuance of this opinion, and how cheaply thoſe of whom it was known that they practiſed phyſick before they ſtudied it, might ſatisfy themſelves and others with the example of the illuſtrious SYDENHAM.

It is therefore in an uncommon degree uſeful to publiſh a true account of this memorable man, that pride, temerity, and idleneſs may be deprived of that patronage which they have enjoyed too long; that life

may

may be ſecured from the dangerous experiments of the ignorant and preſumptuous; and that thoſe who ſhall hereafter aſſume the important province of ſuperintending the health of others, may learn from this great maſter of the art, that the only means of arriving at eminence and ſucceſs are labour and ſtudy.

About the ſame time that he became batchelor of phyſick, he obtained, by the intereſt of a relation, a fellowſhip of *All Souls* college, having ſubmitted to the ſubſcription required to the authority of the viſitors appointed by the parliament, upon what principles, or how conſiſtently with his former conduct, it is now impoſſible to diſcover.

When he thought himſelf qualified for practice, he fixed his reſidence in *Weſtminſter*, became doctor of phyſick at *Cambridge*, received a licence from the college of phyſicians, and lived in the firſt degree of reputation, and the greateſt affluence of practice, for many years, without any other enemies than thoſe which he raiſed by the ſuperior merit of his conduct, the brighter luſtre of his abilities, or his improvements of his ſcience, and his contempt of pernicious methods ſupported only by authority, in oppoſition to ſound reaſon and indubitable experience. Theſe men are indebted to him for concealing their names, when he records their malice, ſince they have thereby eſcaped the contempt and deteſtation of poſterity.

The ſame attention to the benefit of mankind, which animated him in the perſuit of a more ſalutary practice of medicine, may be ſuppoſed to have incited him to declare the reſult of his enquiries, and communicate thoſe methods of which his ſagacity had firſt conjectured, his experience afterwards confirmed the ſucceſs; he therefore drew up thoſe writings which have been from his time the chief guides of phyſick, and that they might be uſeful to a greater extent, procured them to be put into latin, partly by Dr *Mapletoft*, to whom part is dedicated, and partly by Mr *Havers* of *Cambridge*.

It is a melancholy reflection, that they who have obtained the higheſt reputation, by preſerving or reſtoring the health of others, have often been hurried away before the natural decline of life, or have paſſed many of their years under the torments of thoſe diſtempers

tempers, which they profeſs to relieve. In this number was SYDENHAM, whoſe health began to fail in the fifty ſecond year of his age, by the frequent attacks of the gout, to which he was ſubject for a great part of his life, and which was afterwards accompanied with the ſtone in the kidneys, and, its natural conſequence, bloody urine.

Theſe were diſtempers which even the art of SYDENHAM could only palliate, without hope of a perfect cure, but which, if he has not been able by his precepts to inſtruct us to remove, he has, at leaſt, by his example, taught us to bear; for he never betray'd any indecent impatience, or unmanly dejection, under his torments, but ſupported himſelf by the reflections of philoſophy, and the conſolations of religion, and, in every interval of eaſe, applied himſelf to the aſſiſtance of others with his uſual aſſiduity.

After a life thus uſefully employed, he died at his houſe in *Pall Mall*, on the 29th of *December*, in the year 1689, and was buried in the iſle, near the ſouth door, of the church of *St James* in *Weſtminſter*.

What was his character, as a phyſician, appears from the treatiſes that he has left, which it is not neceſſary to epitomiſe or tranſcribe; and from them it may likewiſe be collected, that his ſkill in phyſick was not his higheſt excellence; that his whole character was amiable; that his chief view was the benefit of mankind, and the chief motive of his actions the will of GOD, whom he mentions with reverence, well becoming the moſt enlightened and moſt penetrating mind. He was benevolent, candid, and communicative, ſincere and religious; qualities, which it were happy if they would copy from him, who emulate his knowledge, and imitate his methods.

THE

THE

AUTHOR'S PREFACE.

1. SINCE the human body is ſo formed by nature, that by reaſon of the continual wear of its component particles, and the force of external agents, it cannot always continue in the ſame ſtate, whence numerous diſeaſes have in all ages ariſen; doubtleſs the neceſſity of diſcovering a cure for them, muſt have put mankind upon ſtudying phyſick, long before the birth of the *Grecian*, or even the *Egyptian Æſculapius*, who flouriſh'd a thouſand years before the former. Origin of phyſick.

2. In reality as it would be difficult to aſſign the firſt inventer of houſes and clothing, for a defence againſt the injuries of the weather, ſo the origin of phyſick can no more be diſcovered, than the head of the *Nile*; notwithſtanding that this art, as well as ſome others, muſt have always ſubſiſted, tho' it has been cultivated more or leſs according to the diſpoſitions of different countries, and ages. (*a*) Hard to be trac'd.

3. The

(*a*) If it be allowed that phyſick had its origin from a principle of ſelf-preſervation, no ſcience can lay claim to greater antiquity, it being almoſt coeval with the world; for it muſt doubtleſs have had a beginning ſoon after the fall; our firſt parents, and, through them, all mankind, being from thence render'd unavoidably ſubject to numerous diſeaſes and caſualties, and even death itſelf, in puniſhment of their fatal diſobedience.

I do not, however, contend that phyſick was reduc'd into a ſcience in the earlieſt ages, but was promiſcuouſly practiſed, every man being his own phyſician; after a ſeries of time, it grew up into a liberal art from a number of obſervations, experiments, and medicines, and ſo fell to the province of particular perſons to exerciſe it, who from thence were entitled phyſicians. Thus we ſee, that phyſick had a being before there were any phyſicians; tho' it could not be properly called an art, till it had its peculiar diſtinct profeſſors.

In effect, it ſhould ſeem highly probable that ſickneſs and pain muſt have neceſſarily excited mankind to ſeek for immediate relief: they could not be men, and be ſo thoughtleſs and inſenſible under theſe deplorable circumſtances, as to neglect a ſearch of ſuch importance to their well-being. For it cannot be imagined that man alone ſhould be ſo deaf to the voice of nature and reaſon, as not to be extremely ſollicitous as well to preſerve his health, as to reſtore it when loſt, ſince we ſee that brutes are ſo ſtrongly impell'd to both by mere inſtinct.

After

Its antient and modern improvers.

3. The performances of the antients in this ſcience, and chiefly of *Hippocrates*, are well known; their works containing the moſt conſiderable part of the curative branch. And the following ages have produced ſome eminent men, who have ſpared no pains to extend its limits by a cloſe application either to anatomy, pharmacy, or practice, not to mention thoſe of our own age and nation, whoſe endeavours in all the ſciences that tend to improve this art deſerve the praiſes of an abler pen. (*b*)

The endeavours of the author.

4. But how conſiderable ſoever their attempts have been, I ſhould always have eſteemed myſelf a uſeleſs member of ſociety, had I not contributed my mite towards the improvement of phyſick. And upon this account, after long deliberation, and many years cloſe and faithful obſervation, I reſolv'd (1) to communicate my thoughts relating to the manner of making farther advances in phyſick; and (2) to publiſh a ſpecimen of my endeavours in this way.

The ways of improving phyſick.

5. The improvement of phyſick in my opinion depends (1) upon collecting as genuine and natural a deſcription, or hiſtory of all diſeaſes, as can be procured; and (2) laying down a fix'd and complete method of cure,

After all enquiries of this kind, the truth and uſefulneſs of a ſcience are more to be conſulted than its antiquity: 'tis from theſe excellencies we ought to form our opinion of it, and be induced to protect and encourage it, and not from its antiquity only, ſince this of itſelf adds no real value to any ſcience, and is often found thro' a falſe and ſlaviſh veneration to give currency and ſanction to very pernicious errors.

(*b*) Upon comparing the antient ſtate of phyſick with the ſcientifical and truly uſeful improvements of the moderns, it will ſeem ſtrange that ſo ſmall a progreſs ſhould have been made in the art; which muſt ſurely be aſcribed to our having departed from the only juſt method of improving it by the joint help of reaſon and experience. Whoever carefully peruſes practical writers, will find that they have advanced ſeveral things, concerning the cauſes and nature of diſeaſes, contradictory to experience; as will manifeſtly appear by conſulting a number of them upon any particular diſeaſe. Hence we ſee how great circumſpection is neceſſary to prevent our being led into error. Again, experience teaches us a ſhorter and eaſier method of curing ſeveral diſeaſes, than the common one; and to reaſon againſt fact is highly abſurd: whence it follows that we ought not to confine ourſelves to perſue ſtrictly the generally received methods of cure, but to forſake the beaten path occaſionally, as reaſon and experience ſhall direct.

cure (*c*). It is eaſy enough to deſcribe diſeaſes unſkilfully, but to write ſuch a full and accurate hiſtory of them as to eſcape the cenſure that lord *Bacon* has paſſed upon ſome great promiſers in another way, is a much more difficult taſk. "*We are not to learn*, ſays the noble author, *that we have a voluminous natural hiſtory, which is agreeable by the variety of its matter, and by the pains beſtow'd upon it render'd curious and entertaining in many places: but if it were ſtript of its fables, quotations, trifling diſputes, philology, and other ornaments, that are fitter for the converſation of learned men at their hours of relaxation, than for inſtitutes of philoſophy, the matter of it would be brought into a very narrow compaſs. Such a hiſtory falls far ſhort of our deſign.*" And thus the cure of diſeaſes is eaſily delivered according to the common method, but to do it in a maſterly ſcientifical manner will appear a much harder taſk to thoſe who know that there are abundance of diſtempers to be met with in practical writers, that were and ſtill continue incurable.

6. But with regard to the hiſtory of diſeaſes, whoever conſiders the undertaking deliberately, will eaſily perceive that the author muſt attend to ſeveral more particulars than are ordinarily minded, a few of which I ſhall mention at preſent. The hiſtory of diſeaſes a work of difficulty.

7. (1.) All diſeaſes then ought to be reduc'd to certain and determinate kinds, with the ſame exactneſs as we ſee it done by botanic writers in their treatiſes of plants. For there are diſeaſes that come under the Diſeaſes to be reduced to certain kinds.

(*c*) The hiſtory of diſeaſes, ſays *Baglivi*, or the *medicina prima* ought to be diſtinguiſh'd from the curative part, or the *medicina ſecunda*. The former is a ſcience *ſui generis*, and is only to be drawn from the pure and uncorrupted ſprings of nature; or, to ſpeak more properly, depends upon a plain and accurate deſcription of diſtempers, as they appear in their beginning, height, increaſe, declenſion, and termination, to the diligent and judicious obſerver. The *medicina ſecunda*, or the curative branch of the art, may, I confeſs, be much improv'd by an application to other ſciences, eſpecially to thoſe that have any relation to phyſic, or may be conſidered as branches thereof amongſt which chemiſtry, botany, the knowledge of the ſix non naturals, experimental philoſophy, anatomy, and the like, may be enumerated, which eminently contribute towards the perfection of the method, and the deriving the curative indications from every the leaſt circumſtance. *Baglivi op. p.* 14, 15.

ſame *genus*, bear the ſame name, and have ſome ſymptoms in common, which, notwithſtanding, being of a different nature, require a different treatment. Thus it is generally known, that the word *carduus* is applied to ſeveral kinds of herbs, and yet a botaniſt would be guilty of inaccuracy, who ſhould content himſelf with giving a general deſcription of the plant, and enumerating the marks, wherein it differs from all others, and in the mean time take no notice of the peculiar characteriſtics of every ſpecies, which diſtinguiſh them from one another. In like manner, it is not enough for a writer to give us only the common ſigns or appearances of any diſeaſe: for tho' the ſame variety does not happen in all diſtempers, yet, I hope to make it plainly appear in the following ſheets, that there are ſeveral, which, notwithſtanding their being treated of by authors under the ſame name, without any diſtinction of kind, are extremely different.

But not to ſupport any hypotheſis.

8. Furthermore, where we meet with this diſtribution of diſtempers into kinds, it is commonly done to ſerve ſome hypotheſis, founded upon the true phenomena; and hence this diſtinction is rather adapted to the bent of the author, and his manner of philoſophiſing, than to the nature of the diſorder. How much the improvement of phyſick has been obſtructed by this erroneous procedure appears in not a few diſeaſes, the cure of which would not have been undiſcovered at this day, if the benevolent writers of experiments and obſervations had not been deceived by taking one diſeaſe for another. And to this cauſe I eſteem it owing, that the *materia medica* is ſo immenſely enlarged, and yet with little advantage to the diſeas'd.

No hypotheſis to be us'd in writing a hiſtory of diſeaſes.

9. (2) In writing, therefore, a hiſtory of diſeaſes, every philoſophical hypotheſis which hath prepoſſeſs'd the writer in its favour, ought to be totally laid aſide, and then the manifeſt and natural phenomena of diſeaſes, however minute, muſt be noted with the utmoſt accuracy; imitating in this the great exactneſs of painters, who, in their pictures, copy the ſmalleſt ſpots or moles in the originals. For 'tis difficult to give a detail of the numerous errors that ſpring from hypotheſes, whilſt writers, miſled by falſe appearances, aſſign ſuch phenomena

phenomena for diſeaſes, as never exiſted, but in their own brains; whereas they ought to appear clearly, if the truth of their favourite hypotheſis, which they eſteem inconteſtable, were well eſtabliſh'd. Again, if any ſymptom properly ſuiting their hypotheſis, does in reality belong to the diſeaſe they are about to deſcribe, they lay too much ſtreſs upon it, as if nothing more was wanted to confirm it; whereas, on the contrary, if it does not agree with their hypotheſis, their manner is, either to take no notice at all of it, or but barely to mention it, unleſs they can, by means of ſome philoſophical ſubtlety, adjuſt it thereto, and bring it in ſome meaſure to anſwer their end. (*d*) 10.

(*d*) Hypotheſes owe their origin to oſtentatious vanity and idle curioſity; whence 'tis eaſy to conceive how much they muſt needs obſtruct the improvement of phyſick, ☤ is a ſcience that depends chiefly upon well-conducted experiments and cloſe and faithful obſervation; whereas hypotheſes are always built in great part upon feign'd, precarious, and often very obſcure principles; ſo that they may aptly enough be ſtil'd the unſhapely production of a lively and wanton imagination. The humour of over-looking familiar and obvious effects, to ſearch after their ſecret and abſolutely undiſcoverable cauſes, is an error of very antient date, and hence phyſick has ever been peſter'd with hypotheſes, the multitude and precarioufneſs whereof have only ſerv'd to render the art uncertain, fluctuating, fallacious, myſterious, and in a manner unintelligible.

And if their uſeleſsneſs and bad tendency be conſider'd it ſhould ſeem ſtrange that they ſhould have prevail'd ſo long, and ſtill maintain their ground; for certain it is that not a ſingle medicine has been diſcovered by their aſſiſtance, ſince the introduction of them into phyſick above 2000 years ago, nor have they let in the leaſt light into the affair of adminiſtering medicines properly in particular circumſtances, but rather ſerv'd to bewilder us, to perplex practice, and create diſputes that are never to be decided without having recourſe to experience, the true teſt of opinions in phyſick. Indeed, as all hypotheſes are chiefly founded upon ſuppoſitious and unſettled principles, it were folly to expect truth, and certainty from them. It is worth obſerving, ſays a very ingenious writer and deep thinker, that all the real true knowledge we have of nature is intirely *experimental*; inſomuch that, how ſtrange ſoever the aſſertion ſeems, we may lay this down as the firſt fundamental unerring rule in phyſick, *That it is not within the compaſs of human underſtanding to aſſign a purely ſpeculative reaſon for any one phenomenon in nature*; as why graſs is green, or ſnow is white; why fire burns, or cold congeals? By a *ſpeculative reaſon*, I mean, aſſigning the true and *immediate efficient* cauſe *a priori*, together with the manner of its operation, for any effect whatſoever purely natural. We find indeed by obſervation and experience

The proper and accidental ſymptoms to be particulariz'd in deſcribing a diſeaſe.

10. (3) Again, in deſcribing any diſeaſe, it is neceſſary to enumerate both the peculiar and conſtant phenomena, or ſymptoms, and the accidental ones ſeparately; of which latter kind are thoſe which differ occaſionally by reaſon of the age and conſtitution of the patient, and the different method of cure. For the appearance or aſpect of a diſorder often varies according to the different method of cure, ſome ſymptoms being rather occaſioned by the phyſician than the diſorder itſelf: ſo that perſons labouring under the ſame illneſs, being differently treated, have different ſymptoms. And hence unleſs great caution be us'd in this point, our notions of the ſymptoms of diſeaſes muſt neceſſarily be very looſe and uncertain: not to mention that uncommon

experience that ſuch and ſuch effects *are* produc'd; but when we attempt to think of the reaſon *why*, and the *manner how* the cauſes work thoſe effects, then we are at a ſtand; and all our reaſoning is precarious, or at beſt but probable conjecture.

If any man is ſurpriſed at this, let him inſtance in ſome ſpeculative reaſon he can give for any natural phenomenon; and how plauſible ſoever it appears to him at firſt, he will, upon weighing it thoroughly, find it at laſt reſolv'd into nothing more than mere obſervation and experiment; and will perceive that thoſe expreſſions generally us'd to deſcribe the *cauſe* or *manner* of the productions in nature, do really ſignify nothing more than the *effects*. The moſt plauſible reaſon which can in ſuch caſes be aſſign'd, will be found to amount to nothing beyond a bare compariſon, or *analogy* of ſome *effects* with others; as when inferences are made from the proportion of velocity in other *liquids* thro' *tubes* of certain conical figures, to the circulation of the blood and *ſpirits* in the *arteries* and *veins* of an human body. Now tho' this laſt ſhould be allow'd a plauſible way of *gueſſing* how far the effects may be *ſimilar* in both; yet what *certain ſcientific* concluſions can poſſibly be drawn from it, when ſuch a variety of circumſtances, as occur in the complicated frame of a human body, muſt join to render the caſes ſo widely different? Or what can be more groundleſs than to conclude, with a philoſophic air of poſitiveneſs, that becauſe the ſmalleſt particles of ſome medicines which we can diſcern with microſcopes, ſeem, when thus viewed, to reſemble *wedges*, *globes*, &c. therefore the *inviſible* particles of which even *theſe* are compos'd, would be found of the ſame figures, were the cluſters diſſolved, and capable of being thus ſeen: and that conſequently when they are diſſolv'd in the humours of our body, they muſt act *mechanically* juſt as a wedge or globe, &c. does out of it? All theſe obſervations may with equal juſtice be extended to accounts given of the mechanical cauſes and manner of motion and operation in the *larger* bodies of the univerſe; whenever the terms uſed in ſuch treatiſes are pretended to ſignify any thing beyond *effects* known from experience.

From

mon caſes do not more properly belong to the hiſtory of diſeaſes, than the biting of the palmer-worm, in deſcribing *ſage*, is to be reckon'd amongſt the characteriſtic marks of that plant. *(e)*

From hence we may ſee how little that abſtracted and mechanical way of reaſoning from the ſtructure and *configuration* of the minute particles in medicines, and of the ſolids and fluids in human bodies, which obtains ſo much of late, is likely to contribute to advance the art of healing; ſince it is in truth no other than running altogether into *hypotheſes*, tho' our modern mechanical reaſoners profeſs, at the ſame time, to reject and explode them utterly. For however they may tell you plauſibly in *general*, that the different *ſpecies* and *effects* of bodies, with their ſpecific *qualities* and *attributes*, proceed from nothing elſe but the different *figure*, *ſize*, or *motion*, of their minute particles: yet when you come to *particular* inſtances, and demand of them what that peculiar configuration, texture, ſize, or motion of the particles, for inſtance, of flour of *ſulphur*, or *camphire*, or *mercury* is, which renders them capable of *operating* after ſuch and ſuch a manner, and producing ſuch *effects* in the ſolids or fluids of an human body and *how* they act; you will find them utterly at a loſs. And whoever reads the mechanical reaſoning of ſome of our beſt and moſt ingenious modern phyſicians upon the operations of thoſe very medicines, will find them all precarious *conjectures*, and nothing more than uncertain *hypotheſes*, dreſſed up in the ſtyle and form of *certainty* and *demonſtration*. I cannot forbear therefore mentioning again this fear and jealouſy of my own, which I am perſuaded is not altogether groundleſs; that there never will be any great and conſiderable advances made in the art of *healing*, till all hypotheſes and mechanical reaſoning are out of vogue, and till men are come about again to the antient method of pure experiment, and the common obvious reaſoning intirely from thence.

Thus ſhort and imperfect is all our boaſted knowledge of nature; we are intirely in the dark as to the inward ſtructure and compoſition of the minute particles of all bodies; and can with no degree of certainty judge or determine any thing concerning them, but from their outward appearances and ſenſible effects; when we attempt any thing beyond this, all our reaſonings are full of confuſion and uncertainty. And yet even this purely *experimental* knowledge of nature is however a degree of it aptly ſuited to our preſent ſtate and condition in this life; it anſwers all the reaſonable ends of our well-being and preſervation: and if we had ſagacity and acuteneſs of ſenſe enough to penetrate into the very *intimate eſſences* of things, and into the exact configuration of the *minuteſt* parts of matter, it would perhaps anſwer no other end but that of uſeleſs ſpeculation and amuſement.

Bp Brown's procedure &c. of human underſtanding, Edit. 3. *p.* 205. *&c.*

(*e*) *Hippocrates*, by cloſely attending to obſervation, diſcovered that diſeaſes have certain conſtant and individual ſymptoms, and others that are adventitious, or caſual, and common to other diſtempers,

The seasons of the year to be carefully noted.

11. (4) Lastly, the seasons of the year that principally promote any particular kind of diseases, are to be carefully remarked. I own that some happen indiscriminately at any time, whilst many others, by a secret tendency of nature, follow the seasons of the year with as much certainty, as some birds and plants. And indeed I have often wonder'd that this tendency of some distempers, which is very obvious, has been hitherto observed but by few, whereas abundance of persons have, with great exactness, noted under what planet plants spring, and brutes ingender. But from what cause soever this inadvertency proceeds, certain it is that a knowledge of the seasons in which diseases ordinarily arise, is of great use to a physician towards discovering the species of the disease, as well as the method of curing it; and that the consequence of slighting this piece of knowledge, is ill success in both.

The usefulness of a history of diseases to practice.

12. These are some of the most remarkable, tho' not the only particulars to be observed in writing a history of diseases; the usefulness of which to practice is not to be conceived, and in comparison whereof the subtile enquiries, and trifling notions, with which the writings

stempers, and that the former depend upon the identical and constant nature of the disease, and the latter either upon the different treatment of the patient, or the numerous and always various assemblage of causes. The first he form'd into aphorisms, as the rules of the art, and left the latter to the judgment of the physician.

The constant symptoms, which may be call'd the characteristic signs of diseases, sometimes strike the senses, and sometimes lie conceal'd, and can't be accounted for in a probable way. And, nevertheless, whatever they are, they ought not to be overlook'd by the physician, but should be faithfully noted, just as they appear. For as the curative indications are taken from every the least circumstance, so the least motions of diseases, tho' somewhat obscure, are to be investigated, and describ'd; by which means we shall not only be furnished with a complete history of distempers, but a method of cure likewise, which is still more valuable. To the obscure motions of diseases may be referr'd the critical days, the secret changes of diseases amongst themselves, their translation to one part rather than another, the latent mutual consent of the parts, the periods of diseases, and their increase at set hours, which happens in some kind of pains in fevers also, and several other disorders. *Baglivi, op. p.* 6, 7.

writings of the moderns abound are of no ſort of value (*f*). For, is there a ſhorter, or indeed any other way of coming at the morbific cauſes we are to encounter, or of diſcovering the curative indications, than by a certain and diſtinct perception of the peculiar ſymptoms? Even the ſmalleſt circumſtance is of uſe to both theſe purpoſes. For allowing that ſome variety happens from the conſtitution of particular perſons, and the method of cure, yet nature notwithſtanding acts in that orderly and equable manner in producing diſtempers, that the ſame diſeaſe appearrs attended with the like ſymptoms in different ſubjects: ſo that thoſe which were obſerv'd in *Socrates*, in his illneſs, may generally be applied to any other perſon, afflicted with the ſame diſeaſe, in the ſame manner as the general marks of plants juſtly run thro' the ſame plants of every kind. Thus for inſtance, whoever deſcribes a violet exactly as to it colour, taſte, ſmell, form, and other properties, will find the deſcription agree in moſt particulars with all the violets in the univerſe.

13. And in truth 'tis my opinion, that the principal reaſon of our being yet deſtitute of an accurate hiſtory of diſeaſes, proceeds from a general ſuppoſition that diſeaſes are no more than the confus'd and irregular operations of diſorder'd and debilitated nature, and conſequently that it is a fruitleſs labour to endeavour to give a juſt detail of them. (*g*)

Why we yet want an accurate hiſtory of diſeaſes.

(*f*) Nothing eminent can be done in the prognoſtic, and eſpecially in the curative part of phyſick, without an accurate and circumſtantial hiſtory of diſeaſes; for how is it poſſible to foretel what will happen in a diſtemper, and proceed properly in the cure, if we are ignorant of the conſtant and fortuitous ſymptoms attending it, and the general progreſs of it from the beginning to the end, when nothing intervenes to obſtruct its ordinary courſe, whether from miſmanagement, accident, or otherwiſe?

(*g*) A cloſe and diligent ſearch into the riſe, progreſs, and termination of diſeaſes will clearly ſhew the contrary, nature acting with great ſteadineſs and uniformity in producing, carrying on and terminating diſeaſes, provided ſhe be not forc'd out of the way by ſome accident, or improper means; ſo that if application and judgment be not wanting, 'tis not impoſſible to give a juſt and orderly detail of all the ſymptoms and appearances, without omitting the minuteſt particular.

For the cauſes that have hitherto prevented our having a full and

The curative indications to be gather'd from the ſmalleſt circumſtances.

14. But to reſume our ſubject: a phyſician may likewiſe collect the indications of cure from the ſmalleſt circumſtances of the diſtemper as certainly as he does the diſtinguiſhing ſigns from them (*b*). And for this reaſon I have often thought, that if I had a juſt hiſtory of any diſeaſe, I ſhould never be at a loſs to apply a ſuitable remedy to it: its different phenomena, or ſymptoms, manifeſtly ſhewing the way to be followed, and being carefully compar'd together, would lead us, as it were by the hand, to thoſe obvious indications that are gathered from a thorough inſight into nature, and not from the errors of the imagination.

What made *Hippocrates* ſo excellent a phyſician.

15. By theſe ſteps and helps the father of phyſick, the never enough extolled *Hippocrates*, came to excel in his profeſſion, who, after laying down this ſolid and unſhaken foundation to build the art upon, has clearly delivered the ſymptoms of every diſeaſe, without calling in any hypotheſis to his aid, as appears in his books concerning *diſeaſes*, &c. He has likewiſe left us ſome rules drawn from the obſervance of nature's method of promoting and removing diſtempers; ſuch are his *prognoſtics*, *aphoriſms*, and other writings of this kind.

and particular hiſtory of diſeaſes, and the rules to be obſerved in writing one, we can't do better than refer the reader to the ſecond and third chapters of the ſecond book of the judicious and induſtrious *Baglivi's praxis medica*, where he will find theſe matters treated with great clearneſs, accuracy, and judgment.

(*b*) The curative indications in diſtempers can't be more certainly deriv'd than from the moſt threatening and prevailing ſymptoms, which chiefly manifeſt the nature and violence of the diſeaſe. If therefore for want of noting, and duly conſidering all circumſtances, and eſpecially over-looking the effects of all that is given or applied to the patient, we miſtake in the indications of cure, we muſt needs go wrong, and do miſchief.

The forming juſt indications then being a matter of the higheſt importance, we ought to make uſe of all the helps we can procure in order thereto, by attending to every thing that falls under the notice of the ſenſes, the procedure of nature from the beginning of the illneſs to the time we are call'd, the ſtrength of the patient at this time, the cauſe of the diſeaſe, the ſeaſon of the year, the then reigning diſtempers, the ſex, age, and conſtitution of the patient, &c. all which particulars being maturely conſidered and compar'd, will certainly direct us to the genuine curative indications, whence we may hope to ſucceed in the cure, or at leaſt to ſecure our reputation by making the danger known, and foretelling the fatal conſequence that is likely to enſue.

kind. Of theſe particulars the theory of this eminently judicious phyſician chiefly conſiſted, which not being deduced from the trifling ſallies of a wanton imagination, like the dreams of diſtempered perſons, exhibited a genuine hiſtory of the operations of nature in the diſeaſes of mankind. Now his theory being no more than an exact deſcription of nature, it was highly reaſonable that he ſhould aim in his practice only at relieving diſeaſed nature by all the means he could employ; and hence, likewiſe, he required no more of art, than to aſſiſt nature when ſhe languiſh'd, and to check her when her efforts were too violent; and to accompliſh both theſe ends by the ſteps and method whereby ſhe endeavours to expel the diſorder: for this ſagacious obſerver found that nature alone terminates diſtempers, and works a cure with the aſſiſtance of a few ſimple medicines, and ſometimes even without any medicines at all. *(i)* 16. *(6)*

(*i*) Whoever will be at the pains of peruſing the writings of *Hippocrates* with due attention, will find him juſtly entitled to the eminent character he has enjoy'd for ſo many ages, and is likely to preſerve to lateſt time. We meet with manifeſt proofs there of his being poſſeſs'd in an extraordinary degree of the moſt eſſential qualifications of a phyſician; a more than common attention in obſerving all the different phenomena of diſeaſes, and a profound judgment to apply this knowledge in the fitteſt manner to practice.

He remarked with ſurprizing exactneſs all that preceded diſtempers, the ſymptoms that accompanied them, and what did good or hurt upon every occaſion. And indeed his ſteady and cloſe application to acquire this truly uſeful part of medical knowledge, which he juſtly held in the higheſt eſteem, left him neither inclination nor leiſure to proſecute enquiries of leſs conſequence with diligence enough to make any conſiderable progreſs therein. He greatly improved the art by being at the pains of collecting a large number of obſervations, in order to diſcover the iſſue of diſtempers, as to life or death, and to be able to foretel what would happen in all the caſes that came under his care: and he made ſo extraordinary a proficiency in this branch of the art, that his writings contain the beſt ſet of prognoſtics, that are to be met with in any writer at this day. Upon enquiry, I fear it will be found, that moſt have copied from him in this point, and few added any thing to his diſcoveries.

It is on all hands allowed that he found phyſick in a very confuſed and imperfect ſtate, and left it much mended both in point of method and certainty. Whence he has been all along reſpected as the reſtorer and founder of the art.

Phyſick further improvable by delivering a complete method of cure.

16. (2.) The other method of improving phyſick further conſiſts chiefly, in my opinion, in delivering a fixed and every way complete method of cure; ſuch a one, I mean, as hath been ſufficiently eſtabliſh'd and verified by a competent number of experiments, and found effectual to cure any particular diſeaſe. For I conceive it not enough to publiſh the particular ſucceſs of any method or medicine, if neither are generally found to anſwer the end in all caſes, at leaſt in the ſame given circumſtances. But I maintain that we ought to be as certainly aſſured that a particular diſeaſe may be conquered by anſwering a certain indication, as we are of anſwering a particular indication by ſome certain medicine, that will generally tho' not always produce the deſir'd effect: thus, for inſtance, we purge with *ſena*, and cauſe ſleep with *poppies*. However, I do not deny but that the phyſician ought to attend carefully to the particular effects both of the method and medicine he uſes in curing diſeaſes, and to ſet them down for the eaſe of his memory, as well as the improvement of his knowledge; ſo that at length, after many years experience, he may fix upon ſuch a method of curing any particular diſeaſe, as he need not in the leaſt depart from.(*k*)

The inutility of publiſhing particular obſervations.

17. But the publiſhing particular obſervations is not ſo uſeful, in my opinion; for if the obſerver only intends to inform us that a particular diſeaſe hath yielded once, or oftner, to ſuch a medicine; of what advantage

(*k*) It were highly to be wiſh'd that we had ſuch a certain general method of cure, as our author here deſcribes, which might be acquired, one would think, if phyſicians would unanimouſly ſet about it in earneſt. To adapt it to our own nation; our climate, the air we breathe, the winds that moſt frequently blow, our manner of living, the diſeaſes we are moſt ſubject to, the medicines that agree beſt with our conſtitution, the ſituation, ſoil and water of particular places, and the like muſt be known, and exactly noted. Upon theſe principles a general method of cure might be eſtabliſhed in moſt diſtempers, from which we need only depart occaſionally, as particular circumſtances and exigencies may require.

In peruſing the writings of phyſicians of a different nation with this view, let it always be remember'd, that they are foreigners, and treat of diſeaſes as they appear with them reſpectively, and ſuit the method of cure to the place of their reſidence, inſomuch that their rules cannot be ſafely followed by us any further than they ſhall be found to correſpond with our own obſervations, and experience, in a ſufficient variety and number of inſtances.

vantage is it to me, that a ſingle medicine, which I knew not before, is added to the immenſe ſtock of eminent medicines, that we have long been peſter'd with? But if, laying aſide all other medicines, I ſhould uſe only this, ought not its virtues to be approved by numerous experiments? And are there not alſo numberleſs other circumſtances, relating both to the patient and the method of cure, to be conſidered before any advantage can be reap'd from a ſingle obſervation? If the medicine never fails, why does the obſerver deal only in particulars, unleſs he either diſtruſts his experience, or deſires rather to impoſe upon the publick in part, than in the whole *(l)*? But how eaſy a taſk it is to write large volumes of this kind, can be no ſecret to one that is but little acquainted with practice; as, on the contrary, how

(l) The author here ſhould ſeem not to have ſufficiently attended to the advantages derivable from faithful and accurate obſervations, which are the principal foundation of the pathological and curative branches of phyſick. For experience, the ſoul of the art, is the reſult of a number of ſuch obſervations made by ourſelves and others, and phyſick is much more indebted to them for its improvement, than to all the diſcoveries that have ever been made in the art, and all the hypotheſes that have been invented with this ſpecious deſign; many things happening daily in the courſe of diſtempers, which being exactly noted, greatly contribute to direct us in the like caſes, tho' it may be they cannot be accounted for in a ſatisfactory manner. But to render them truly uſeful, I confeſs they ſhould be wrote with much more exactneſs than they generally are, and no circumſtances of any moment omitted from the beginning to the ending of the diſtemper, as well relating to the courſe thereof, as the method of cure employ'd, ſetting down the medicines that were exhibited from day to day, and the effects they had, and ſpecifying likewiſe the diet, regimen, *&c.* in a very particular manner. Many of the obſervations delivered both by the antients and moderns labour under great defects, and are ſo far from being complete, or the things we mean, that they do not deſerve the name of obſervations, but ought rather to be entitled fragments of obſervations, and of courſe are of little or no uſe to guide the practical phyſician in the true method of cure [For, as *Dr Cotton* very juſtly obſerves, after the pain of turning over a variety of vols. we ſtill find that the particular caſe we wanted, is either not mentioned at all, or too partially and ſuperficially, to ſerve our purpoſe].

So that it is in medicine as in navigation. Rules may be laid down, and charts exhibited; but when a man hath made himſelf maſter of all theſe, he will often find himſelf among ſhelves and quickſands; and muſt at laſt have recourſe to his own natural ſagacity, to extricate himſelf out of theſe difficulties.

Letter to Dr Mead on a particular kind of ſcarlet fever, &c. p. 21.

how difficult it is to lay down a perfect, and every way complete method of cure in any diſeaſe. If only one perſon in every age had treated but a ſingle diſeaſe in this manner, phyſick would have been brought to as much perfection many years ago, as the condition of mankind will admit. But our misfortune proceeds from our having long ſince forſook our ſkilful guide *Hippocrates*, and the antient method of cure, founded upon the knowledge of conjunct cauſes, that plainly appear: inſomuch that the art which is at this day practis'd, being invented by ſuperficial reaſoners, is rather the art of *talking* than of *healing*. But that I may not ſeem to advance this aſſertion without ſufficient grounds, I beg leave to make a ſhort digreſſion from the ſubject, in order to prove that the diſcovering and aſſigning of remote cauſes, which engroſs the thoughts, and feed the vanity of curious enquirers, is an impoſſible attempt, and that only immediate and conjunct cauſes fall within the compaſs of our knowledge, and that from theſe alone the curative indications are to be taken.

Remote cauſes not to be diſcover'd.

Reaſons to prove this aſſertion.

18. Accordingly, it muſt be obſerved, that if the humours are retain'd in the body beyond the due time, either (1) becauſe nature cannot digeſt and afterwards expel them, or (2) from their having contracted a morbific taint from a particular conſtitution of the air, or (3) laſtly, from their being infected with ſome poiſon: by theſe, I ſay, and the like cauſes, theſe humours are work'd up into a ſubſtantial form, or ſpecies (*m*), that diſcovers itſelf by particular ſymptoms, agreeable to its peculiar eſſence; and theſe ſymptoms, notwithſtanding they may, for want of attention, ſeem to ariſe either from the nature of the part in which the humour is lodged, or from the humour itſelf before it aſſumed this ſpecies, are in reality diſorders that proceed from the eſſence of the ſpecies, newly raiſed to this pitch: ſo that every ſpecific diſeaſe ariſes from ſome ſpecific exaltation, or peculiar quality of ſome humour contain'd in a living

(*m*) Or, in plainer language, the humours undergo ſuch a change from ſome one of theſe cauſes, juſt mentioned, as to occaſion a diſtemper, attended with the peculiar ſymptoms, proceeding from this change, and agreeable to the nature of the diſtemper hereby form'd.

ing body. Under this kind may be comprehended moſt diſeaſes, which have a certain form or appearance; nature in fact obſerving the ſame uniform method in producing and bringing diſeaſes to a height or *criſis*, as ſhe does in the production or growth of plants or animals. For as every plant or animal is poſſeſs'd of peculiar properties, ſo is it likewiſe in every exaltation of any humour after its being come to a ſpecies, or diſeaſe. We have a clear proof of this every day in thoſe kinds of excreſcences that grow on trees and ſhrubs (occaſioned by the ill quality of the nutritious juice, or other cauſes) in the form of moſs, miſletoe, muſhrooms, and the like; all which are manifeſtly diſferent eſſences, or ſpecies, from the tree or ſhrub that bears them.

Further proved by a *quartan fever*.

19. In reality, whoever diligently and accurately conſiders the phenomena, or ſymptoms, accompanying a *quartan fever*, *viz.* that it moſtly comes towards *autumn*, and keeps a certain courſe, or appearance, the fits or periodical revolutions of it returning as certainly every fourth day, as a clock renews its rounds, unleſs this regular courſe be interrupted by ſome external agent; that it begins with a ſhivering, and a great ſenſe of cold, which are ſucceeded by as ſenſible a degree of heat, which terminates at length in a profuſe ſweat; and laſtly, that whoever is ſeiz'd with this diſorder, is ſeldom cur'd before the *vernal equinox*: I ſay, whoever duly conſiders theſe particulars, will find as ſtrong reaſons to believe that this diſtemper is a ſpecies, as a plant is one, which in like manner ſprings out of the earth, flowers, and dies, and is in other reſpects affected agreeably to its nature or eſſence. For it is not eaſy to comprehend why this diſeaſe ſhould ariſe from a combination of principles and manifeſt qualities, whilſt a plant is on all hands allow'd to be a ſubſtance and diſtinct ſpecies in nature. However, in the mean time, we do not deny but that as moſt kinds of animals or plants ſubſiſt of themſelves, ſo on the contrary the ſpecies of diſtempers depend on thoſe humours that produce them.

20. But tho' from what has been delivered the cauſes of moſt diſeaſes ſhould ſeem abſolutely undiſcover-

able,

Diſeaſes curable tho' their remote cauſes cannot be diſcovered.

able, yet the queſtion, *how they may be cured*, may be anſwered, inaſmuch as we ſpeak here only of their remote cauſes. Now 'tis eaſy to obſerve that the curious enquirers into theſe cauſes loſe their labour, whilſt they endeavour, in ſpite of nature, to inveſtigate and bring them to view, and yet overlook the immediate and conjunct cauſes that are at hand, which muſt neceſſarily and may be diſcovered without ſuch trifling helps, inaſmuch as they diſcloſe themſelves to the underſtanding, fall under the notice of the ſenſes, or may be learnt from the anatomical obſervations of our predeceſſors. And as it is manifeſtly impoſſible a phyſician ſhould diſcover thoſe cauſes that have not the leaſt correſpondence with the ſenſes, ſo neither is it neceſſary: 'tis ſufficient for him to learn the immediate cauſes, and thoſe effects and ſymptoms of a diſtemper, that may enable him to diſtinguiſh accurately between this and another ſimilar diſeaſe. Thus, for example, in a *Pleuriſy*, it is a fruitleſs labour to ſearch into the ill quality and broken texture of the blood, whence this diſeaſe originally proceeds, which are not to be comprehended; but whoever perfectly underſtands the immediate cauſe thereof, and can diſtinguiſh it from all other diſtempers, will cure it as certainly, tho' he neglects the uſeleſs and trifling ſearch after remote cauſes.—— But this by way of digreſſion.

Specifics wanting towards the further improvement of phyſick.

21. But if any one were to aſk whether, beſides the two foregoing *deſiderata* in phyſick, *viz.* (1) a true hiſtory of diſeaſes, and (2) a certain and eſtabliſh'd method of cure, a third ſhould not be added, namely, the diſcovery of *ſpecific* remedies? I anſwer in the affirmative, and proceed to do my part towards it. For tho' that ſeems to me the beſt method of curing acute diſeaſes, which, after nature has pitch'd upon a certain kind of evacuation, aſſiſts her in promoting it, and ſo neceſſarily contributes to cure the diſtemper; it is nevertheleſs to be wiſh'd that the cure might be ſhortened by means of *ſpecifics* (if any ſuch medicines can be diſcovered) and, which is of more importance, that the patient might be preſerved from the evils which are the conſequence of thoſe errors that nature often unwillingly makes in expelling

expelling the cauſe, even tho' ſhe is aſſiſted in the moſt effectual and ſkilful manner by the phyſician. (*n*)

22. As to the cure of *chronic diſeaſes*, tho' I believe that more advantage may be expected from the uſe of a *method* only, than can be conceiv'd at firſt, yet 'tis plain that this is wanted in the cure of ſome of the moſt conſiderable diſtempers of this kind, which happens chiefly for this reaſon, that nature is not poſſeſs'd of ſo effectual a method of expelling the morbific matter in *chronic* as in *acute* diſeaſes, which might enable us to conquer the diſtemper, by aſſiſting her, and aiming at the true end. In eradicating a *chronic* diſeaſe, therefore,

(*n*) A want of ſpecifics in phyſick is a complaint of long ſtanding, and yet no due care has been taken to ſupply the deficiency. The few we have would have ſtood upon a much ſurer foundation, if their effects under all the different circumſtances they may have been given, had been diligently noted and regiſter'd; for by this means we ſhould have been furniſh'd with a ſet of rules, directing how and when to exhibit, or not exhibit them, as well as uſeful cautions to render them more benificial. The beſt medicines often fail merely for want of adminiſtering them judiciouſly; for ſuppoſing them to have undergone no change for the worſe, by keeping, or unſkilful preparation, it is manifeſt they muſt needs always produce ſimilar effects in nearly the ſame given circumſtances: ſo that when they do not, the fault is not in the medicines, but proceeds from their being given improperly, without diſtinguiſhing & the accuracy requiſite in caſes of this nature.

Certain it is that a true ſpecific is of that real value, that a perſon would be amply rewarded for his pains, who by making a diligent enquiry after this kind of medicines, ſhould diſcover but one in his whole life. In order to proceed in ſuch a method as may afford ſome hopes of ſucceſs, it might not be amiſs, (1.) to get a clear conception of what is meant by a *ſpecific*, which may, perhaps, be defin'd, " a medicine poſſeſs'd of ſuch peculiar vir- " tues, as infallibly to relieve, or cure the particular diſorder for " which it is uſed, being exhibited as nearly as can be in the ſame " given circumſtances". (2) The next thing to be done is to form a ſet of rules to direct him methodically in the enquiry and manner of making proper trials, ſo as not to run the riſque of his reputation, or injure the patient. Natural and experimental philoſophy, mechanics, anatomy, botany, chemiſtry, *&c.* are to be ſtudied with this view: and not a few helps may be had from analogy, and comparative anatomy and medicine. (3) The ſucceſs and failure of a ſpecific in the ſeveral caſes it is given are to be be carefully and faithfully regiſter'd, not omitting the leaſt particular; ſo that a right judgment may be form'd of the efficacy, or inſignificancy of the medicine employ'd, and phyſicians accordingly be encourag'd to have recourſe to it upon the like occaſions, or taught to reject it. *Baglivi, prax. med. p.* 224, *&c.*

fore, whoever is poſſeſs'd of a medicine, powerful enough to deſtroy the ſpecies of it, juſtly deſerves the appellation of a phyſician; to which he has no right, who only introduces a new one from the firſt and ſecond qualities, inſtead of the former, which may indeed be done without aboliſhing the ſpecies. Thus, for inſtance, a perſon that has the *gout* may be heated or cool'd without curing the diſtemper; ſpecific diſeaſes being not more immediately cur'd by that method, which is only introductive of different qualities, than fire is extinguiſhed by a ſword. For pray what does heat, cold, moiſture, dryneſs, or any of the ſecond qualities contribute towards the cure of a diſtemper, the eſſence of which conſiſts in none of theſe?

There are fewer *ſpecifics* than are imagined.

23. But if it be objected, that we have long been poſſeſs'd of a ſufficient number of *ſpecifics*, I anſwer, that the contrary will ſoon appear, provided a ſtrict ſearch be made into this particular: the *Peruvian* bark being the only one we have. For there is a wide difference between medicines that *ſpecifically* anſwer ſome certain curative indication, which, being effectually perform'd, perfects the cure, and thoſe that ſpecifically, and immediately cure a diſeaſe, without regarding any particular intention, or curative indication. To exemplify this: *mercury* and *ſarſaparilla* are uſually reckon'd ſpecifics in the venereal diſeaſe, tho' they ought not to be deem'd proper and immediate ſpecifics, unleſs it could be demonſtrated by undeniable inſtances, that *mercury* had cured the patient without cauſing a *ſalivation*, and *ſarſaparilla* without raiſing a *ſweat* (*o*). For other

(*o*) I ſee no juſt reaſon for excluding from the number of ſpecific medicines, mercury, as a cure for the venereal diſeaſe, milk in one ſtage of a conſumption, opium in pains, ſoap in ſome kinds of the jaundice and the ſtone, the fetid gums in ſome hyſteric diſorders, nor oil in the bite of a viper; ſince they all ſeem peculiarly adapted to relieve or cure the reſpective diſorders juſt enumerated.

Beſides, to think that not a ſingle ſpecific ſhould have been diſcover'd by the united labours of a ſurprizing number of learned and indefatigable men, is more than enough to diſcourage the moſt ſanguine perſon from a ſearch that is ſo little likely to afford him an equivalent for his pains. For if the *bark* be indeed the only ſpecific we have, that was a caſual diſcovery, and not the fruit of ſtudy and experience.

other diſeaſes are cur'd in the ſame way by other evacuations, and nevertheleſs the medicines exhibited for this purpoſe do no more immediately contribu e to the cure of the diſeaſes that yield to thoſe evacuations, which theſe medicines are principally deſign'd to promote, than a lancet does towards the cure of a *pleuriſy*; which no body, I imagine, will call a ſpecific in this diſorder.

24. Specific medicines, therefore, conſider'd in our limited ſenſe of them here deliver'd, fall not to every man's ſhare, and ſeldom to theirs who take no pains to diſcover them; and yet I doubt not but out of the overflowing fulneſs wherewith nature, by the appointment of our moſt liberal creator, abounds for the preſervation of the whole race of mankind, proviſion is likewiſe made for the cure of the principal diſeaſes which afflict them, and that by ſuch medicines as are within reach, and the produce of every climate. It is indeed pity that we are not better acquainted with the virtues of plants, which I eſteem the beſt part of the *materia medica*, and moſt likely to afford ſuch medicines as we have juſt treated of. For the parts of animals ſhould ſeem to reſemble the human body too nearly, and minerals to differ too much from it; and hence it is I ingenuouſly own, that minerals more effectually anſwer indications, than medicines prepar'd from animals or plants do, but yet not ſpecifically, in the ſenſe and manner above-mentioned. For my own part, I can only ſay that I have ſpent ſome years in reſearches of this kind, yet without ſucceeding well enough to encourage me to communicate the reſult of my enquiries. (*q*)

More might be diſcovered by taking due pains.

A misfortune that the virtues of plants are not better known.

25. But

(*q*) There does not ſeem to be ſo much reaſon for this complaint now as there might be in our author's time, much pains having been taken of late years by ſeveral ſkilful perſons, both in the way of analyſis and experiment, in order to diſcover and ſettle their virtues upon a ſurer foundation. And nevertheleſs, if this part of the *materia medica* were much more contracted, and plants only of known and approv'd virtues uſed, the curative method would probably receive very conſiderable improvements, inaſmuch as the preſcriber would not be at a loſs to chuſe in ſo ſmall a number, and be abundantly better ſatisfied of what they can and cannot do, by the frequently repeated trials he would be obliged to make of the few that ſhould be judg'd worth retaining.

To

Other excellent medicines besides plants

25. But tho' I like plants best, yet I would not decry those excellent medicines, the productions of a different kingdom, that have been discover'd by the application of our predecessors, or cotemporaries, and found to answer the curative indications effectually. Amongst these Dr *Goddard*'s drops claim the first notice, which are prepared by Dr *Goodall*: I prefer them to all other volatile spirits, on account of their efficacy and virtue in answering the purposes for which they are given. (*r*)

The author publishes a history of *acute* diseases.

26. To conclude: having engag'd myself in this preface, to publish a specimen of my labours for the improvement of physick, I will now endeavour to fulfil my promise, by presenting the publick with the history and cure of *acute* diseases. And tho' in executing this design, I am sensible I shall expose all the fruit of my labours for the best part of my life to the indolent and ignorant, yet I am too well acquainted with the disposition of this degenerate age to expect any thing but censure and contumely in return; and know that I should have gain'd more reputation by advancing some trifling and useless speculation: but be that as it will, I hope to be rewarded elsewhere. (*s*)

27. If

To this may be added, that plants and simple medicines have great advantages over compound: thus they are more safe and certain than the latter, and we are seldomer deceiv'd in them, because they cannot be so readily adulterated, and may be given in substance, or require only a few easy operations to fit them for use; whereas the best compounds are often spoil'd by unskilful preparations.

(*r*) The medicine that goes under this name is an highly volatile oleous alcaline spirit, drawn from dead silk worms and their remains, and extoll'd for giving relief in convulsions from acidities, or worms: but the present practice takes no notice of it.

(*s*) Our author, however well he deserv'd of mankind, should seem to have had but too much reason to apprehend that his laudable endeavours to serve them, instead of procuring him their esteem and regard as they ought to have done, would expose him to the envy of the ignorant, the hatred of the vicious, and the contempt of the prejudic'd part of mankind. He expected to meet with little else but censure and contumely from an ungrateful world, in return for his generous and honest labours; and 'tis to be fear'd he was not disappointed in the issue. *See pag.* 110. *par.* 40. *pag.* 272. *par.* 3. *pag.* 414. *par.* 140. *pag.* 416. & 493.

But what the malice, envy, and prejudice of some of his cotem-

27. If it be objected here, that there are thoſe no leſs vers'd in practice than I am, who are of a different opinion; I anſwer, that 'tis none of my buſineſs to enquire into what other perſons think, but to eſtabliſh the truth of my own obſervations; in doing which, I only beg the reader's patience, not his favour, for the ſubject itſelf will ſoon ſhew whether I have acted with ſincerity, or, on the contrary, like the moſt profligate wretches, endeavoured to deſtroy my fellow creatures after my deceaſe (*t*). I only beg pardon for having deliver'd the hiſtory and cure of diſeaſes with leſs accuracy than I intended, being ſenſible that I have not compleated my deſign, but rather excited men of greater abilities to undertake the finiſhing of a performance hereafter, that I have here executed imperfectly.

The author only ſollicitous to eſtabliſh his own obſervations.

28. And now I have but one thing more to inform the reader of, which is, that I do not intend to ſwell the following ſheets with a multitude of particular obſervations in confirmation of the method therein delivered; for it would be both needleſs and tireſome to repeat thoſe things particularly which I have compriſed in a ſummary way. I eſteem it ſufficient to ſubjoin occaſionally a particular caſe, containing the ſubſtance of the preceding method, at the concluſion of every general obſervation, at leaſt with reſpect to late years. And I declare that I have publiſh'd no general method, that has not been eſtabliſh'd and verified by frequent experience.

gives few particular obſervations to avoid ſwelling the work;

29. Whoever expects to meet with abundance of preſcriptions will be diſappointed; it being left to the judgment

and only a few preſcriptions.

temporaries refus'd him living, has been abundantly made up to him ſince his death; for no one, the great *Hippocrates* himſelf not excepted, ever ſtood poſſeſs'd of a fairer reputation than he has ſince enjoy'd, and ſtill bears. His judgment, integrity and candour are univerſally acknowledg'd and applauded: the phyſicians of our own nation have recourſe to his writings as an oracle, and foreigners never mention him without the moſt honorable titles, and, to ſum up all in one, many of them call him the *Engliſh Hippocrates*. We tread in his ſteps at this day with ſucceſs, and without the ſpirit of propheſy I may venture to foretel that our ſucceſſors will do the ſame, and that as long as there ſhall be able and honeſt phyſicians, our excellent author will be remember'd with the higheſt gratitude and eſteem, and his methods of practice perſued.

(*t*) *See p.* 345, *note* (*k*).

judgment of the phyſician to preſcribe as the circumſtances may require. I have done my part by mentioning the indications to be anſwered, and pointing out the time and manner of doing it: for the practice of phyſick chiefly conſiſts in being able to diſcover the true curative indications, and not medicines to anſwer them; and thoſe that have overlook'd this point have taught empirics to imitate phyſicians.

Apologizes for the ſimplicity of the medicines he recommends.

40. But if it be objected, that in ſome caſes I have not only renounc'd the pompous part of preſcription, but likewiſe recommended ſuch medicines, as, by reaſon of their ſimplicity, have little or no affinity with the *materia medica*; I anſwer, that I conceive that this procedure will offend none but perſons of little underſtanding and leſs benevolence; for the wiſe know that every thing is good which is uſeful. And that *Hippocrates* in adviſing the uſe of bellows in the *iliac paſſion*, and the total diſuſe of all medicines in a *cancer*, with other articles of the like nature, which occur in almoſt every page of his writings, deſerves to be eſteem'd as able a phyſician, as if he had fill'd them with the moſt pompous preſcriptions.

31. I intended alſo to have given a hiſtory of *chronic* diſeaſes, at leaſt of thoſe I had moſt frequently treated; but as this will be a work of labour, and being deſirous likewiſe to ſee firſt how theſe ſheets are receiv'd, I ſhall defer the proſecution of it to ſome other time. (*v*)

(*v*) The author, however, ſeems to have done this in a ſummary way in his *proceſſus integri*, here firſt annex'd to his other works; a very few *chronic* diſtempers having eſcaped his notice, as will appear upon turning over this intirely practical performance.

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SECT. I. CHAP. I.

Of acute Diſeaſes in general.

1. A DISEASE, in my opinion, how prejudicial ſoever its cauſes may be to the body, is no more than a vigorous effort of nature *(a)* to throw off the morbific matter, and thus recover the patient (*b*). For as God has been pleaſed ſo to create mankind, that they ſhould be fitted to receive various impreſſions from without, they could not, upon this account, but be liable to different diſorders; which ariſe (1) either from ſuch particles of the air, as having a diſagreement with the juices, inſinuate themſelves into the body, and, mixing with the blood, taint the whole frame; or (2) from different kinds of fermentations and putrefactions of humours detained too long

Diſeaſes defined.

Their cauſes.

(*a*) See the term *Nature* explain'd, *Sect.* II. *Chap.* II. *Par.* 48.

(*b*) In order juſtly to define a diſeaſe in general, it ſhould be firſt known what health is; a morbid ſtate of the body being correlative to a ſound one.—Now if health may be ſaid to conſiſt "in a free and regular circulation, a juſt mixture and pro- "portion of the blood and juices, the due tone and motion of "the ſolids, and a perfect exerciſe of the vital and animal func- "tions", then a diſeaſe may be defin'd, "a conſiderable altera- "tion in the motion, mixture, or quantity of the fluids, a too "great tenſion, or relaxation, and conſequently an accelerated "or languid motion of the ſolids, affecting the whole body, or "only ſome parts thereof, join'd with a remarkable diſorder of "the ſecretions, excretions, vital and animal functions, and "tending either to recovery, death, or the diſordering ſome "parts of the body, when the diſeaſe terminates in another."

This definition takes in the whole of what is meant by a diſeaſe in general; for it not only clearly ſhews wherein it actually conſiſts, namely, in a diſorder of the vital and animal functions, but includes its immediate cauſe, which is an augmented or diminiſhed motion in the whole body, or ſome of the parts, and alſo enumerates the effects it has on the body.

It ſhould be further obſerved, that there are abundance of diſtempers which do not agree with our author's definition of a diſeaſe; as for inſtance a *palſy*, in which it does not appear that there is any morbific matter fixed on the nerves; and all thoſe diſeaſes likewiſe, which proceed from a weak relaxed ſtate of the ſolids, or the poorneſs and languid motion of the fluids, or from both together. By his definition, therefore, it ſhould ſeem that he had an inflammatory fever chiefly in view, with which, in reality, it beſt correſponds. The deſcription of a diſeaſe, as it appears in all its variety of ſymptoms in the human body, is ever the beſt definition that can be given of it: this alone is truly ſcientifical, and reſts upon the moſt ſolid foundation.

Sect. 1. in the body, for want of its being able to digeſt, and diſcharge them, on account of their too large bulk, or unſuitable nature.

2. Theſe circumſtances being ſo cloſely interwoven with our conſtitutions, that no man can be entirely free from them, Nature provides ſuch a method and train of ſymptoms, as may expel the peccant matter that would otherwiſe deſtroy the human fabric. And tho' this end would be more frequently obtained by theſe diſagreeable means, were not her method obſtructed thro' unſkilfulneſs; yet, when left to herſelf, either by endeavouring too much, or not enough, the patient pays the debt of mortality; for it is an immutable law that no generated being can always continue. (*c*)

Their ſymptoms.

Illuſtration

3. A little to exemplify this doctrine: What is the *plague* but a complication of ſymptoms to throw out the morbific particles (taken in with the air we breathe) through the proper emunctories, by way of external abſceſs, or other eruptions? What is the *gout*, but the contrivance of nature to purify the blood of aged perſons, and, as *Hippocrates* phraſes it, to purge the receſſes of the body? And the ſame may be ſaid of many other diſeaſes, when they are perfectly formed. (*d*)

Acute diſeaſes whence.

4. But nature performs this office, quicker or ſlower, according to the different methods ſhe takes to expel the morbific cauſe. For when a fever is required to looſen the morbid particles from the blood, to promote their ſeparation, and at length diſcharge them by ſweat, a looſeneſs, eruptions, or other ſimilar evacuation; as this effect is produc'd in the maſs of blood, with a violent motion of the parts, it follows, that the change, to recovery or death, muſt be ſudden, (according as Na-

(*c*) *Conſtat, æternâ poſitumque lege eſt,*
Conſtet ut genitum nihil. BOETIUS.

(*d*) Nothing is more evident than that the body is a *living* machine, ſo formed that many of its diſorders correct themſelves, and reſtore the body to its natural ſtate; whilſt others perpetuate and increaſe themſelves, and bring on its deſtruction. Hence it clearly follows, that 'tis the buſineſs of phyſicians to diſcover from obſervation, the ſeveral ways leading to theſe contrary ends, in the ſeveral diſorders of the body; to promote the firſt, and oppoſe the laſt. Thus, for inſtance, acrimonious matter in the ſtomach and bowels occaſions a vomiting and looſeneſs; which are ſometimes juſt ſufficient to relieve the body, by diſcharging what is offenſive, ſometimes fall ſhort of this; and at others are ſo violent as to end in exhauſtion and death. Accordingly the phyſician ought, in ſome caſes, to give emetics or purgatives, and in others opiates, as experience, with the reaſoning reſulting from it, ſhall direct.

Nature can conquer the morbific matter by a criſis, or is forced to ſubmit) and that theſe efforts muſt be joined with violent and dangerous ſymptoms. And of this kind are all *acute diſeaſes*, which come to their ſtate with rapidity, violence, and danger. Now, in this way of ſpeaking, all thoſe diſeaſes may be eſteemed *acute*, which, with reſpect to their fits taken together, go on ſlowly, but with reſpect to a ſingle fit are ſoon terminated *critically*, of which kind are all intermittent fevers. Chap. I.

5. But where the matter of the diſeaſe is ſuch that it cannot raiſe the aſſiſtance of a fever, for its thorough diſcharge, or is fix'd upon a particular part too weak to expel it, either on account of the peculiar ſtructure of that part, (as in the palſy, where the morbific matter is fix'd in the nerves, and an empyema, where, it is diſcharged in the cavity of the breaſt) or through a want of natural heat and ſpirits, (as when phlegm falls upon the lungs weakened by age, or an habitual cough) or laſtly, from a continual afflux of new matter, whereby the blood becomes vitiated, and, by its vigorous endeavours to throw it off, overpowers and oppreſſes the part affected (*e*); in all theſe caſes, the matter is ſlowly brought to concoction, or not at all; and therefore diſeaſes proceeding from ſuch indigeſtible matter, are what we properly term *chronic*. And from theſe two contrary principles, acute and chronic diſeaſes reſpectively ariſe. Chronic diſeaſes, whence.

6. As to acute diſeaſes, of which I now deſign to treat, ſome of them proceed from a latent and inexplicable alteration of the air, infecting the bodies of men; and not from any peculiar ſtate or diſpoſition of the blood and juices, any further than an occult influence of the air may communicate this to the body: theſe continue only during this one ſecret ſtate, or conſtitution of the air, and, raging at no other time, are called *epidemic diſtempers*. The cauſes of acute epidemic diſeaſes.

7. There are other acute diſeaſes, ariſing from ſome peculiar indiſpoſition of particular perſons; but as theſe are not produced by a general cauſe, few are ſeiz'd with them at once. Theſe alſo appear in all years, and at any time of the year indifferently, ſome exceptions admitted, which I ſhall hereafter mention, in treating of this kind particularly. Theſe I call *intercurrent*, Intercurrent, or ſporadic acute diſeaſes.

(*e*) For inſtance, in the Gout.

Sect. 1. or *ſporadic* acute diſeaſes, becauſe they happen at all times when epidemics rage. I will begin with epidemics, and chiefly propoſe to give a general hiſtory thereof.

CHAP. II.

Of epidemic Diſeaſes.

1. IF one were to examine all the branches of phyſic, nothing, perhaps, would appear ſo ſurprizing as the different, and perfectly diſſimilar face of epidemic diſeaſes; which do not ſo much relate to, and depend upon the various ſeaſons of the ſame year, as upon the different conſtitutions of different years.

Epidemic diſeaſes differ ſurpriſingly;

2. And this manifeſt diverſity of theſe diſeaſes ſtill farther appears, not only from their proper and peculiar ſymptoms, but alſo from the different method of cure they reſpectively require. Hence it is clear, that theſe diſtempers, tho' to leſs accurate obſervers they may ſeem to agree in their external face, and certain ſymptoms in common, are, in reality, of very different and diſſimilar natures. Whether a careful examination, ſuch as, perhaps, could not be well made in the life of one man, might ſhew, that certain tribes of epidemic diſorders conſtantly follow others in one determined ſeries, or circle, as it were; or whether they all return indiſcriminately, and without any order, according to the ſecret diſpoſition of the air, and the inexplicable ſucceſſion of ſeaſons, I am not certain.

require a different treatment.

3. This, however, I am convinc'd of from numerous, careful obſervations, that the abovemention'd kinds of diſeaſes, eſpecially continued fevers, differ ſo extremely, that the ſame method which cures in the middle of the year, may poſſibly prove deſtructive at the concluſion of it; and when I had once happily fallen upon a genuine method of treating any ſpecies of fevers, ſuitably to its nature, I always prov'd ſucceſsful (proper regard being had to the conſtitution, age, and other particular circumſtances of the patient) till that ſpecies became extinct, and a new one aroſe; when I was again doubtful how to proceed, and, notwithſtanding the utmoſt caution, could ſcarce ever preſerve one or two

of

of my firſt patients from danger, till I had thoroughly inveſtigated the nature of the diſtemper, and then I proceeded in a direct, and ſafer way to the cure. Chap. 2.

4. And though I have carefully obſerved the different conſtitutions of different years, as to the manifeſt qualities of the air, that I might from thence diſcover the cauſes of the ſo great diſſimilitude of epidemic diſeaſes; yet I muſt own, I have hitherto made no progreſs; having found that years, perfectly agreeing as to the manifeſt temperature of the air, have nevertheleſs produced very different tribes of diſeaſes; and *vice verſa*.

5. The matter ſeems to ſtand thus: There are various general conſtitutions of years, that owe their origin neither to heat, cold, dryneſs, nor moiſture; but rather depend upon a certain ſecret and inexplicable alteration in the bowels of the earth, whence the air becomes impregnated with ſuch kinds of *effluvia*, as ſubject the human body to particular diſtempers ſo long as that kind of conſtitution prevails, which, after a certain courſe of years, declines, and gives way to another. Each of theſe general conſtitutions is attended with its own proper and peculiar kind of fever, which never appears in any other; and therefore I call this kind of fever *ſtationary*. Stationary fevers defined;

6. There are alſo certain particular conſtitutions of the ſame year, in which, tho' ſuch kinds of fevers as follow the general conſtitution of the year, with regard to the manifeſt qualities of the atmoſphere, may prove more or leſs epidemic, and riſe either earlier or later; yet the fevers that appear in all years (which we therefore call *intercurrents*) do proceed from ſome one or other manifeſt quality of the air; for inſtance, pleuriſies, quinſies, and the like; which generally happen when an intenſe and long continued cold is immediately ſucceeded by a ſudden heat. It may therefore be, that the ſenſible qualities of the air have ſome ſhare in producing thoſe intercurrent fevers which appear in every conſtitution of the atmoſphere, but they do not cauſe the epidemics peculiar to the general conſtitution. And yet, at the ſame time, it muſt be acknowledged that the abovementioned qualities of the air may more or leſs diſpoſe the body to the particular epidemic diſeaſe; and the ſame may be affirmed of any error in the non-naturals. not produced by the manifeſt qualities of the air.

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Some epidemics regular.

7. Now it muſt be obſerved, that ſome epidemic diſeaſes, in ſome years, are uniformly and conſtantly the ſame, appearing in almoſt every patient with the ſame train of ſymptoms, and going off in the ſame manner. From this kind therefore, as the moſt perfect, the genuine hiſtory of epidemic diſeaſes is to be taken.

Others irregular.

8. On the contrary, in other yeats there are other diſtempers, which, tho' called epidemic, prove very irregular and diſſimilar, as having no one fixt form, or conſtant appearance, but are extremely irregular, both as to the variety and diſſimilarity of the ſymptoms, and the manner in which they proceed and go off. This great variety in epidemics happens from hence, that every conſtitution produces diſeaſes conſiderably differing from thoſe of the ſame kind, that prevailed in other conſtitutions, at another time; which not only holds true of fevers, but of moſt other epidemic diſeaſes.

9. Nor is this all; for there is another ſubtilty of nature ſtill behind, *viz.* that the ſame diſeaſe, in the very ſame conſtitution of the year, frequently appears in a various and diſſimilar manner, as to the time of its beginning, ſtate, and declenſion; which is an obſervation of ſuch conſequence, as to regulate the indications of cure.

Epidemics either vernal or autumnal.

10. Again, it muſt be obſerved, that all epidemics are of two ſorts, *viz. vernal* and *autumnal*, and tho' they may poſſibly ariſe at a diſtant time of the year, yet they muſt be referr'd either to ſpring or autumn, according as they approach thereto reſpectively. For ſometimes the temperature of the air conſpires ſo much with an epidemic diſeaſe, as to produce it before its time; and, on the other hand, it ſometimes oppoſes it ſo much, as to make it appear later, even in perſons diſpoſed to receive it. When therefore I ſhall mention ſpring or autumn, I do not preciſely mean the *vernal* or *autumnal* equinox, but take in a wider compaſs.

The courſe of ſome vernal ones.

11. Some vernal epidemics appear early, as in *January*, and thence gradually increaſing, come to their ſtate about the vernal equinox; after which they gradually decreaſe, and at length diſappear about the ſummer ſolſtice, except, perhaps, in a very few inſtances. Of this kind I reckon the meaſles, and vernal tertians, which, tho' they riſe ſomewhat later, as in *February*, do

do likewiſe diſappear near the ſummer ſolſtice. Whilſt others, riſing in the ſpring, and daily increaſing, come not to their ſtate till about the autumnal equinox, after which they gradually decreaſe, and vaniſh at the approach of winter. Of this kind are the plague and the ſmall-pox, in thoſe years when either of them is the principal diſeaſe of the year. Chap. 2.

12. The *cholera morbus*, which is of the number of autumnal epidemics, riſes in *Auguſt*, and finiſhes its courſe in a month; tho' there are other diſeaſes which ariſe at the ſame time, and run on to the winter; as autumnal dyſenteries, tertians and quartans; all which, however, notwithſtanding the longer or ſhorter ſpace they ſometimes affect a few particulars, generally ceaſe in two months. The different duration of autumnal epidemics.

13. As to fevers in particular, it muſt be obſerved, that the greateſt part of them, which are of the continued kind, have hitherto no names aſſigned them, as they depend upon the influence of a general conſtitution or ſtate of the air; but the names whereby they are diſtinguiſhed are derived from ſome remarkable alteration made in the blood, or ſome other apparent ſymptom; whence they are called *putrid*, *malignant*, *petechial*, *&c.* But as almoſt every conſtitution, beſides the fevers it produces, eminently favours ſome remarkable epidemic diſeaſe; as the plague, ſmall-pox, dyſentery, *&c.* I ſhould think that theſe fevers ought to derive their names from the conſtitution, as this tends more peculiarly to produce ſome one of theſe remarkable diſtempers, at the time they appear, rather than from any alteration of the blood, or particular ſymptom; both which may equally accompany fevers of different kinds. Names of epidemic fevers whence to be taken.

14. Intermittents, indeed, derive their names from the interval of two fits, and by this mark are ſufficiently diſtinguiſhed, provided regard be had to the two diviſions of the year wherein they happen, *viz.* ſpring and autumn. And yet ſometimes fevers are of the true nature of intermittents, without any viſible ſign to diſcover them by. So when autumnal intermittents enter and appear early, as in *July*, they do not preſently aſſume their genuine form, as vernal intermittents generally do, but ſo far reſemble continued fevers in all reſpects, as not to be diſtinguiſhed, without a very Intermittents, how diſtinguiſhed. Autumnal ones ſometimes appear as continuals.

Sect. 1. ſtrict examination. But, at length, when the force of the prevailing conſtitution is a little weakened, they appear more genuine, and at the cloſe of autumn, quitting their diſguiſe, plainly manifeſt themſelves to be intermittents either of the tertian or quartan kind, as they really were from the firſt; but if this be not carefully attended to, phyſicians will be deceived to the diſadvantage of their patients, by taking ſuch kinds of intermittents for true continued fevers.

Some one epidemic uſually prevails over the reſt,

15. Again, it muſt be carefully remarked, that as many of theſe diſeaſes appear in the ſame year, ſome one or other of them rules over the reſt, which rage leſs at the ſame time; ſo that this one increaſing, the others decreaſe, and this diminiſhing, the others ſoon re-appear. And thus they prevail by turns, according as each is favoured by the diſpoſition of the year, and the ſenſible qualities of the air; and that diſtemper which rages moſt violently about the autumnal equinox, gives its name to the conſtitution of the whole year; for whatever diſtemper then prevails over the reſt, will eaſily be found to preſide over them during that year; and to the diſpoſition thereof all the then reigning epidemics accommodate themſelves, ſo far as their nature permits.

to the nature of which the reſt approach.

Inſtanc'd in the *ſmall pox* and *dyſenteries.*

16. Thus, for example; when the ſmall-pox prevails much, the fever of that year, which is leſs general, plainly partakes of the ſame inflammatory nature therewith; ſo that both diſtempers begin after the ſame manner, and are attended with a great ſimilarity of the moſt peculiar ſymptoms, as manifeſtly appears from the great tendency to ſpontaneous ſweats, and the diſcharge of *Saliva* in both; and they only differ in the eruption of the puſtules, and whatever depends thereon. Again, when dyſenteries are the principal raging diſeaſe of the year, the fever of the ſame year bears great reſemblance to their nature; excepting only that in a dyſentery the morbific matter is diſcharged by ſtool, with a few ſymptoms thereon depending. For they both attack in the ſame manner, and in both caſes *Aphthæ*, and the like ſymptoms, are equally apt to appear. And indeed the dyſentery we ſpeak of, is the very fever itſelf, with this particularity, that it is turned inwards upon the inteſtines, and diſcharges itſelf that way.

17. But

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17. But it muſt be remarked, that this principal epidemic which rages about the autumnal equinox, and lays all waſte before it, is check'd upon the coming in of winter; whilſt, on the contrary, the lower claſs of epidemics, ſubſervient, as it were, to that principal one, now chiefly rage, till the ſaid reigning diſtemper of the year again prevails, breaks their force, and aboliſhes their very name.

Prevailing epidemics check'd by the coming in of winter.

18. Laſtly, it muſt be obſerved that whenever any conſtitution produces various ſpecies of epidemics, all theſe ſpecies differ in kind from thoſe which have the ſame name, but are produced in another conſtitution. But how many peculiar ſpecies ſoever ariſe in one and the ſame conſtitution, they all agree in being produced by one common general cauſe, *viz.* ſome peculiar ſtate of the air; and conſequently how much ſoever they may differ from one another in appearance, and ſpecific nature, yet the conſtitution common to them all works upon the ſubject-matter of each, and moulds it to ſuch a ſtate and condition that the principal ſymptoms (provided they have no regard to the particular manner of evacuation) are alike in all; all of them agreeing in this circumſtance, that they reſpectively grow mild or violent at the ſame time. It is further to be noted, that in whatever years theſe ſeveral ſpecies prevail at one and the ſame time, the ſymptoms wherewith they come on are alike in all.

All epidemics of one conſtitution produced by one common general cauſe.

19. Hence we may ſee how very various and ſubtile a method nature uſes in producing diſeaſes, which no one, I conceive, has hitherto traced in proportion to the dignity of the ſubject. And it appears, from this ſhort account, that as the ſpecific differences of epidemic diſtempers, eſpecially fevers, depend upon the ſecret conſtitution of the air (*a*), that thoſe perſons labour

The cauſes of fevers whence to be deriv'd.

(*a*) It ſhould ſeem poſſible, by a ſet of well-adapted experiments, accurately made, to diſcover what are uſually called the occult qualities of the air, ſo frequently mention'd by our author, and render them manifeſt to the ſenſes. And if, by this means, we could come at a tolerable knowledge of the effluvia, ſalts, and other heterogeneous matters, wherewith the air at different times, and in different countries is replete, it might give us almoſt a compleat knowledge of the nature of all epidemic diſeaſes that may ariſe for the future, provided due attention be given at the ſame time to the age, ſex, conſtitution, manner of living,

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bour unprofitably, who deduce the cauſes of different fevers from the morbific matter gradually collected in the body; for it is evident, that if any man in perfect health, ſhould remove to any part of our own country where an epidemic diſeaſe rages, he might in a few days be ſeiz'd with it, tho' it is ſcarce credible that any manifeſt alteration ſhould be made by the air in the juices of the ſame perſon, in ſo ſhort a time (*b*).

Difficult to lay down a general method of cure.

20. Nor is it leſs difficult to lay down general rules for the cure of theſe fevers, or to fix certain limits for practice. Under ſo much darkneſs and ignorance, therefore, my chief care, as ſoon as any new fever ariſes, is to wait a little, and proceed very ſlowly, eſpecially in the uſe of powerful remedies; in the mean time carefully obſerving its nature and procedure, and by what means the patient was either reliev'd or injur'd; ſo as ſoon to embrace the one, and reject the other (*c*).

21. In

living, &c, of the patient; all which circumſtances being carefully conſidered, and compared together, might probably direct to rational, fix'd and effectual methods of cure.

The proſecution of this ſubject by experiment, and not by way of conjecture, or hypotheſis, is ſurely worthy the notice of all ſuch as have leiſure and abilities for the undertaking; ſince very conſiderable advantages will accrue to mankind when once a hiſtory of this ſort ſhall be in ſome meaſure compleated. The excellent Mr *Boyle* has made great advances herein, and laid down the methods that ſhould be followed, in order to ſucceed in the attempt.—See Dr Shaw's *Abridgment of his Works, in* 3 *Vols.* 4to; Arbuthnot *on air*; *Dr* Hales's *ſtatical Experiments, and* Huxham *de aere et morb. epid.*

(*b*) There is a poſſibility that perſons, ſeemingly in perfect health, may have the principles, or *ſemen*, of ſome diſeaſe, actually exiſting, but lying dormant in the juices; in which caſe the diſeaſe cannot be ſaid to be produced, or cauſed, but only ſtirr'd into action by the ſecret conſtitution of the air. Is not this verified in many inſtances of perſons ſeiz'd with the ſmall pox, &c? If ſo, the morbific matter collected in the body, how little ſoever it be in quantity, may ſometimes principally contribute to the production of ſome particular diſeaſe thereon depending, contrary to what our author ſeems to allow. But whether it proceeds from any heterogeneous matter, or from the blood's attempting a new change, our author judges the indications in either caſe to be the ſame; whence this ſhould ſeem a matter of ſo little conſequence, as not to deſerve a ſerious diſpute.

(*c*) Might not a due regard to the preceding and the then reigning manifeſt temperature of the air, the manner of living, conſtitution, age, and ſex of the patient, together with a ſtrict attention to the firſt ſymptoms of any epidemic fever, enable the phyſician to proceed with greater certainty in the method of cure, than our author ſeems to judge poſſible?

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21. In ſhort, to reduce all the ſpecies of epidemics into claſſes, according to the variety of their appearances, to explain their peculiar ſigns, and point out the proper method of cure for each, is a very difficult taſk, and requires much time; and as they ariſe in no ſtated order of years, (at leaſt this is not yet diſcovered) to procure a juſt collection of obſervations about them, would perhaps require more than the life of any one phyſician; yet this taſk, how difficult ſoever, muſt be perform'd, before it can be juſtly ſaid we have done any thing conſiderable towards diſcovering the intricacy of theſe diſorders.

Epidemics not eaſily claſs'd and explain'd.

22. But how ſhall we give an account of the diſtinct ſpecies of epidemics, which not only, ſo far as appears, ariſe fortuitouſly, but alſo continue of the ſame kind for a ſingle year, or ſome certain ſeries of years; but in another year differ from each other ſpecifically? The beſt method I can pitch upon is that which deſcribes them thro' a competent number of years, in the ſame order in which they happened; and to do this at preſent, according to my ability, I will here deliver the hiſtory and cures of thoſe epidemics which rag'd from the year 1661, to 1676, *viz.* the ſpace of 15 years; and this, according to the moſt accurate obſervations I have been able to make. For it ſeems to me impoſſible to do any thing to this purpoſe, by endeavouring to aſſign their cauſes, as deriv'd from the manifeſt qualities of the air; or from any particular indiſpoſition in the blood and juices, unleſs ſo far as this may depend upon a ſecret influence of the air. And it would be ſtill more impoſſible to ſet down the ſpecies of various epidemics, as ariſing from ſome ſpecific alteration of the air, however eaſy this might ſeem to thoſe who can affix the names of fevers to ill-form'd notions, from the ſpeculation of ſuch alterations as may happen in the blood, or juices, by any particular degeneration of principles. By this means, indeed, whilſt we depart from nature, which is always the beſt guide, and indulge ourſelves the liberty of conjecture, we may make as many ſpecies of diſeaſes as we pleaſe; tho' at the ſame time we take ſuch a liberty as no one would eaſily grant to a botaniſt, who, in writing the hiſtory of plants, is oblig'd to abide by the teſtimony of the ſenſes, and not indulge his talent

Beſt diſtinguiſhed by deſcribing them.

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Sect. 1. at conjecture, however excellent he may be therein.

23. I preſume not here to deliver any thing perfect, not even in enumerating the whole claſs of epidemics; much leſs will I anſwer for it, that the diſeaſes I mention, as following one another, in the order I ſet them down, ſhall keep the ſame order hereafter. The thing I endeavour is to ſhew, by the aſſiſtance of a few years obſervations, how this matter ſtood lately with reſpect to my own country, and the city wherein I live; in order to aſſiſt in beginning a work that, in my judgment, will greatly tend to the advantage of mankind, when, at length, it ſhall be finiſhed by poſterity, and the whole ſeries of epidemics be exhibited to view, as they ſhall ſucceed each other for the future (*d*).

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(*d*) There are many particulars in this ſecond chapter, which ſeem rather ſuited to favour an hypotheſis, than taken from fact. That many acute diſtempers are epidemic is certain, and it is alſo certain that many epidemics of the ſame name are of different natures. But that epidemics are not conſiderably influenc'd by the ſenſible qualities of the air, has never yet been proved for want of ſufficient obſervation. On the contrary, ſo far as obſervation hitherto reaches, it ſtrongly favours the oppoſite opinion. Whoever conſiders the remarkable alterations the air frequently ſuffers in point of gravity, elaſticity, heat, cold, dryneſs and moiſture, together with the infinite diverſity of its contents, which are likewiſe perpetually varying, will, doubtleſs, conclude that the ſeveral epidemics, ariſing at the ſame time, muſt needs be rendered more or leſs violent and dangerous, according as the prevailing conſtitution of the air is more or leſs diſpoſed to conſpire therewith. And this, indeed, ſeems fully confirmed by modern obſervation. But whatever be the cauſe of the epidemic, it ſhould ſeem that the treatment thereof were beſt deduced from its ſymptoms, compared with the age, conſtitution, *&c.* of the patient; and not, as the author ſeems to intimate, that the ſame diſtemper, to all appearance, ſhall require different methods in different conſtitutions of the air. For, if it be different in its appearance, no wonder it ſhould require a different treatment. See Wintringham's *commentarium noſologicum*, Huxham's *obſervationes de aere et morbis epidemicis, and the edition of our author's works, printed at* Geneva, *in* 4*to.* 1716, *to which is added, a number of treatiſes on various epidemic diſtempers, and conſtitutions of the air, by different authors.*

CHAP. III.

The epidemic Conſtitution of the Years 1661, 1662, 1663, 1664, *at* London.

1. THE autumnal intermittent fevers which had reign'd for ſeveral years backwards, appeared with new force in the year 1661, eſpecially a bad kind of tertian, about the beginning of *July*, which continually increas'd, ſo as to prove extremely violent in *Auguſt*, ſeizing almoſt whole families in many places with great devaſtation; after which it gradually decreaſed upon the coming on of the winter, ſo as to appear ſeldom in the month of *October*. The ſymptoms that attended theſe tertians differed from thoſe of the intermitting tertians of other years, chiefly in the following particulars: (1) the fit was more ſevere; (2) the tongue more black and dry; (3) the intermiſſion between the fits not ſo manifeſt; (4) the loſs of ſtrength and appetite greater; (5) a greater tendency to a double fit; (6) all the concomitants in ſhort more violent; (7) and the diſeaſe itſelf more mortal than intermitting fevers uſually are; (8) when it happened in perſons aged, or of a bad habit of body, where, beſides, either bleeding or any other evacuations had diminiſhed the ſtrength, it would continue for two or three months. The tertian of this conſtitution deſcribed;

2. A few quartans accompanied theſe tertians, but both of them went off upon the firſt coming on of winter, (for they ſeized upon none that were unaffected by them before) and were followed by a continued fever, differing from the nature of autumnal intermittents only in this; that *they* happened at ſtated times, but *this* without intermiſſion; for they both ſeized almoſt in the ſame manner, and thoſe that were violently attack'd with either had a vomiting, dryneſs of the external parts, thirſt, and blackneſs of the tongue: ſweats alſo, towards the end of the diſtemper, readily diſcharged the morbific matter in both caſes. followed by a continual fever,

3. And it may even from hence appear that this fever belonged to the claſs of autumnal intermittents, becauſe it very rarely ſhewed itſelf in the ſpring. This reſembling the foregoing intermittents

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continued fever, therefore, appeared to me a kind of compendium of the intermittent; as, on the other hand, each ſingle fit of the intermittent was a kind of compendium of the continued fever. The difference between them conſiſted chiefly in this, that the continued fever finiſhed its period of effervescence all at once, in the ſame conſtant courſe; but the intermittent, by fits, at different times.

4. How long this continued fever had prevailed, I cannot ſay, having been hitherto ſufficiently employed in obſerving the general ſymptoms of fevers, and not yet finding that fevers might be diſtinguiſhed, with regard to the various conſtitutions of different years, or the different ſeaſons of the ſame year. This, however, I know, that there was only one ſpecies of continued fevers to the year 1665, and that the autumnal intermittents, which were frequent to that year, appeared afterwards very rarely.

Only one ſpecies of a continued fever from 1661 to 1665.

The order of the epidemics of this conſtitution.

5. The abovemention'd tertian fever, which ſpread very wide in 1661, as was ſaid above, contracted itſelf in the ſucceeding year; for in the following autumns, quartans prevailed over the other epidemics, during this conſtitution of the air. As the quartans always grew milder after the autumn, the continued fever, which appeared more rarely during all this time, now raged more violently till the ſpring, when vernal intermittents ſucceeded, which alſo going off at the beginning of *May*, the ſmall-pox appeared a little, but diſappeared again upon the coming in of the autumnal epidemics; *viz.* the continued fever and quartans, which then reigned. In this order did the epidemic diſeaſes appear and ſucceed each other, during this whole conſtitution of the air; of which I am now to treat in particular, eſpecially of the continued fever, and intermittents, whether vernal or autumnal, theſe being the chief diſtempers of this conſtitution.

This continued fever, of a capital kind;

6. I begin with this continued fever, which appears to me of a more capital kind than any of the reſt; becauſe nature here brought the febrile matter to a due concoction, and expelled it when concocted, in a limited time, more uniformly and regularly, than in any other fever. Moreover, as thoſe conſtitutions of the year which favour autumnal intermittents return more frequently, taking one year with another, than ſuch as

produce other epidemics, it follows that the continued fever attending intermittents occurs oftener than any other continued fever. Chap. 4. Occurs oftener than the reſt.

7. Beſides the ſymptoms which accompanied other fevers, the preſent fever had theſe in particular; *viz.* (1) a great faintneſs, (2) vomiting, (3) a dry and black tongue, (4) great and ſudden loſs of ſtrength, (5) a dryneſs of the external parts, (6) the urine conſtantly either turbid or thin, both of them here equally ſigns of crudity, (7) a looſeneſs in the decline, unleſs the phyſician happened to ſtop it at firſt, whereby the diſeaſe was prolonged, and rendered more obſtinate; (8) but in its own natural courſe it ſcarce laſted above fourteen, or one and twenty days *(a)*, when it went off, with a ſweat, or rather a gentle moiſture; (9) nor did any proper ſigns of concoction appear before in the urine; but at this time there generally did. Its ſymptoms.

8. Other ſymptoms alſo aroſe when this diſtemper was unſkilfully treated; however, as not only theſe, but the nature of the diſtemper itſelf will more clearly appear, from the particular method which I formerly adapted to this fever, I ſhall here ſet it down, as it was then publiſhed; at leaſt as far as it regards the preſent purpoſe: though at that time I was not aware of there being any other ſpecies of fever in nature.

CHAP. IV.

The continued Fever of the Years 1661, 1662, 1663, 1664.

MY firſt obſervation is, that the irregular commotion raiſed by nature in the blood, either as a cauſe or concomitant of this fever, is excited in order to ſeparate from it a certain heterogeneous matter contained therein, and prejudicial thereto; or elſe to change the blood itſelf into a new ſtate. Final cauſe of the commotion of the blood in this fever.

2. And here I rather chuſe to make uſe of the general word *commotion* than *fermentation* or *ebullition*; in order The term *commotion* preferred

(*a*) Does it appear from experience that any fever, which is not brought to a criſis in 14 days, is diſpoſed to run on to 21? Or is not this notion with ſome others of the like kind taken from the antients, and firſt by them, from ſome fancied harmony between numbers and the continuance of fevers?

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order to prevent all fruitleſs diſputes about words, that might ariſe from the uſe of thoſe, which, tho' they may ſeem harſh and metaphorical to ſome, are capable of a commodious interpretation. For tho' the commotion of the blood in fevers does at different times reſemble the fermentations and ebullitions of vegetable liquors; yet there are thoſe who think this commotion very different from both in more reſpects than one. For example, ſay they, fermenting liquors acquire a vinous nature, ſo as to afford an inflammable ſpirit by diſtillation, and to be eaſily turned into vinegar, which yields an acid ſpirit by the ſame treatment; yet neither of theſe changes have been hitherto obſerved of the blood. Again, fermentation and depuration are both carried on at one and the ſame time in vinous liquors; whereas the depuration of the blood in fevers does not accompany, but follow the analogous operation; as appears even to the eye, by the ſolution of a fever-fit by ſweat.

Ebullition eſteemed the impropereſt term.

3. As to ebullition, this analogy, they ſay, is ſtill more harſh, and, in many caſes, contrary to experience, where the commotion of the blood is too gentle to deſerve the title of ebullition. But not to engage in theſe controverſies; ſince the terms *fermentation* and *ebullition* have prevailed among the modern phyſicians, I likewiſe have not ſcrupled to uſe them occaſionally, meaning only to convey my thoughts more eaſily thereby. Moreover, that this febrile commotion of the blood is raiſed by nature, in order to ſeparate an heterogeneous and noxious matter, appears from eruptive fevers, in which an excrementitious matter, of a vitiated quality, that lay concealed in the blood, is, by means of the ebullition, thrown out upon the ſkin *(a)*.

4. Nor is it leſs clear to me, that a febrile commotion of the blood often tends only to introduce a new ſtate of that fluid, and that a man whoſe blood is pure and untainted may be ſeized with a fever; for fevers frequently appear in healthy bodies, where there was before

(*a*) In eruptive fevers the diſorders of the pulſe go off entirely, or abate very much upon a free eruption; and in the ſmall pox the matter depoſited in the puſtules becomes infectious after a time. It ſeems therefore to have been morbific matter originally, which, while it circulated with the blood, occaſioned a great commotion in it, agreeably to our author's notion.

for no previous indiſpoſition, either from a plethora, cachexy, or tainted air, that could give riſe thereto. Yet even in theſe caſes, upon ſome remarkable preceding change of the air, diet, and others of the non-naturals a fever preſently ariſes, upon account of the blood's affecting a new ſtate, or diſpoſition, ſuch as this air and diet require, and not becauſe the irritation of vitiated particles, latent in the blood, brings on the fever (*b*). Tho' I make no queſtion but the matter regularly diſcharged in the deſpumation of the blood, after the febrile commotion, may prove vitiated, tho' the blood before was healthy: Which is not more ſtrange perhaps than that ſome parts of our food ſhould become corrupt and fetid, after having undergone a remarkable alteration in the body, and ſuffered a ſeparation from the reſt (*c*). Chap. 4.

5. With regard to this diſeaſe, I judge that the genuine indications are, to keep the commotion of the blood within ſuch bounds as ſuit the deſign of nature; ſo as to prevent its riſing too high on the one ſide, whence dangerous ſymptoms might follow, or ſinking too low on the other, whereby either the excluſion of the morbific matter might be hindered, or the endeavour of the blood affecting a new ſtate be fruſtrated. And hence, whether the fever be owing to the irritation of any heterogeneous matter, or to the blood's attempting a new change, the indication of the diſtemper will, in either caſe, be the ſame, and upon this foundation I

The commotion of the blood to be duly regulated.

(*b*) This does no way appear; why may not the diet, air, *&c.* have already changed the blood before the fever begins? There is in all this too much ſpeculation concerning cauſes, with which, and eſpecially final ones, practice has little to do. The ſame advancement of theory which opens cauſes to us, will probably diſcover the uſes to be made of them; but we are yet far ſhort of this. The beſt encomium that can be given to our author's theory is, that it ſhould ſeem to have been formed after he had determined his practice, and entirely made to bend to this. So that it is in effect no more than a plauſible way of talking, and of gratifying the reſtleſs craving of the fancy after ſenſible images repreſenting the manner and progreſs of the effects. Many perſons aſk more than is reaſonable from phyſicians in accounting for things, but then they are often content with leſs than they ought. A lively metaphor, or a ſtrong contraſt of words, are often ſatisfactory.

(*c*) All this requires to be verified by experience, laying aſide metaphor and analogy.

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Bleeding where prejudicial;

6. When the blood is weak (*e*), as it generally is in children, or wants its due proportion of ſpirit (*f*), as in declining age (*g*), or even in young perſons worn out by a lingering illneſs, I refrain from bleeding: Otherwiſe the blood, being already too weak even without taking any of it away, might prove abſolutely unequal to the buſineſs of deſpumation; whence the whole maſs becoming corrupted, death might eaſily enſue. Thus a haſty check can ſcarce be put to the fermentation of wine, without injuring the liquor: For nature cannot bear the corrupt particles ſhe has once begun to throw off, which tho' they were pure, whilſt equably mix'd with the blood, now ſtrongly tend to taint the reſt of the juices. I am well aware, however, that where bleeding has been imprudently uſed, the patient may be ſometimes ſaved by means of proper cordials, and the blood reduced to a proper temper for performing the neceſſary deſpumation: But prevention is better than cure.

where ſerviceable.

7. When the blood happens to be of a contrary diſpoſition,

(*d*) The practice is, as we here ſee, to be regulated by the degree of the commotion, and the proper degree of this, as we ſhall ſee preſently, by the ſymptoms. But why then could not the practice be regulated by the ſymptoms, without ſtarting an hypotheſis, ſo difficult both to be defined and proved? This ſhould be a caution to every man to ſtand on his guard; ſince ſo excellent a practitioner, and ſo profeſſed an enemy to theory, could not forbear entangling his practice with an hypotheſis, which is rather a figurative deſcription, than an explicit detail of the ſteps which he ſuppoſes nature to take, and for which he has produced no ſolid authority from facts.

(*e*) How does the weakneſs of the blood diſcover itſelf to the ſenſes? By the too ſmall proportion of *Craſſamentum?* Whatever it be, it ought to have been mentioned particularly, and the reaſon taken from thence, if it afforded any: If not, ſtill there lies an appeal to experience.

(*f*) This again, I preſume, can never be made out to the ſenſes.

(*g*) Old perſons ſeem to bear bleeding better than either of the others. However, the practical doctrine here delivered is very good: Only it would have been much eaſier, and more ſatisfactory to have founded it upon experience, or at leaſt upon obvious reaſons immediately reſulting from thence. Thus in children, and perſons exhauſted by a preceding diſeaſe, the quantity of red blood is leſs in proportion to the quantity of the other fluids, than in robuſt and grown perſons; neither do their relaxed veſſels compreſs the fluids ſo ſtrongly, and turn them into red blood ſo faſt. They cannot, therefore, ſupport the loſs of red blood ſo well.

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poſition, as it uſually is in young perſons of a ſtrong and ſanguine habit, I eſteem bleeding the firſt ſtep to the cure, and not to be omitted without danger, except in the caſes hereafter mentioned. For without it not only deliriums, phrenſies, and the like diſorders from inflammation might ariſe from too great an efferveſcence of the blood, but alſo the circulation might be obſtructed, or the whole maſs, in a manner, ſtagnate from its exceſs in quantity *(b)*.

In what proportion to be uſed.

8. As to the proportion, I uſually take away no more than I conceive may prevent thoſe inconveniencies, which, as we ſaid above, might proceed from an immoderate commotion of the blood *(i)*: Afterwards regulating the degree of heat, by repeating or omitting bleeding occaſionally, together with the free or ſparing uſe of warm cordials, and laſtly by the uſe of laxatives or aſtringents, as I obſerve the commotion to prevail or languiſh.

A vomit, where neceſſary, and where not.

9. After bleeding, where it was neceſſary, I carefully enquire whether the patient has had any vomiting or retching at the beginning of the fever; and if he has, I order an emetic, unleſs the tender age, or ſome remarkable weakneſs, of the patient ſhould contra-indicate *(k)*. Where a retching has preceded, a vomit is ſo neceſſary,

(b) Surely a deſcription of the diſtemper to be here treated by a regular detail of the ſymptoms ought ſomewhere to have been premiſed. It is true indeed, that a ſtrong conſtitution can hardly have any fever, where bleeding is not required; but an enumeration of the foregoing and preſent ſymptoms would have illuſtrated and confirmed this in an eminent degree, as we ſee by the few conſequent ones that are nam'd.

(i) Here it ſhould have been particularly ſpecified what degree thereof is to be eſteemed immoderate.

(k) If the patient has ſick fits and vomitings, and upon enquiry you find he has eat or drank any thing diſagreeable; or if a copious, bilious, pituitous matter is brought up, it will be proper, firſt of all, to exhibit a gentle *emetic*, after a ſufficient quantity of blood has been drawn off, in proportion to the ſtrength of the body, and violence of the diſeaſe. What advantages may be reaped from *vomiting* in the *beginning of acute fevers*, will eaſily appear from the ſubſequent reaſoning.

I. It diſcharges any bilious, pituitous, or indigeſted matter which might otherwiſe lie in the ſtomach, and irritate it into frequent motions to vomit; and which, if it was not thrown off, would putrify, corrupt, and grow acrid and corroſive: whence oftentimes ariſe dangerous diarrhœas, towards the height of the fever, for want of vomiting in the beginning.

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neceſſary, that unleſs the humour be expelled, it produces ſeveral other different ſymptoms, not eaſy to be removed in the courſe of the cure, and highly dangerous to the patient. The principal and moſt common of theſe is a looſeneſs, which generally happens in the decline of the fever, if emetics were omitted when they were indicated; for in the progreſs of the diſtemper, when nature has in ſome degree ſubdued the malignant humour in the ſtomach, and thrown it lower, it, by its ſharpneſs, and the conſtant ſupply derived from above, ſo corrodes the inteſtines, that a looſeneſs muſt neceſſarily follow (*l*). I have however obſerved in ſuch inflammatory fevers, as are commonly called malignant, that tho' a vomit has been omitted, when retchings at firſt appeared, yet a diarrhœa does not neceſſarily follow, as it did in the preſent: But more of this hereafter (*m*).

A looſeneſs happens, if not given when required.

But not always in malignant fevers.

Danger of the looſeneſs.

10. Now the danger of this diarrhœa lies here, that it farther debilitates the patient, already ſufficiently weakened by the diſeaſe, and, what is ſtill worſe, happens in the decline of the fever, when the blood ought to collect itſelf, and exert its force to finiſh the buſineſs of deſpumation, but is hindered by this evacuation.

Generally check'd by a vomit.

11. What makes it ſtill plainer, that this humour lodged in the ſtomach, if not diſcharged by a vomit, may bring on a looſeneſs afterwards, is that, upon examination, we ſcarce find any inſtance of a looſeneſs attending this fever, but where the patient was apt to vomit

II. It opens the ſecretory and excretory ducts of the glands of the *fauces*, *oeſophagus*, *ſtomach*, *inteſtines*, *ſpleen*, *liver*, *pancreas*, *omentum* and *meſentery*; and unloads them of a great quantity of viſcous phlegm, and bilious matter.

III. By the forcible contractions of the muſcles in vomiting, they ſhake, agitate, divide, and attenuate the *lentor*, and thereby promote the ſecretions and excretions, as is evident from the profuſe ſweats that always break out after plentiful fits of vomiting. *See* Langriſh's *Modern Theory*, &c. *of Phyſic*, *p.* 144, &c.

(*l*) This is certainly a ſufficient reaſon for a vomit, but as ſtrong a one, at leaſt, for a gentle purge.

It can hardly be ſuppoſed (conſidering the quantity of liquids drank in the courſe of a fever, and the medicines exhibited) that the very identical humour which produced the diſorder at firſt, by being actually lodged in the ſtomach, is preſerved there till the decline of the fever, in ſuch an unaltered ſtate as to occaſion a looſeneſs.

(*m*) See below, *Par.* 11. 50, 51.

vomit at the beginning, and an emetic was not given (*n*): as, on the other hand, tho' this inclination to vomit be over, yet the looſeneſs generally ſtops upon giving a vomit, provided the patient be ſtrong enough to bear it: and I have frequently obſerved, that upon the coming on of a looſeneſs in this caſe, aſtringents, either internally or externally given, have very little, if any force in ſtopping it (*o*). Chap. 4.

Aſtringents ineffectual.

12. The emetic I generally uſed was of this kind.

Take of the infuſion of Crocus metallorum, *otherwiſe called* vinum benedictum, *ſix drams, oxymel of ſquills, and compound ſyrup of ſcabious, each half an ounce: mix them for a vomit.*

A vomiting draught.

I directed it to be given in the afternoon, two hours after a light dinner; and to make it work the ſafer and better, ordered three quarts, or a gallon of poſſet-drink to be in readineſs, becauſe this kind of emetic is dangerous unleſs plentifully diluted; and therefore as often as the patient vomited, or purged, he was directly to take a draught of the poſſet-drink, by which means griping was prevented, and the vomiting rendered more eaſy (*p*).

Antimonial vomits require plentiful dilution.

13. When I have ſometimes happened carefully to examine the matter here thrown up by vomit, and found it neither conſiderable in bulk, nor of any remarkable bad quality, I have been ſurprized how it ſhould happen that the patient has been ſo much relieved thereby: for as ſoon as the operation was over, the ſevere ſymptoms, *viz.* the *nauſea*, anxiety, reſtleſſneſs, deep ſighing, blackneſs of the tongue, *&c.* uſually abated, and went off, ſo as to leave the remainder of the diſeaſe tolerable (*q*).

Vomiting of admirable ſervice.

(*n*) This is an inſtance of the practical reaſoning.

(*o*) Theſe poſitions are abundantly confirmed by experience.

(*p*) There ought to be no delay in giving a vomit, for a quart of water-gruel, poſſet-drink, *&c.* will at any time render its operation more gentle than a light dinner, by being drank a little before.

(*q*) The difficulty our author lies under here, in accounting for the relief obtained by a vomit, ſeems to proceed either from his having not known, or not ſufficiently conſidered the good effects vomits produce beyond the *primæ viæ*, by the conſiderable ſhock they give to all the parts. As to the diſcharge being

Sect. 1.

Bleeding to be first used, if also required.

14. We should not omit, that if the state of the patient requires both bleeding and vomiting, it is safest to bleed first, and give the vomit afterwards; otherwise there would be danger that, whilst the blood-vessels are greatly distended, the violent motion in vomiting might burst the vessels of the lungs, or hurt the brain, and occasion a vomiting of blood, or a mortal apoplexy: of which I could give some instances, if it were proper, but my design is only to caution (*r*).

A vomit when to be given.

15. As to the time of giving a vomit, I would have it done at the beginning of the fever, if possible, in order to prevent those terrible symptoms arising from a collection of humours in the stomach, and parts adjacent; and thus, perhaps, the distemper may be crush'd in the beginning, which might otherwise increase, and prove both obstinate and dangerous, whilst supplied by these humours, which, entring into the recesses of the body, may mix with the mass of blood, or, growing more corrupt by longer continuance, communicate a malignant quality thereto. We have an instance of this in the *cholera morbus*, where, if we sometimes unseasonably endeavour to stop the vomiting, either by *laudanum*, or astringents, and the attempt succeeds, we bring on a no less dangerous train of symptoms. For the acrimonious and corrupt humours, which ought in some measure to be discharged, being by this means detained, exert their force upon the blood, and raise a fever, which usually proves of a bad kind, and is accompanied with dangerous symptoms, so as scarcely to be removed without giving a vomit, even tho' the patient has then no tendency to such an evacuation.

Vomiting not to be stopp'd unseasonably in the *cholera morbus*.

16. But

being small, that almost always happens in case a surfeit has not preceded from overloading the stomach with solid or fluid aliment, or both: for acute diseases are perhaps not so much owing to an excess in the quantity of the juices, as to some ill quality they may have contracted, from a surprisingly minute portion of morbid matter of a certain kind, as is manifest in several epidemic diseases. And indeed our author assures us, and daily experience confirms it, that persons, apparently in good health, may be seized with distempers, according as the latent or sensible qualities of the air are disposed to taint their juices, and those, on the other side, are fitted to receive the infection. See Sect. I. Chap. II. *Par.* 19. and Chap. III. *Par.* 4.

(*r*) This is an extremely useful caution, and appears to have been derived from observation, whence all our reasonings in physic, to make them truly advantageous, should be drawn.

16. But if, as it frequently happens, the phyſician is called ſo late, that a vomit cannot be given at the beginning of the fever, yet I ſhould judge it proper to give one at any time of the diſtemper, provided the patient is not too weak to bear it (*s*). I have ſucceſsfully ordered an emetic on the twelfth day of the diſtemper, even tho' the ſpontaneous retchings were over; and by this means have ſtopp'd the looſeneſs that hindered the blood from finiſhing its depuration, and I ſhould not ſcruple attempting the ſame later, if the ſtrength of the patient permitted (*t*). Chap. 4.

17. In the evening, after the operation, I always endeavour to quiet the diſturbance raiſed in the juices by the emetic, and to procure ſleep; and therefore direct a paregoric draught to be taken at bed-time after the following manner: An opiate to be given in the evening.

Take of the diſtill'd water of red poppies, two ounces, Aqua mirabilis, *two drams, ſyrup of white and red poppies, each half an ounce: mix the whole for a draught* (*u*). A quieting draught.

18. But if there be no danger in raiſing too great an efferveſcence in future, either on account (1) of plentiful bleeding, uſed in the courſe of the cure, (2) frequent vomiting or purging upon the uſe of an emetic, (3) the preſent diſappearance of the fever, (4) its mildneſs, or (5) its natural decline; then inſtead of the draught above ſet down, I give, without apprehenſion, a ſufficiently large doſe of diaſcordium, either alone, or mixed with ſome cordial water: and this is an excellent medicine, provided it be given in a ſuitable quantity (*w*). Or a large doſe of *diaſcordium.*

19. Under

(*s*) And where a particular ſymptom required, as appears by what follows.

(*t*) See below, *Par.* 51.

(*u*) The opiate here ordered is indeed gentle, but the reaſons here given are not very ſatisfactory, and practice determines opiates to be in general pernicious in fevers. Moſt perſons ſleep in fevers after the proper evacuations of bleeding, vomiting and purging, or bliſtering; and without theſe helps, opiates often fail.

(*w*) It may be queſtioned, whether the caſes here deſcrib'd be not thoſe in which the fever is overcome, and by conſequence where good nurſing is ſufficient, eſpecially with the addition of almoſt any cordial. If ſo, diaſcordium is the worſe

Sect. 1.

Vinum benedictum unſafe in children under 14.

19. Under the article of vomits, we ſhould not omit to obſerve that it is by no means ſafe, at leaſt in this fever, to give ſuch as are made with the infuſion of *crocus metallorum*, even in the ſmalleſt quantity, to children under the *age of* 14. It were indeed to be wiſh'd that, inſtead of this emetic, we had others of a ſafer kind, yet ſo ſufficiently efficacious, as thoroughly to diſcharge the humour, which in the decline of this fever generally brings on a looſeneſs; or at leaſt were poſſeſſed of ſome proper remedy for changing (*x*) or diſſolving this corroſive matter, and blunting its force, ſo as to hinder it from producing a diarrhœa. It has often been a difficulty with me, when called to infants and children in a fever, and obſerving an emetic indicated, whereby they might have been preſerved from danger, that I durſt not give this infuſion for fear of a bad conſequence (*y*): but in grown perſons I have hitherto found no ill effect

in this caſe for the opium it contains, wherein, however, its efficacy ſhould chiefly ſeem to conſiſt; for opium is apt to pall the ſtomach, and ſink the ſpirits. And many perſons fall into a ſound ſleep naturally when the fever is gone, and this is much more refreſhing than that procured by opiates. A grateful wine ſeems here a better opiate than any thing, if uſed moderately.

It muſt be owned, that opiates often raiſe the ſpirits, and prove a noble cordial, particularly in weakneſs occaſioned by grief, if not given in large quantities, and likewiſe in ſome hyſteric diſorders. Another obſervation to be made here is, that many perſons after the fever is gone off do not get much ſound ſleep for ſome time, but are often a fortnight without having a good night's reſt, and come to it very gradually and ſlowly.

(*x*) Teſtaceous powders ſeem to anſwer this purpoſe very well.

If the humour here mentioned appears to be of the acid kind, teſtaceous powders will have a good effect; but the nature of it ſhould be previouſly learnt to enable the phyſician to direct a proper remedy, otherwiſe it is preſcribing empirically, and at random.—And further, as the looſeneſs may ſometimes be *critical*, which a diligent obſerver will ſoon diſcover, it ſhould not in that caſe be ſtopped, but only moderated if there be occaſion, and the patient's ſpirits kept up by ſmooth nutritive liquid food, given warm in ſmall quantities and often, and by proper cordials.

(*y*) Surely the author knew the ſafe emetic virtue of oxymel of ſquills, which he has preſcribed in this very vomit; tho' he was unacquainted with the ipecacuanha, and the ſafe ways of giving tartar emetic to children.

By reaſon of a peculiarity in ſome conſtitutions, it ſometimes happens that *oxymel* of *ſquills* proves as violent an emetic, as

anti-

effect from it, provided it were given with the cautions abovementioned (*z*). Chap. 4.

20. When the affair of vomiting is over, I next conſider,

(1) Whether, notwithſtanding the preceding evacuations, the blood may not ſtill hurry on ſo faſt as to require a check; or

(2) On the other hand, whether it may not languiſh ſo much as to require quickening; or laſtly,

(3) Whether the fermentation is now brought to ſuch a proper ſtate, or degree, as that it may be ſafely left to itſelf.

Something muſt be ſaid to each of theſe caſes (*a*).

21. (1) If the blood hurries on ſo faſt as to give a juſt ſuſpicion of a delirium, or other bad ſymptom coming on, the day after the emetic I generally preſcribe a glyſter. A glyſter to be given occaſionally.

Take of the common decoction for glyſters, one pint; ſyrup of violets, and brown ſugar, each two ounces: mix them for a glyſter.

This glyſter I order to be repeated occaſionally, by which means the blood is often ſo refreſhed and cooled, as ſufficiently to check its efferveſcence. It ſometimes likewiſe becomes neceſſary to repeat bleeding once or twice; as particularly in perſons of a very ſanguine conſtitution, and in the prime of life, or ſuch as have inflamed their blood by uſing wine too freely: tho' there is ſeldom occaſion for ſo capital a remedy as repeated bleeding, and therefore glyſters may ſuffice to check the efferveſcence, except in the caſes juſt now mentioned. If therefore the efferveſcence of the blood be too high, I order a glyſter to be injected, every day, or every other day, as the caſe requires, till about the 10th day of the diſtemper (*b*).

22. But

antimonial wine: ſo it is ſafeſt to give ſomething leſs than a full doſe.

(*z*) See above, *Par.* 12.

(*a*) Each of theſe muſt be determined by the ſymptoms; why then ſhould not one have immediate recourſe to the ſymptoms? The author has ſaid above, that [illegible] the words *fermentation* and *efferveſcence*, rather as words [illegible] only uſed, than as having any preciſe meaning in fevers.

(*b*) This practice of giving glyſters is certainly very good, but a purge, ſtronger or weaker, according to the violence of the

Sect. 1.

Cautions relating to glyſters.

22. But when a large quantity of blood has been taken away, or the patient is in years, I at this time order no glyſter, tho' the effervescence of the blood ſhould be conſiderable: for, in theſe caſes, as we need not fear its riſing ſo high, without the uſe of glyſters, as to bring on any great and dangerous ſymptoms (*c*); ſo, on the other ſide, it is certain that the ſtrength and texture of the blood may be ſo impaired and relaxed by the uſe of them, as thus ro diſturb and hinder the procedure of nature, eſpecially if the patient be in years; for glyſters do not ſucceed ſo well in the old as the young (*d*). But if only little blood has been taken away, then, as was ſaid before, I continue the uſe of glyſters to about the 10th, and ſometimes to the 12th day (*e*); as particularly when I durſt not bleed at all. For ſome perſons are ſeized with a continued fever, after an autumnal intermittent, whether tertian or quartan, for want of purging at the cloſe of the preceding diſtemper; and if blood ſhould be taken away in this caſe, there is danger of the ſediment, depoſited in the former fermentation, being re-abſorbed into the maſs of blood, and occaſioning freſh diſorders. Inſtead of bleeding therefore in ſuch caſes, I continue

the ſymptoms, their particular nature, and the ſtrength of the patient, is, in general, greatly to be preferred. For the heat of a fever renders the contents of the inteſtines very fetid and acrimonious, the ſecretions of the liver, *pancreas*, &c. are often diſturbed both in quantity and quality, and the digeſtion very imperfect; for all which reaſons the preſent contents of the inteſtines at leaſt ought to be removed. And tho' bleeding cools and relieves more immediately than purging, yet purging does it in a very laſting manner, and diſpoſes to quiet natural ſleep. See Langriſh's *Mod. Theory of Phyſic*, p. 174, &c.

(*c*) This is contradicted by practice, and here his theory ſeems to have miſled him. There are many bad febrile ſymptoms with a weak pulſe.

(*d*) What our author means by ſaying the ſtrength and texture of the blood may be impaired and relaxed by glyſters, and the like expreſſions, which occur ſo frequently in his writings, is not eaſy to conjecture.—This way of talking is very inaccurate, if not abſolutely falſe: for do glyſters bring away any part of the *craſſamentum* of the blood? and is it not more obvious and natural to ſuppoſe that they relax and impair the ſolids, and that by this means the patient is weakened?

(*e*) Surely the procedure here ought to be regulated by the ſtate of the ſymptoms, not the days, and the ſymptoms particularized.

to

to uſe glyſters to the 12th day, if the patient be young, and the fermentation too violent (*f*). Chap. 4.

23. (2) On the other hand, whether bleeding has been uſed, or not, if the efferveſcence of the blood ſinks too low, and requires raiſing in order to aſſiſt nature in her work; in this caſe I judge that no glyſter ſhould be injected even before the 10th day, and much leſs afterwards. Otherwiſe we might thus farther check the fermentation, now already too languid of itſelf. But to uſe glyſters after this time, *viz.* in the decline of the diſtemper, would be as abſurd, as to ſtop the fermentation of wine, before the deſpumation was performed, by opening a large vent-hole: for a glyſter here would hinder nature in her vigorous endeavour to throw off the morbific matter (*g*).

24. But when once the patient is out of danger from thoſe ſymptoms ariſing from too great an ebullition, either by means of proper and ſeaſonable evacuations, or that the diſeaſe begins to decline, the more coſtive he is kept, the more ſecure I judge him; the febrile matter then proceeding more kindly and gently to concoction. And, therefore, if the preceding evacuations ſhould either actually diſſolve, or tend to diſſolve, the maſs of blood, or the fever go off before its due time, or before it is come to its full period, I not only refrain from the uſe of glyſters, but alſo call in the aſſiſtance of cordials, and directly endeavour to prevent a purging (*h*).

25. Cordials, as I have experienced, when given too ſoon, do miſchief, and, unleſs bleeding has preceded, may derive the crude matter of the diſtemper upon the membranes of the brain, the *pleura*, &c. and there- Cordials when to be given.

(*f*) Here again the ſymptoms ſhould be named. General directions are of little uſe, as they may be made to ſuit very different ſorts of practice. And beſides both the reaſon and criterion are taken from a theory, which is either falſe or unintelligible.

(*g*) The true practice here is to give glyſters, if wanted, and join the aſſiſtance of cordials and bliſters: theory has a great ſhare alſo in this direction.

(*h*) It is very true that in caſes of extreme weakneſs a ſingle ſtool is dangerous: and in leſs degrees of weakneſs purging is improper, unleſs there be reaſon to judge that the inteſtinal contents are preternaturally irritating and acrimonious; *i. e.* unleſs this appears by the ſymptoms, from whence alone all indications ought to be taken.

fore

Sect. 1. fore I never give them when either no blood, or very little has been taken away; or when no other conſiderable evacuation has been made; or the patient has not paſſed the meridian of life (*i*). For whilſt the blood remains rich enough of itſelf, it ſhould not be more enriched to the endangering the patient; nor does it require to be raiſed, ſo long as no remarkable evacuations have diminiſhed its natural heat. Such kind of patients have cordials within them, which render external ones either needleſs or prejudicial, and therefore I here either uſe none at all, or thoſe of the weakeſt ſort (*k*).

26. But if the patient ſhould be greatly weakened and diſpirited by copious evacuations, or be in the decline of life, I uſually allow of cordials, even in the beginning of the fever; and on the 12th day, when the buſineſs of ſeparation is at hand, I judge a freer uſe of the warmer medicines allowable; and they might be given earlier, if there be no danger of the febrile matter's falling upon the principal parts. For at this time, the more the blood is heated, the more the buſineſs of *concoction* is promoted (*l*).

27. I cannot imagine what phyſicians mean by their frequent precepts for giving remedies to promote the concoction of the febrile matter, which they often talk of in the beginning of the diſtemper, though at the ſame time they order only ſuch medicines as may moderate the fever. For the fever itſelf is no other than the inſtrument of nature, by means whereof ſhe ſeparates the vitiated parts of the blood from the ſound; tho' ſhe does this in a manner perfectly imperceptible at the beginning, and even at the ſtate of the diſtemper, but more manifeſtly in the decline thereof, as appears from the ſediment in the urine. The concoction of the febrile matter here means no more than a ſeparation of the morbific particles from the ſound, whence the way to haſten this concoction is not by moderating the fever, but the efferveſcence muſt be kept up ſo long as the

The concoction of the febrile matter, what.

(*i*) As this conjecture is merely theoretical, it ſhould ſeem more natural to ſuppoſe, that cordials help to puſh the thick part of the blood into the lymphatics of theſe parts; which, as in other caſes, conſtitutes an inflammation of the parts affected.

(*k*) This direction is very juſt.

(*l*) The practice is very good, but the theory here taken is from a different metaphor.

ſafety

ſafety of the patient will give leave: but when the diſeaſe is in the decline, and the ſeparation becomes manifeſt, warmer medicines ſhould be immediately given, in order to finiſh the operation with greater certainty and expedition. And this is properly promoting the concoction of the febrile matter; whereas I have frequently found that evacuations and coolers hinder the cure, and put back the recovery that was now approaching. But if the fermentation advances ſufficiently, deſpumation will be finiſhed about the 14th day; whereas if coolers are given too late, ſo as to check the efferveſcence, it is no wonder if the fever run on to the 21ſt day, or even much longer, in perſons extremely weakened with ill treatment (*m*).

Deſpumation finiſhed about the 14th day.

28. It is remarkable here that, tho' the patient may ſometimes ſeem to be a little relieved by the uſe of glyſters, or other purgatives unſeaſonably directed about the decline of the diſtemper, and even perhaps to be totally freed from the fever; yet, a day or two after, it happens that the former fever does not ſo much appear to return, as a new one to ariſe; for chillneſs and ſhivering preſently come on, and are ſoon followed by heat, and a fever, which, unleſs it happens to degenerate into an intermittent, runs its courſe as already deſcribed. In this caſe the patient is to be treated in the ſame manner as if he had not had the fever before; for (how painful ſoever it may be to the patient, much weaken'd by the former diſeaſe, to wait ſo long for his recovery) the depuration conſequent upon this new

(*m*) In the beginning of a fever the circulation is irregular, and above *par*, as to force and ſtrength; ſomewhere in the middle irregular, and at *par*; in the decline irregular, and below *par*. Bleeding and other evacuations, therefore, which leſſen the force of the blood, are in general proper at the beginning of fevers, and improper in the decline; cordials and bliſters, which increaſe the force of the blood, are improper in the beginning, and proper in the decline. This may be accounted a tolerable general direction, but as much too narrow to comprehend the ſubtlety of nature, and variety of caſes. Theſe therefore ſhould all be particularized, and particular directions ſuited thereto, wherein our author eminently excels in other parts of his works; for general directions are almoſt always differently underſtood by different perſons, and one finds the moſt oppoſite practices ſhelter themſelves under the ſame words.

effer-

Sect. 1. efferveſcence will not be performed in leſs than 14 days (*n*).

The kinds to be us'd.

29. I ſhall next ſet down the cordials which I generally uſe in this diſtemper, the milder (*o*) of which I employ at the beginning, when the ebullition is violent, and gradually proceed to the hotter, according as the fever, or the degree of ebullition requires; always obſerving, where bleeding was freely uſed, or the patient was in years, to adminiſter thoſe of a ſtronger kind, than when no blood had been taken away, or the patient was in the vigour of life (*p*).

The milder and ſtronger cordials enumerated.

30. The milder cordials I mean are ſuch, for example, as are made of the diſtill'd waters of borage, citrons, ſtrawberries, the compound ſcordium water, with a mixture of the ſyrup of balm, cloves, or juice of citrons (*q*), *&c.* But the ſtronger are *Gaſcoign*'s powder, bezoar, confection of hyacinth, *Venice* treacle, with others of the ſame kind. The following preſcriptions were frequently uſed.

Forms of cordials.

Take of the diſtill'd waters of borage, citron, black cherries, and compound ſcordium water, each two ounces, barley cinnamon water, one ounce, prepared

(*n*) Perhaps theory has more ſhare in this poſition than obſervation, at leaſt it does not occur frequently in the preſent practice, and it may be, that the free uſe of bliſters, eſtabliſhed ſince this was wrote, is one reaſon thereof. However, it is of the utmoſt conſequence, either to be confirmed, or diſproved.

(*o*) Why any in ſuch caſes? But we are extremely obliged to the author for the progreſs he made in rejecting cordials. The modern practice gives coolers here.

(*p*) Whatever increaſes the forces or powers of the heart and vaſcular ſyſtem, may be reckon'd a cordial; and, agreeably to this poſition, there are two kinds of cordials, *viz.* (1) proper diet, which proves a cordial by keeping up the ſtrength of the ſpirits, ſo as to enable the patient to overcome the diſeaſe; (2) all ſuch medicines as act by a ſtimulating property, and of courſe augment the motion both of the ſolids and fluids. In fevers, therefore, it ſhould be carefully enquired whether a ſtimulus is wanting or not; and if not, which is commonly the caſe, the diet muſt be ſlender and thin: hence water is a general cordial where the juices are too thick, and proper abſtinence and bleeding admirably anſwer the ſame intention in very plethoric habits. An extraordinary motion of the juices is ſeldom required, and therefore cordials are rarely proper; which our author author only ſeems to have well conſidered. BOERHAAVE, *Prax. med. Vol.* III. *p.* 104, 277.

(*q*) Theſe are ſcarcely cordials at all.

pearl,

pearl, two drams, fine ſugar, two ounces, or a ſufficient quantity; mix them together.——Take four ſpoonfuls of this mixture often in a day, eſpecially when faint.

Take of the diſtill'd waters of the whole citron, and ſtrawberries, each three ounces, the cooling cordial water of SAXONY, *one ounce, treacle water, ſyrup of balm of* FERNELIUS, *and of the juice of citron, each half an ounce: mix them for a julap; ſome of which is to be taken frequently.*

Take of GASCOIGN'S *powder, oriental and occidental bezoar, and* LAPIS CONTRAYERVA, *each a ſcruple, a ſingle leaf of gold; bring the whole into a fine powder, of which take twelve grains, as often as there ſhall be occaſion, in ſyrup of the juice of citron, and cloves each two drams; drinking after it a few ſpoonfuls of the julap above directed.*

Take of treacle water, four ounces, the ſeeds of citron, two drams; beat them together and make an emulſion: to the ſtrain'd liquor add enough ſugar to ſweeten it to the taſte.——Take two ſpoonfuls of it thrice a day (*r*).

It would be needleſs to add any more forms of medicines, becauſe a great number are, or may be, of uſe in the courſe of the diſtemper, and require to be varied according to its different ſtages, and the different ſymptoms ariſing therein.

31. (3) But when the fermentation neither riſes too high, nor ſinks too low, I leave it in that ſtate, without preſcribing any medicines, unleſs forc'd to it by the

Remedies when needleſs.

(*r*) Here I cannot but condemn the too common practice in inflammatory caſes, of giving ſpirituous waters, and ſpirituous tinctures in julaps, draughts, *&c.* which as they are generally made not only with ſpirits, but likewiſe with warm ſtimulating ingredients, muſt be extremely improper. I have known a cooling pectoral apozem with nitre ordered, and the preposterous addition of two ounces of *Aqua Mirabilis*. Was this likely to prove a cooler? and did the phyſician well conſider what he was doing? — Though ſuch cordials may have their uſe in the decline of inflammatory diſorders, yet ſure in their beginning and increaſe they muſt needs do miſchief by adding to the heat, which is already too great.—The uſe of bezoar and leaf gold in cordials has been long laid aſide; as they were found greatly to inhance their price, without adding at all to their virtues; and in the preſent practice they are rarely, if ever, directed in any form.

impor-

Sect. 1. importunity of the patient, or his friends; and then I direct ſuch only as may pleaſe without prejudicing (*s*).

Perſons in low circumſtances how to be treated.

32. I ſhould not omit, that frequently when I was called to perſons of low circumſtances, I ordered them to do nothing elſe, after bleeding and vomiting when required, but to keep in bed during the whole courſe of the diſtemper, and to ſup only water-gruel, barley-gruel, and the like; to drink moderately of warm ſmall beer (*t*) to quench their thirſt, and to take a glyſter of milk

(*s*) All the foregoing are pretty much of this kind; being what the modern phyſicians underſtand by non ſignificants.

It would not, I ſhould think, be unbecoming a phyſician to have integrity and reſolution enough to withſtand the moſt importunate intreaties of this ſort, and never to order a ſingle grain of medicine, when he ſees no neceſſity for it.—The wiſeſt and honeſteſt part he can act in all caſes, where it plainly appears that nature alone will get the better of the diſtemper, is to leave her at full liberty to act, without breaking in upon her meaſures and operations; and only to ſuperintend that no miſchief be done by the inconſiderate officiouſneſs and unſkilfulneſs of the patient's friends and attendants.—To this his office ſhould be peculiarly reſtrained in all ſuch inſtances; and if it be executed with judgment and addreſs, it will reflect as much honour upon him, as if he had wrote ſeveral elegant preſcriptions during the courſe of the diſtemper, and juſtly entitle him to an equivalent recompence.—Sometimes, however, the impatience, fretfulneſs, and prejudices of the patient may make it almoſt indiſpenſably neceſſary to act otherwiſe; for he may think himſelf neglected, or his phyſician at a loſs how to proceed, if nothing be preſcribed for him; in which caſe if he cannot convince the patient that this is ſerving him in the beſt and moſt upright manner, I can ſee no harm in his being ſo complaiſant as to indulge him in his humour, but much good rather, as it may remove his needleſs fears and apprehenſions, compoſe, and even raiſe his ſpirits, give him a better opinion of, and more confidence in his phyſician, and of courſe make him chearfully and willingly ſubmit to his management in every reſpect: a ſtate of mind that will not a little contribute to leſſen the pain and tedioufneſs of illneſs, and promote the ſick perſon's recovery. *See p.* 220. *par.* 8. *of this book.*

(*t*) Clear old ſmall beer, neither bitter nor ſour, will agree very well with thoſe who have no *nauſea*, *ſickneſs at ſtomach*, nor *tendency* to a looſeneſs. Where the ſymptoms are moderate, and where the blood is not too much rarefied, to deny ſmall beer to be taken now and then moderately, is a needleſs ſeverity, and very often hurtful, eſpecially where it has always been uſed as the common diluter of the food. But in others, whoſe vital powers are wound up to the higheſt pitch, and whoſe blood is in vaſt agitation, ſmall beer will not agree; becauſe, however ſmall, it contains a portion of ſpirit, which, by

milk and ſugar every day, or every other day, till the tenth or eleventh day of the diſtemper; but towards the end of the fever, when the ſeparation was begun, and proceeded ſlowly, to promote it, I allowed them now and then a little ſtronger malt liquor, inſtead of cordials. And thus, without any thing further, except a gentle purge at the end of the diſtemper, they generally did well (*u*). Chap. 4.

A purge when to be given.

33. If the method above delivered was carefully obſerved, I commonly, about the fifteenth day, found it proper, from the laudable ſeparation in the urine, and a manifeſt abatement of all the ſymptoms, to order a purging potion to drain off the ſediment depoſited upon particular parts by the preceding fermentation; and unleſs this was ſeaſonably done, that ſediment might return into the maſs of blood, and occaſion a return of the fever; or, by its continuance in the parts where it lodged, produce obſtinate diſorders in the body. For the ſeparation being now over, the groſs and vitiated humours, tranſmitted from the arteries to the veins, eaſily prevent the return of the blood, whence various kinds of obſtructions, and, at length, new ferments ariſe (*w*).

When leſs neceſſary.

34. But it may be here obſerved, that purging is not ſo neceſſary after vernal, as after autumnal fevers, becauſe the ſediment depoſited by the former is neither ſo copious, nor of ſuch an earthy malignant nature as in the latter (*x*); which holds alſo in the ſmall-pox (*y*), and

by its briſkneſs, will irritate the *fibrillæ* into more frequent and ſtrong contractions; and as it contains a deal of very elaſtic air, it is ever ready to ferment, by which means it will cauſe ſtill greater tumults in the blood, and render the patient delirious, if not ſo before. Langriſh's *modern Theory and Practice of Phyſic*, p. 150. §. (IV).

(*u*) The author ſeems to have fallen into his eaſy, natural, and excellent general method of practice from obſervations of this kind.

(*w*) There is great liberty of feigning taken here.

The reader will meet with ſome judicious obſervations on *purging*, well worth his reading, in *Langriſh's Modern Theory of Phyſic*, p. 192. &c. *Glaſs de Febribus*, p. 88. and in *Dr Barker's Eſſay on the Agreement between the Ancient and Modern Phyſicians*, p. 122, &c. and again, *p.* 201. &c.

(*x*) The practice may be good, but the theory cannot be commended.

(*y*) This practical direction is abſolutely contradictory to

 experience;

Sect. 1. and many other diſtempers that rage in the ſpring; ſo that here, as far as I have obſerved, it is not ſo dangerous to omit purging, as in the caſes before-mentioned. And it ſeems to me, that more diſtempers ariſe from an omiſſion of purging after autumnal diſorders, than from any other ſingle ſource.

35. If the patient happens to be very weak, or the depuration not perfectly performed, ſo as to render it unſafe to give a purge on the fifteenth day, I defer it to the ſeventeenth, and then preſcribe the following, or the like, purging potion, in proportion to the ſtrength of the perſon.

A purging potion.

Take tamarinds, half an ounce; the leaves of ſena, two drams; rhubarb, one dram and a half; boil them together in a ſufficient quantity of water, ſo as to leave three ounces when ſtrain'd off; in which diſſolve manna and ſyrup of roſes, of each an ounce; mix the whole for a purging potion to be taken in the morning faſting.

36. I always order the patient to keep his bed till he is purged, then permit him to riſe, and by degrees return to his ordinary way of living. The diet I order to this time is nearly the ſame with that abovementioned; as water-gruel, barley-gruel, panada made of bread, the yolk of an egg, water and ſugar, thin chicken broth, ſmall beer, to which, when the fever is high, a little freſh juice of oranges may be added, it being firſt juſt boiled over the fire to take off the rawneſs, with the like; tho' water-gruel may ſerve for them all. But to forbid the drinking moderately of ſmall beer is a needleſs ſeverity, and often pernicious.

The diet to be us'd upon recovery.

A cough at the decline how to be relieved.

37. It ſometimes happens, eſpecially in the aged, that tho' the fever is cured, and the body perhaps rather too much purged, that the patient ſtill remains very weak; and with coughing or ſpitting, expectorates a large quantity of viſcid phlegm: a ſymptom terrifying not only to the patient, but alſo to the phyſician, if not apprized of it, who might otherwiſe miſtake it for a beginning conſumption: tho' I have found it not

experience; one would wonder how ſo careful an obſerver could be led to affirm this; but his theory ſeems to have prevailed here.

very

very dangerous. In this caſe I order a glaſs of old *Malmeſey*, *Falernian*, or *Frontignac*, with a toaſt; which, by ſtrengthening the texture of the blood, (much weakened by the preceding fever, and therefore rendered unfit to aſſimilate the juices of the aliment lately taken in) removes this ſymptom in a very few days, as I have found by repeated experience (z). Chap. 4.

38. By the method (a) here laid down, the patient will be preſerved from ſeveral ſymptoms and diſorders uſually aſcribed to malignity; nothing being more common with unexperienced phyſicians, than to lay the blame on malignity, when by too cooling remedies, or the unſeaſonable uſe of glyſters, they have weakened the texture of the blood, and reduced nature ſo low, whilſt ſhe was performing the office of ſeparation, as to bring on faintings, and other bad ſymptoms, which are the genuine effects of ſuch perverted rules of art: but if the long continuance of the diſeaſe ſhould wipe off this aſperſion of malignity, whatever afterwards obſtructs them in the cure they impute to the ſcurvy; tho' in reality the ſymptoms that happened in the height of the diſeaſe were neither owing to malignity, nor thoſe that appear in the decline to the ſcurvy, but both of them to wrong management, as I have frequently obſerved. Not that I, nor any other phyſician, who is acquainted with the hiſtory of diſeaſes, will ſay that there are no fevers of a malignant nature; for there are manifeſt ſigns of ſuch; nor will I deny that a fever may be ſometimes complicated with a ſcurvy and other diſorders; but what I aſſert is, that both malignity and the ſcurvy are here frequently blamed without reaſon. Malignity and the ſcurvy unjuſtly accus'd.

(z) In this caſe bitters, light chalybeates, riding on horſeback, and food of eaſy digeſtion, often prove a ſpeedy and an effectual cure.

(a) The method laid down in this chapter, ſeems to ſuppoſe that a fever cannot be cured without running thro' its period of fourteen days. And in reality, this is the general time in which thoſe who are left to themſelves, and recover, have the ſtrongeſt ſigns of a favourable criſis. But it is as certain that the evacuations of bleeding, vomiting and purging, will often quite extinguiſh a fever in a few days, and where they cannot, bliſtering ſhortens the period. And the author ſeems to have diſcovered this in other fevers, which perhaps he therefore judg'd to be of a very different nature, becauſe he had ſucceſs in different ways. But there are many different ſolutions of the ſame problem, exceeding one another however in brevity.

Sect. 1.

Coolers and glyſters given too late, prolong the diſeaſe.

39. When the fermentation of the blood proceeds in a proper manner, the deſpumation of the morbific matter will be finiſhed in the time abovementioned; but if cooling medicines, or glyſters, are given too late, the fever will run to a much greater length, eſpecially in aged perſons that have been improperly treated. When I have ſometimes been called to ſuch, after they have ſtruggled with the fever above forty days, I have uſed my utmoſt endeavours to procure the deſpumation of the blood, which was now ſo far weakened, partly by age, and partly by glyſters and cooling medicines, that I could not obtain the end propoſed, either by cordials, or any other ſtrengthening remedies; but either the fever maintained its ground, or, if it ſeemed to go off, the ſtrength of the patient was almoſt quite exhauſted (*b*).

Good effects of applying the heat of young men.

40. But when other means failed me, I have made uſe of a ſingular expedient with great ſucceſs, namely, the application of the heat of ſtrong and healthy young men: nor will it be found ſurprizing, that by this uncommon means the patient ſhould be conſiderably ſtrengthened, and debilitated nature aſſiſted, ſo as to diſburthen herſelf, and throw off the remains of the morbific matter; for it is eaſy to apprehend that a conſiderable quantity of ſound and wholeſome *effluvia* will thus paſs from a robuſt, healthy body, into the exhauſted body of the patient; and I have never found the repeated application of warm napkins to prove near ſo ſerviceable as the preſent method, where the heat applied is not only more natural to the human body, but alſo more mild, moiſt, equable and conſtant. And this way of tranſmitting, perhaps, balſamic ſpirits and exhalations into the body of the patient, however quaint it may ſeem, has alſo ſince been ſucceſsfully uſed by others. Nor do I think it below me to have mentioned this expedient, whatever cenſure it may expoſe me to, from ſuch as contemn whatever is vulgar; as judging the health and benefit of mankind ought to be preferred to their falſe opinion of things.

Some ſymptoms here require a particular treatment.

41. By carefully purſuing the method hitherto delivered, the greater part of the bad ſymptoms, that either accompany, or follow upon this fever, will be pre-

(*b*) Bliſters here are of principal uſe.

vented,

vented, which otherwiſe, in the courſe of the cure, frequently perplex the phyſician, and prove fatal to the patient, tho' the diſeaſe itſelf ſhould have no ſuch deſtructive tendency. But as ſuch accidents are common, if the phyſician comes too late, be negligent, or unſkilful, I will here briefly treat of the cure of thoſe ſymptoms, which, when they happen, require a peculiar treatment, tho' they might generally have been prevented, by keeping cloſe to the abovementioned method. Chap. 4.

Method of treating a *delirium*.

42. And, firſt, if a *delirium* be occaſioned, either by the too early and unſeaſonable uſe of heating medicines, or the patient's being naturally of a hot conſtitution; or, which is nearly the ſame, if he has conſtant watchings, raves, ſpeaks haſtily, looks wild, takes his medicines, or other liquids eagerly, or has a ſuppreſſion of urine: in this caſe I bleed more freely, order glyſters and cooling medicines, particularly in the ſpring, at which time ſuch as are young and florid, tho' free from this ſymptom, may be treated in the ſame manner, without much danger (*c*).

Taken off by an opiate.

43. By theſe means I endeavour to ſupport the patient, till the diſeaſe is run to a certain length, when I find it eaſy to take off both that, and the delirium, by a large doſe of ſome opiate; for anodynes properly given in the decline are very beneficial, whereas they prove of no ſervice whilſt the fever is high, tho' given in the largeſt doſe, as being unable to ſtop the violent courſe of the fermentation; but chiefly becauſe the peccant matter, then equably mix'd with the blood, and not ripe for ſeparation, is confined, whence the expected

(*c*) Great care ſhould be uſed to diſcover what occaſions this ſymptom, as it may proceed from ſeveral, and thoſe very different, cauſes; for inſtance, the activity and copiouſneſs of the ſpirits, or their weakneſs and paucity, an inflammation of the brain, or its membranes, *&c.* If it happens in an acute fever, with a full and quick pulſe, bleeding in the jugular is proper to leſſen the preſſure on the brain, and divert the blood to the extremities; ſtimulating plaiſters, or other proper applications, ſhould be laid to the feet; nitrous medicines may alſo be given with advantage, and, in general, whatever cools, abates the tenſion of the nerves, opens obſtructions, blunts the *ſtimulus*, and attenuates the juices. But if the diſorder be accompanied with a weak, ſlow, and irregular pulſe, bliſters are proper, warm attenuants, and all nervous medicines. Opiates are very unſafe in this caſe.

Sect. 1. depuration is hindered. Whether this be the reaſon of the thing, or it proceeds from ſome more latent cauſe, I leave to the determination of others.

Cautions at the time of giving it.

44. This, however, I can affirm from numerous obſervations, that laudanum, or any other narcotic uſed to take off this ſymptom, whether in the beginning, increaſe, or height of this fever, was either ineffectual or prejudicial; whereas a moderate doſe in the decline proved ſucceſsful. I once ordered a narcotic upon the twelfth day of the diſeaſe, with ſucceſs, but never knew it given ſooner to advantage; and if it be deferred to the fourteenth day, when the ſeparation is more perfect, it will prove ſtill more beneficial. For I have frequently obſerved, that the delirium may be diſregarded, till it is proper to give an opiate, provided the diſorder be not increaſed by the uſe of cordials, and heating medicines, which may here prove mortal. The opiates I uſually preſcribe, are either *London Laudanum* to a grain and a half, or the following:

Forms of opiates.

Take of cowſlip flowers, one handful; boil them in enough black-cherry water to leave three ounces, when ſtrain'd off, to which add ſyrup of white poppies, half an ounce; juice of lemons, half a ſpoonful; mix the whole together. Or,

Take of black-cherry water, one ounce and a half; plague-water, two drams; liquid laudanum, ſixteen drops; mix them together.

To be preceded by a purge.

45. It may be proper to add, that if this ſymptom be not very urgent, and the fever be prolonged, ſo as that the patient may be ſafely purged before an opiate is given, it will then be attended with greater ſucceſs. And therefore I uſually direct two ſcruples of the greater *Pil. cochiæ*, diſſolved in betony water, to be taken ten or twelve hours before the opiate; and thus the diſturbance this warm purgative might otherwiſe occaſion will be prevented by the opiate, and an agreeable ſleep procured. But if the watching continues after the fever, and the other ſymptoms are gone off, I have known a piece of linnen dipt in roſe-water, and applied cold to the forehead and temples, prove of greater ſervice than any kind of opiate.

46. 'Tis

Chap. 4.

Treatment of a *cough*.

46. 'Tis uſual for the patient to be afflicted with a bad *cough* during the whole courſe of the diſeaſe, ariſing from the violent commotion of the blood, whereby the juices being broke, are ſeparated from the maſs, in its circulation thro' the pulmonary veſſels, and thrown upon the internal membrane of the *Trachea*, which is of a fine texture, and extremely ſenſible. The cough is firſt dry, the matter being then too thin to be expectorated; but the febrile heat gradually thickens it, and ſoon renders it more tenacious, whence it is with difficulty expectorated; and becomes apt to cauſe a ſuffocation, for want of ſufficient ſtrength in the patient to diſcharge it. In this caſe I ſeldom uſe any other medicine than freſh-drawn oil of ſweet almonds, unleſs, as it ſometimes happens, the patient has an averſion to oil, and if ſo, I endeavour to relieve him by the common pectorals. Otherwiſe I prefer the oil of almonds to all other pectoral medicines, chiefly becauſe to anſwer the intention they muſt be given freely, and in large quantities; whereby the ſtomach, already too weak, and ſubject to retchings, is overcharged; and, beſides, we are ſometimes by this means prevented from giving what is proper upon other accounts.

Oil of ſweet almonds commended in this caſe.

Its diſadvantages obviated.

47. Again, neither reaſon nor experience have yet convinc'd me that the uſe of this oil is not to be allowed in fevers, becauſe it is of an inflammable nature, and conſequently may tend to increaſe the diſtemper; for granting it to be naturally hot, 'tis however certainly not ſo hot, but that the advantages ariſing from its uſe are greater than the inconveniences (*d*). For it is an excellent pectoral, opens and lubricates the paſſages, thereby promoting expectoration, which, when copious, frees the blood from the noxious humour, now ſeaſonably ſeparated, and at the ſame time tends to cool; ſo that this ſymptom thus proves of conſiderable ſervice, for which reaſon I am not anxious about it. Let it, however, be obſerved, that 'tis unſafe to give ſeveral ſpoonfuls of oil of almonds at once, as retchings and a looſeneſs may thereby be occaſioned; but the frequent

How to be given.

(*d*) It does not appear from any of its ſenſible qualities, or effects, that oil of almonds is hot; but rather the contrary, as it is given with great ſucceſs in ſeveral inflammatory caſes. *Vid. Geoffroy de Materia Medica, Vol.* III. *p.* 80.

Sect. 1. use of it in small quantities, throughout the day and night, not only eases the cough, by promoting expectoration, but, which is very material, the patient, now almost worn out, will be in some measure recruited by this kindly nourishment.

A *bleeding at the nose* how to be stopt.

48. Sometimes a *bleeding at the nose* happens, either from giving too warm medicines in the beginning of the fever, or from not sufficiently depressing the ebullition of the blood, the patient either being in the prime of life, or the season of the year conspiring with the fever. Here the means commonly made use of to check the motion of the blood will be of little service; such as bleeding, ligatures, astringent, agglutinant, balsamick medicines, *&c.* tho' recourse may be had to these and the like helps, according as they shall be judged proper; but the principal thing is, to stop the violent ebullition of the blood by a proper medicine; though, in reality, if this symptom be considered apart, the remedies abovementioned, and particularly bleeding should seem to be serviceable therein; nor have I scrupled to use them; yet as they do not (bleeding excepted) strike sufficiently at the cause of this symptom, *viz.* the ebullition of the blood, 'tis imprudent to depend upon them; therefore, in this case, when all other means had proved ineffectual, I usually gave the following draught:

A quieting draught.

Take of the distill'd waters of purslain, and wild poppies, each an ounce and a half; syrup of white poppies, six drams; syrup of cowslips, half an ounce: mix them together for a draught (*e*).

(*e*) So gentle an opiate does not seem likely to put a stop to a *bleeding at the nose*, where the abovemention'd means fail. If the hæmorrhage be violent, therefore, it will be proper to bleed in the jugular, set cupping glasses on the shoulders, apply cooling lotions to the head and parts adjacent, bathe the extremities in warm water when they are cold, blow a styptic powder up one or both the nostrils, as it shall be necessary, or put up a tent dipt in some styptic liquor. *See Sect.* vi. *Chap.* vii. *Par.* 8. Cooling emulsions, opiates, subastringent and nitrous medicines are to be given internally, and a spare, thin diet used. An upright posture, with the head bending a little forwards, is the best here. If the blood be acrimonious, thin and serous, agglutinants should be freely exhibited. In case of great weakness from the loss of blood, refrain from opiates entirely, and direct mild cordials, a restorative diet, and rest.

49. But

Chap. 4.

49. But I judge it improper to put an immediate ſtop to every hæmorrhage after this manner; for it is frequently rather to be permitted, and may prove of great ſervice, ſometimes, by abating the too violent ebullition of the blood, and, at others, by proving critical put an end to the diſeaſe. And, in reality, no conſiderable effect is to be expected from the abovementioned remedy, unleſs the ſymptom has continued ſome little time, and bleeding in the arm preceded its uſe. Again, it muſt be carefully remarked, that this and all other immoderate hæmorrhages are peculiarly apt to return, ſoon after a ſtop has been put to them, unleſs a gentle purge be given, which therefore muſt not be omitted, even tho' it ſhould ſeem too early to purge with reſpect to the ſtage of the fever, if this ſymptom had not happened.

All hæmorrhages not to be immediately ſtopt.

50. The *hiccup* generally happens to the aged after an immoderate looſeneſs, but chiefly after exceſſive vomiting, and frequently prognoſticates imminent death. I ingenuouſly own that I have not been able to ſatisfy myſelf in my inquiry into the cauſe of this ſymptom; but I have frequently obſerved it to proceed from ſome diſturbance raiſed in the ſtomach and adjacent parts by violent medicines, not without great danger to the patient, becauſe nature is unable to check and quiet this commotion; and on this account I judged it proper to aſſiſt her by art, by giving a large doſe of *diaſcordium*, *viz.* two drams, which ſeldom failed to remove this ſymptom, when the ſeeds of dill, and other celebrated ſpecifics, had proved ineffectual (*f*).

An hiccup how to be treated.

51. If,

(*f*) The *hiccup* is a convulſive motion of the diaphragm: happening in the declenſion of a fever it is a dangerous ſymptom. In this caſe it is generally accompanied with extreme weakneſs and depreſſion of ſpirits; and therefore the opiates directed ſhould be of the warm or cordial kind, and given in ſmall quantities; otherwiſe they may ſink the ſpirits ſtill more, and bring on a fatal *ſtupor*. *Hoffman* here prefers gentle antiſpaſmodics and anodynes to opiates; ſuch as *amber*, *caſtor*, *cinnabar*, *ſaffron*, *&c.* When this diſorder proceeds from viſcous or irritating matter lodged in the ſtomach or firſt paſſages, a vomit is proper, if the patient be ſtrong enough to bear it. If occaſioned by depletion, or immoderate evacuations, a reſtorative and nouriſhing diet, and a moderate uſe of wine, give relief. If by an internal excoriation, or inflammation, from a corroſive poiſon, or other like cauſe, *warm milk*, and *oil of almonds*, or *oil-olive*, ſhould be drank in large quantities, and alſo plentifully

Sect. 1.

A looseness how to be cured.

51. If, as above intimated, (*g*) a *looseness* should happen in the course of the disease, for want of giving a vomit at the beginning, when it was indicated by the retchings; one should be given at any time of the disease, provided the patient be strong enough to bear it, even tho' there be now no tendency to that evacuation. But as this has been largely treated in the foregoing pages, I shall only mention what is proper to be done, if a looseness should happen notwithstanding an emetic has been given; which is very seldom the case, except in an inflammatory fever, where this symptom, so far from being prevented, is sometimes occasioned by a vomit; which is an observation of consequence. And here I have found the following glyster more efficacious than any other astringents.

An astringent glyster.

Take of the bark of pomegranates, half an ounce; red roses, two pugils; boil them in a sufficient quantity of milk, so as to leave half a pint of strained liquor, in which dissolve half an ounce of diascordium: *mix the whole for a glyster.*

'Tis improper to inject a larger quantity of this glyster than is here directed, tho' it be naturally astringent; because the intestines may be oppressed by its bulk, whence the looseness will rather be promoted than check'd (*h*).

Rather to be check'd than encourag'd.

52. But it may be said, that if a diarrhœa should appear, especially in the decline of the disease, it is better to encourage than stop it; as it is sometimes a critical discharge, and terminates the distemper. This undoubtedly may sometimes be the case, but it happens so rarely, as not to encourage one to attempt it; be-

plentifully injected by way of glyster. See *Van Swieten, Comment. in Aphor. Boerh. Vol. 2. p. 265.*

(*g*) See above, *Par.* 19.

(*h*) It is a very difficult matter to lay down a general method of cure for a *symptomatic looseness*; as it may proceed from a great variety of causes, and occasionally require to be check'd, or promoted. However, when it happens near the crisis, and is not too violent, it must by no means be check'd, as it may happily terminate the disease. But if danger be apprehended from the sinking of the pulse, fainting, *&c.* blisters, perspiratives, and gentle cordials, both of the medicinal and dietetic kind, will prove of very considerable service, in checking it, as well by way of revulsion as by strengthening the patient.

sides,

ſides, the reaſon before alleged, in treating of the cure of fevers in general, which tends to ſhew the neceſſity there is of ſtopping the flux, holds here alſo. And to this may be added, that in order to the genuine depuration of the blood, it is not only neceſſary there ſhould be a ſecretion of ſome feculent parts, but there is further required a ſeparation of others by way of *efflorescence*, as we daily ſee in other rich and heterogeneous liquors. Conſequently if the looſeneſs be too much promoted, the depuration will not be wholly compleated, and perhaps the matter, that ought to have been laſt expelled, will paſs off firſt. I own indeed that after the ſeparation by way of *efflorescence* is finiſhed, which is uſually performed gradually and inſenſibly, and by means of a freer perſpiration, rather than of a manifeſt ſweat, if then a looſeneſs ſhould happen, it would be attended with little danger; for it muſt be obſerved, that now it is only owing to a neglect of purging in time, whence the excrement, for want of being evacuated, contracting a kind of malignant ferment, irritates the inteſtines to diſcharge their contents; beſides, the very liquid conſiſtence of the excrement is a proof that the looſeneſs ought not to be accounted a critical ſolution of the diſeaſe (*i*). Chap. 4.

53. Poſſibly the *iliac paſſion* deſerves to be enumerated among the ſymptoms conſequent upon fevers, ſince it is ſometimes occaſioned by immoderate vomiting in the beginning of the diſeaſe. This terrible diſorder, which has hitherto generally been eſteem'd fatal, is owing to the inverſion of the periſtaltic motion of the guts, whence their contents are forced upwards, and thrown out by vomiting, ſo that the ſtrongeſt glyſters become emetic, as do likewiſe cathartics, immediately after being taken. And I judge the exquiſite and intolerable pain attending this diſorder, proceeds only from the inverted periſtaltic motion of the bowels, whoſe natural formation is ſuch, as by their many folds to promote the deſcent of the fæces in the propereſt manner; and therefore whenever they are forced to yield to a motion oppoſite to that of their fibres, a pungent pain is occaſioned, which remains fixt upon a particular part, when either the valve placed at the beginning of the *colon*, to prevent the return of the excrement in- The *iliac paſſion* whence.

(*i*) The reaſoning of this paragraph is very theoretical.

to

Sect. 1. to the *ileum*, or any other membrane belonging to the cavity, ſingly ſuſtains the force of this preternatural motion. This inverted motion, productive of the pain, may proceed either from (1) obſtruction, or (2) irritation.

Whence the inverted motion of the inteſtines.

54. (1) It is manifeſt that whatever blocks up the paſſage of the inteſtines, muſt needs occaſion this contrary motion in them; and this may happen, according to authors, (1) from hardened excrements, (2) much *flatus* collected in the bowels, and as it were purſing them up, (3) ſtrangulation from a rupture, (4) inflammation, (5) and laſtly, large ſwellings filling up their cavity. However, it is plain that the inverted motion, proceeding from theſe cauſes, is rather to be accounted the motion of the aliment taken in, than of the inteſtines themſelves; nor is it an inverſion of the motion of the whole duct, but of thoſe parts only which are ſituated above the ſeat of the obſtruction; for which reaſon I call it the *ſpurious iliac paſſion*.

55. (2) I conceive the inverſion of the periſtaltic motion generally proceeds from acrid and peccant humours being depoſited in the ſtomach and adjacent inteſtines, from the violent fermentation of the blood in the beginning of the fever, whereby the motion of the ſtomach is firſt inverted, and its contents thrown up with violence, and then the ſmall guts that are contiguous to it, being weakened, yield to the violent motion of the ſtomach, and at laſt the large guts are alſo made to ſympathize with them. This is the *true iliac paſſion*, and the diſorder under conſideration. The method of curing it has hitherto remained a ſecret, notwithſtanding the pretenſions of ſuch as have had recourſe to quickſilver, and leaden bullets, which do little ſervice, and are frequently very dangerous.

The intentions of cure to be anſwered.

56. As ſoon as it appears from glyſters being vomited up, and other ſigns, that the diſeaſe is a true iliac paſſion, I endeavour to anſwer theſe three intentions:

(1) To put a ſtop to the inverted motion of the ſtomach, which produces the ſame in the inteſtines.

(2) To ſtrengthen the inteſtines weakened by the ſharp humours. And

(3) To free the ſtomach and bowels from theſe ſharp humours.

57. (1)

57. (1) I direct a ſcruple of *ſalt of wormwood*, with a ſpoonful of *lemon juice*, to be taken morning and night, and in the intervals give ſome ſpoonfuls of *mint-water* by itſelf, twice every hour, by the repeated uſe of which the vomiting and pain may be ſoon removed. (2) At the ſame time I order a live puppy to be applied to the belly, till the following purgative is given. (3) Two or three days after the pain and vomiting are gone off, I give a dram of the greater *Pil. cochiæ*, diſſolved in *mint-water*, and direct draughts of *mint-water* to be frequently taken during the operation of the purge, in order to prevent the return of the vomiting (*k*). Chap. 4. In what manner.

58. I have obſerv'd that 'tis in vain to give this, or any other the ſtrongeſt kind of purge, before the ſtomach be ſtrengthened, and reduced, together with the inteſtines, to its natural motion; for otherwiſe all cathartics will prove emetic, and conſequently be more prejudicial than ſerviceable. And this reaſon induced me to forbear purgatives, till I had firſt uſed ſtomachics awhile (*l*).

59. The diet I direct is very ſparing; for I allow the patient only to ſup ſome ſpoonfuls of chicken broth, twice or thrice a day, and confine him to his bed during his illneſs, and till the ſigns of recovery appear; directing him to continue the uſe of the *mint-water* for

(*k*) The anti-emetic mixture ſhould be given oftener to do any good; it is trifling to give it only twice a day in ſo acute and dangerous a diſorder. And if this and mint water ſhould not relieve, opiates muſt be adminiſtered in a ſufficiently large doſe, and repeated, as the caſe requires, till the vomiting ceaſes. Solid opium here has two advantages, *viz.* the doſe may be more exactly aſcertained, and it is leaſt apt to be thrown up again.

(*l*) When every thing is quiet, it is abſolutely wrong to wait two or three days before giving a purge; the moſt convenient form for which, is that of pills. A proper quantity of *calomel* made up into a pill, will more certainly paſs than any thing elſe; and for fear that in a doſe of about twelve grains it ſhould irritate the ſtomach too much, it may be given in a leſs quantity, and repeated as there is occaſion; and an opiate may occaſionally be mixed with this, or other pills. And as the moſt plentiful bleedings ought to be uſed, and fomentations frequently applied in this caſe, there ſeems to be little danger of inflaming by *calomel*. The dram of *Pil. cochiæ* ordered by the author is too much at once, and ought not to be mixed with a liquid, becauſe in this form it is leaſt likely to be retained by the ſtomach.

a con-

Sect. 1. a conſiderable time after the cure, and to keep the belly warm, by wearing a double flannel, whereby a relapſe may be prevented, which happens more frequently in this than in any other diſeaſe (*m*).

60. In theſe few particulars conſiſts my whole method of curing this diſeaſe, which, it is hoped, no one will deliberately contemn, on account of its ſimplicity, and the want of elegance of language, and the pomp of medicine to recommend it.

61. Thus I have enumerated the ſymptoms that uſually happen in this fever; but there are others I

(*m*) The *true iliac paſſion* will, doubtleſs, rarely be found to yield to ſo few and gentle remedies; and therefore we ſhall add ſome further directions relating to the cure thereof. When a fever has preceded, or accompanies it, all heating medicines ſhould be forbore, for fear of occaſioning an inflammation of the inteſtines, and paving the way to an incurable gangrene. Bleeding very plentifully is neceſſary, and muſt be repeated, as the caſe requires; for the blood in ſome of theſe caſes is as much inflamed, and ought to be taken away as copiouſly at leaſt as in a pleuriſy; tho' to be ſure the rule to go by is the ſizineſs of the blood, which will appear to the eye, and the ſtrength of the patient, which may be known from the pulſe and other circumſtances. An emollient and laxative glyſter ſhould be given every hour, or every two hours; *Boerhaave* tells us, (whoſe method this is in part) that ſeveral have periſhed becauſe glyſters were not given often enough. A tea made of *linſeed* or *marſh mallow roots*, barley water, ſmall chicken broth, and the like, may be uſed warm for common drink. It is adviſeable to continue the proceſs, and keep to a cooling, emollient, ſpare diet, for, at leaſt, two or three days after the diſeaſe is gone off, in order to prevent a relapſe. Opiates may be exhibited along with purgatives. If the diſorder be cauſed by ſtrangulation from a rupture, we muſt, before exhibiting any medicines, endeavour to diſengage and replace the inteſtines, by applying emollient fomentations and cataplaſms to the part affected; and, all means failing, recourſe muſt be had to the ſurgical operation requiſite in theſe caſes. But no probable method ſhould be left unattempted, if the caſe be not too urgent to admit of any delay, before proceeding to an operation, that is always dangerous, and demands uncommon ſkill and dexterity in the operator. Warm bathing in a decoction of *marſh mallow roots*, *linſeed*, *fenugreek ſeed*, *elder and camomile flowers*, *poppy heads*, and other like ingredients, *in milk and water*, is an admirable remedy, and particularly in the laſt mentioned caſe. In deſperate caſes *quickſilver*, prudently adminiſtered, has ſometimes given relief. The method is to begin with a ſmall quantity, and increaſe it by degrees. *Heiſter* in his ſurgery greatly commends, in all theſe caſes, the ſmoak of tobacco to be blown up the *anus*. Tom. 2. p. 1100. See alſo his *Compendium medicinæ*, p. 249.

ſhall

shall not now mention, as they are of less moment, and require no particular treatment, but go off spontaneously, if the fever be skilfully treated. And let this suffice for the continued fever of this constitution, with its symptoms (*n*). Chap. 5.

CHAP. V.

Of the intermitting Fevers of the Years 1661, 1662, 1663, 1664.

1. THE constitution, as we observed above, that prevailed through all the preceding years, having so eminently favoured the rise of all kinds of intermittents, I will here set down the observations I then made concerning them, and also add those which relate to the few intermittents that have happened sporadically since that time, that I may not break in upon the history of the following years.

2. And first it must be observed that, in order to conjecture something, at least, of their nature, regard must be had to the three different stages of the fits of intermittents; *viz.* (1) the *shaking*, (2) the *ebullition*, and (3) the *despumation*. The three stages of intermittents to be considered

(1) I judge the *shaking* proceeds from this cause, that the febrile matter, which, being not yet turgid, was in some measure assimilated by the blood, becomes, at length, not only useless, but prejudicial to nature, raises a kind of violent motion in the mass, and endeavouring, as it were, to escape, causes a chilness and shaking; which shew how pernicious in its nature the febrile matter is to the body, in the same manner, as purging draughts in weak stomachs, or poison casually Description of the first.

(*n*) We have, as we went along, taken notice of the deficiencies this history of the cure of a fever labours under, as being too loose, hypothetical, general, and incomplete; and it should seem that our author was well aware of it, he having been abundantly more exact in most of his following treatises, where we shall generally find a just and full description of the disease under consideration, a minute and particular detail both of its usual and unusual symptoms, together with safe methods of practice, judiciously suited to the several changes thereof.

swallowed,

Sect. 1. ſwallowed, immediately occaſion a ſhivering, and other ſymptoms of the ſame kind.

The ſecond. 3. (2) Nature, therefore, being by this means irritated, raiſes a *fermentation* in order to expel the enemy with leſs difficulty; this being the common inſtrument ſhe uſes to free the blood of its morbid particles, as well in fevers, as in ſome other acute diſeaſes. For by means of the fermentation, the ſeparated parts of the peccant matter, that were equably mixed with the blood, begin to be uuited together in ſome meaſure, and conſequently may be more eaſily moulded, ſo as to be fitted for deſpumation. That this is probably the caſe appears from the death of ſuch as die in the fit, which generally happens in the firſt ſtage of it, *viz.* during the *ſhaking*, or *cold fit*; for if they ſurvive till the efferveſcence, or hot fit comes, they eſcape at leaſt for that time. Both theſe ſtages are ſevere, (3) but The third. in the third, namely the *deſpumation*, all the ſymptoms firſt grow milder, and afterwards go off entirely. *By deſpumation I mean no more than the expulſion, or ſeparation of the febrile matter, now in a manner overcome, when what is thrown off partly reſembles yeaſt, and partly lees, as may be ſeen in other liquors.*

Whence the return of the fit. 4. Having premiſed theſe particulars, I proceed next to ſhew why the fit returns, tho' the patient now ſeems to be out of danger: and this ariſes from the febrile matter's not being wholly thrown off, whence the latent remainder re-appears, according to the nature of the fits, and occaſions freſh diſturbance, running thro' the ſeveral ſtages above deſcribed. How it happens that this latent remainder (not ſufficiently overcome by the preceding efferveſcence, and conſequently not expell'd with the other peccant matter) does not proceed with the ſame regularity in every intermittent, but ſometimes requires one day, ſometimes two, and at others, three days, before it comes to maturity, and cauſes a new fit, is what I cannot account for; neither do I know that any one has hitherto ſufficiently explained this ſecret operation of nature.

5. I do not deſire to be called a philoſopher, and as for ſuch as conceive they have a right to this title, and, upon this account, may poſſibly cenſure me for not having attempted to dive into theſe myſteries, I adviſe them to try their faculties in accounting for the various works

works of nature that every where ſurround us, before they go about to teach others. I would fain know, for inſtance, why a horſe comes to his full growth in ſeven years, a man in twenty one; why ſome plants uſually flower in *May*, and others in *June*; not to mention innumerable other effects, whoſe cauſes are as hard to be diſcovered (*o*). Now if the learned ingenuouſly confeſs their ignorance in theſe points, I ſee no reaſon, why I ſhould be cenſured for being ſilent, in a matter not leſs obſcure, and perhaps wholly inſcrutable; eſpecially as I am perſuaded that nature proceeds in this caſe, as in all others, with a certain regularity and uniformity; the matter of tertians and quartans being not leſs ſubject to, and governed by the laws of nature, than all other kinds of bodies are. Chap. 5.

Their ſymptoms and particular kinds deſcribed.

6. All intermittents, in general, begin with a chilneſs and ſhaking, which are ſoon followed by heat, and then by ſweat. The patient uſually vomits both in the cold and hot fit, complains of great ſickneſs, is thirſty, his tongue dry, *&c.* And theſe ſymptoms abate in the ſame degrees as the ſweat increaſes, which, becoming

(*o*) A ſearch into efficient, or material cauſes, is doubtleſs one of the moſt idle and impertinent uſes we can make of the powers of our underſtanding; for, as they lie far beyond the reach of the ſenſes, we cannot but fail in the attempt; and it is not improbable, on a ſuppoſition we could come at them, that they might rather ſerve to gratify a vain curioſity, than advance us in uſeful knowledge. Would it not then be acting more prudently, to reſolve them into the will and pleaſure of the creator, without preſuming to penetrate into what he ſhould ſeem to have covered with an impenetrable veil; and rather apply ourſelves to mark their effects, and operations, ſo as to draw from thence a ſet of directions, which, being built on ſo ſolid a foundation, might, if judiciouſly applied, and varied as particular circumſtances may require, ſerve to conduct us with ſafety and ſecurity in moſt occaſions? Had the generality of phyſicians, for inſtance, who for many ages paſt have rack'd their brains to no purpoſe, in order to diſcover the remote and latent cauſes of ſimple and obvious effects, made this the ſole ſcope and end of their reſearches, what a fund of beneficial knowledge would have been amaſſed by this time! It may ſeem ſtrange that in ſo great a length of time they ſhould not have perceived that they have no adequate faculties for thoſe ſublime enquiries, but that all the truly uſeful, or ſcientifical knowledge they can ever hope to gain, is only to be had from obſervation and experience, every thing elſe being eternally liable to be controverted, as exiſting only in the imagination.

Sect. 1. more copious, ends the fit (*p*). And now the patient continues tolerably well till the fit returns at the uſual time; which, in a quotidian, happens once in the ſpace of twenty four hours, or a natural day, in a tertian every other day, and in a quartan every third day; calculating from the beginning of one fit to the beginning of the next. But the two latter are frequently doubled, ſo that a tertian comes every day, and a quartan two days ſucceſſively, the third being the intermediate, or well day; and ſometimes, when it proves a triple quartan, it comes three days ſucceſſively, the intermittent deriving its name from the manner of its firſt appearance.

Whence the redoubling of the fits.

7. This redoubling of the fits is ſometimes cauſed by the too great quantity and activity of the febrile matter; in which caſe the adventitious fit precedes the *original* one: but ſometimes, when the patient is conſiderably weakened, and the violence of the fit abated, either by too free an uſe of cooling medicines, or profuſe evacuations, the adventitious fit follows the *original* one, and is both milder and ſhorter than it. In the former inſtance, the violent motion of the matter does not wait for the due time of its return, and finiſhes its deſpumation in a ſhorter time; but in the latter, the blood, being too weak to throw off the febrile matter at once, immediately cauſes a freſh fit, in order to expel the remainder. And perhaps upon theſe two contrary cauſes, both the anticipation, and the ſlower approach of the fits, in common regular intermittents,

(*p*) The diſeaſe here being very imperfectly deſcribed, we ſhall give a more exact and circumſtantial detail of its ſymptoms.—Theſe are heavineſs, pain of the head and limbs, pain in the loins, paleneſs in the face, chilneſs of the extremities, yawning, ſtretching, and often violent ſhaking, a ſmall, ſlow pulſe, thirſt, retching, and ſometimes vomiting of bilious matter. In the hot fit, a heat of the whole body, redneſs and diſtenſion of the ſkin, a quick and ſtrong pulſe, watchfulneſs, ſhort breathing, and ſometimes raving, high coloured urine without a ſediment: theſe ſymptoms abate by degrees, and an univerſal ſweat appears, which ſoon terminates the fit; this generally laſting ten or eleven hours, and ſometimes twenty, according to the difference of conſtitutions, and the nature of the morbific cauſe.—The patient is indiſpoſed the following day, chill, and apt to ſhiver, has a weak and ſlow pulſe, his urine is thick and pale, and either depoſites a ſediment, or contains a ſmall cloud ſuſpended therein.

may

may depend: both which frequently happen in quotidians. Chap. 5.

8. Intermittents are either *vernal*, or *autumnal*; tho' ſome ariſe in the intermediate ſeaſons; but as theſe are not ſo frequent, and may be referred to Spring or Autumn, according as they approach neareſt to either, I ſhall comprehend them all under the two kinds above-mentioned. Theſe diſeaſes make their firſt appearance in *February* and *Auguſt* particularly; though ſometimes they appear ſooner or later, according as the air is more or leſs diſpoſed to produce them, which, of courſe, renders them more or leſs epidemic. The *autumnal* intermittents of 1661 were an inſtance of this; for I remember a woman was that year ſeized with a quartan upon St *John*'s day, and numbers very early in the ſeaſon; and afterwards in the declenſion of the year, theſe diſtempers became very epidemic.

All intermittents either vernal or autumnal.

9. This diſtinction of intermittents is ſo neceſſary, that unleſs it be well attended to in practice, no juſt prognoſtic can be formed of their continuance, nor a method of cure directed, ſuitable to the different nature, both of the ſeaſons, and diſorders. It muſt be own'd, that the intermittents of both ſeaſons, do not greatly differ, either as, (1) to the manner of their attack; which begins with a ſhaking, is ſoon ſucceeded by heat, and at length goes off with ſweat; or (2) the difference of their appearance, in which reſpect ſome are tertians both in ſpring and autumn: and yet I judge that they differ eſſentially from each other.

The two kinds differ eſſentially.

10. I will begin with *vernal* intermittents, moſt of which are either *quotidians*, or *tertians*, and appear ſooner or later, according to the various diſpoſition of the ſeaſon. For the ſpirits being concentrated by the winter's cold, gather ſtrength in their receſs, and in this lively ſtate are invited out by the heat of the approaching ſun, and, being mixed with the viſcid juices, wherewith nature had ſtock'd the blood during that ſeaſon, (which, however, are not ſo viſcid as thoſe whoſe fluid parts have been dried up and parched by the preceding heat in *autumn*,) are, whilſt they endeavour to eſcape, detained, and as it were entangled, and conſequently occaſion this *vernal ebullition*, in the ſame manner as is obſerved to happen upon expoſing bottles filled with beer to the fire, after having been long kept buried in

Vernal intermittents whence, and their progreſs.

Sect. 1.

ſand, or in a cool cellar, whence the liquor begins to work, and endangers the burſting of the bottles. The blood, thus diſpoſed, attempts its depuration, and, by means of its volatile ſpirits, finiſhes it in a ſhort time; unleſs the juices be too viſcid, ſo as to check the fermentation: and tho' this ſhould happen, yet the vernal efferveſcence ſeldom proves continued and regular, but generally intermits, and is divided as it were into ſeveral fits. For the blood being now turgid with theſe rich ſpirits, nature hurries on her work, and by particular fits perfectly compleats the ſecretion of ſome parts, before ſhe finiſhes the univerſal ſeparation. And this ſeems to be the reaſon that there are but few continued fevers in ſpring, and particularly in its decline, unleſs an *epidemic* conſtitution happens to prevail; the fermentations which ariſe at this time, being either ſuddenly check'd, or haſtening to an intermiſſion; or laſtly, ſuch parts of the juices as were beſt fitted for ſeparation, are ſpeedily and violently thrown upon ſome other part of the body; whence quinſies, peripneumonies, pleuriſies, or the like dangerous diſeaſes immediately ariſe, eſpecially at the decline of the ſpring.

Few continued fevers in ſpring.

11. I have already obſerved that vernal intermittents ſeldom laſt long, and always prove ſalutary; ſo that the aged or infirm can ſcarce be endangered thereby, without very unſkilful treatment. But I have ſometimes known vernal tertians prolonged to autumn, by improper bleeding and purging, along with an unſuitable regimen; but this ſeaſon being very contrary to their nature, immediately check'd them, the patient in the mean time being almoſt worn out by the frequent redoubling, and long continuance of the fits, ſo that he ſeemed in great danger, tho', as far as I have hitherto been able to obſerve, he always recovered.

Vernal intermittents ſeldom laſting, and always ſalutary.

12. Neither have I met with thoſe dangerous ſymptoms, in ſuch as are cur'd of this diſeaſe, which, as ſhall hereafter be ſhewn, ſucceed inveterate autumnal intermittents; *viz.* a mortal inflammation of the tonſils, a hard belly, dropſical ſwellings, *&c.* But I have often found when the patients have been extremely debilitated, by the long continuance of the diſeaſe, the doubling of the fits, and repeated evacuations, that they have been ſeized with a madneſs, when they began to recover, which went off proportionably as they gathered ſtrength.

Sometimes ſucceeded by a madneſs.

13. But

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13. But autumnal intermittents differ very much from vernal ones. For tho' a tertian in thoſe years, when it is not epidemic, and ſeizes healthy perſons, does ſometimes go off, in a ſhort time, and is accompanied only with the uſual ſymptoms of vernal tertians; yet when it is epidemic, and ſeizes the aged, or perſons of an ill habit of body, it is not without danger, and laſts two or three months, and perhaps even to the following ſpring. But quartans are more dangerous and obſtinate than tertians, for old perſons are ſometimes deſtroyed by a few fits; in which caſe they generally die in the cold fit, as we have already obſerved. Thoſe who have juſt entered upon old age are not indeed in ſo much danger of ſinking under the diſeaſe in ſo ſhort a time, but are ſcarce ever cured before the return of the ſame period of time of the following year, wherein they were firſt ſeiz'd: and ſometimes this diſeaſe leaves ſome diſorder behind it, that in the end proves mortal.

An autumnal epidemic tertian ſometimes dangerous.

14. A quartan now and then changes its face, and likewiſe produces abundance of morbid ſymptoms, as the ſcurvy, a hard belly, a dropſy, *&c.* But young perſons are better able to bear this diſtemper, from which they are ſometimes freed about the winter ſolſtice; tho' it happens more frequently, particularly when bleeding and purging have been uſed, that their recovery is prolonged to the ſubſequent *vernal equinox*, or even the ſucceeding *autumn*. I have often wondered to ſee infants ſtruggle with this diſeaſe for ſix months, and at length recover.

A quartan ſometimes ſucceeded by dangerous ſymptoms.

15. It is worth obſerving here, that if any perſon be ſeiz'd with a quartan, who has had it before, tho' long ſince, it terminates ſpontaneouſly after a few fits, of whatever age or conſtitution he be (*q*).

Soon goes off when it comes a ſecond time.

16. I have always been of opinion that vernal intermittents might be wholly left to themſelves, having never known a ſingle perſon deſtroyed thereby; and on the contrary have obſerved that the attempting their cure, eſpecially by evacuating medicines, tended only to render them more obſtinate (*r*). But if the patient will

Vernal intermittents how to be treated.

(*q*) This obſervation is ſometimes contradicted in practice.

(*r*) In general, vernal intermittents are not dangerous, and may be ſuffered to go off ſpontaneouſly; but ſometimes phyſicians find it neceſſary to attempt their cure; otherwiſe they are

Sect. 1. will not be satisfied, unless something be done to relieve him, various methods may be successfully employ'd for this purpose, as I have frequently experienced.

Sometimes cur'd by a vomit,

17. A vomit seasonably given, so as to have done working before the fit begins, sometimes proves a cure; especially if a moderate dose of syrup of white poppies, or any other opiate, be given after the operation is over. Sometimes diaphoretics cure, especially in *vernal quotidians*, by promoting the sweat that breaks out towards the end of the fit, provided the patient be well covered, and the sweat continued as long as he can bear it; for the juices not being very thick in this season, the disease is perfectly cured, which would otherwise return: but this never happens in autumn. I have also sometimes cured *tertians* by giving glysters upon three or four of the intermediate days.

Sometimes by glysters.

Copious bleeding retards the cure.

18. But if bleeding be used too freely *(s)*, which inconsiderate persons easily yield to on account of the season, or the spirits, which should directly attempt the business of despumation, be so far impoverish'd by the preceding weakness of the patient, as to be unable to perform it, *vernal tertians* may then withstand all our endeavours, and perhaps prove as lasting as *autumnal ones*; tho' they do not usually continue so long, but either go off spontaneously, or soon give way to the use of a few gentle remedies.

Autumnal intermittents described.

19. But *autumnal intermittents*, of which I am now to treat, are not so easily conquered. When the constitution is epidemic they usually appear about *June*, but otherwise not till *August*, or the beginning of

apt to prove inveterate in some constitutions, and occasion other obstinate disorders. And it is observable, that they are commonly cured by evacuating medicines, such as vomits, gentle laxatives, sudorifics, blisters, and sometimes bleeding. So that it may seem strange our author should except against a method, which yet in the next paragraph he lays down for safe and successful.

(s) There is often no necessity for bleeding at all; it may however be used to advantage when the intermittent, at its first coming, resembles a continued fever, and is accompanied with great heat, and a delirium, the patient in the prime of life, of a sanguine constitution, and accustomed to drink either malt liquors, or wine freely; but when the stomach is foul, and the patient not plethoric, bleeding is pernicious, because it checks the healthful evacuations by the pores, whence this disease is rendered more stubborn, and made chronical, as experience shews.

Sep-

September, and very rarely in the following months. When numbers are seized at the same time, we may generally observe that the fits come exactly in the same manner, and at the same hour of the day, a little sooner, or later perhaps, unless this order be disturbed in some persons by remedies that either hasten or retard the coming of the fit. Chap. 5.

Hard to be distinguished.

20. It must likewise be noted, that it is a difficult matter at the first appearance of intermittents, especially of those that are epidemic in *autumn*, to distinguish them exactly; because, at this time, they are accompanied with a continued fever; and for some time afterwards, unless great attention be given, nothing more than a remission can be discovered; but by degrees they perfectly intermit, and put on a form entirely agreeable to the season of the year.

21. They are, however, either *tertians* or *quartans*; (but the latter are deservedly accounted the genuine product of *autumn*) and, in reality, so much alike, that they frequently vary, at least for a time, from one to the other; shortly after, perhaps, re-assuming their pristine form. But *vernal tertians* never assume the shape of *quartans*, because they differ widely from each other; nor have I ever seen a *quotidian* happen in this season, unless a *double tertian*, or a *triple quartan* should seem to deserve that name.

The cause of autumnal intermittents.

22. I judge that these intermittents are occasioned nearly in the following manner; *viz.* as the year advances the blood is likewise proportionably enrich'd, (just as vegetables shew the course of the year by their growth and decay) till it comes to its height, and ultimate vigour; after which, keeping pace with the time of the year, upon the declension thereof, it also declines; and more particularly when some accidental cause contributes thereto, as great loss of blood, taking cold, the use of indigestible and excrementitious food, unseasonable bathing, and the like. For the blood, being in this depress'd state, is subject to every morbific impression, that any constitution of the air may communicate to it, which, at this time, tends to produce intermittents, epidemically. And to this the immediately succeeding ebullition tends, which happening sometimes in an extremely vitiated blood, occasions a bad fever, accompanied with several malignant and dangerous

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ſymptoms. But from whatever cauſe it ariſes, the blood, having loſt a conſiderable ſhare of its ſpirits, and being greatly parch'd by the heat of the preceding ſummer, will perform its ebullition ſlowly, and require much time to finiſh its depuration (*t*).

Whence ſo hard to cure.

23. Now to ſhew clearly how difficult it is to cure autumnal intermittents, the diſſimilitude between the continued and intermittent fevers of this ſeaſon muſt be well conſidered; which chiefly conſiſts in this, that continued fevers carry on the effervescence once begun, regularly and uninterruptedly to the end of the diſeaſe; whilſt intermittents perform the buſineſs by parts, and at different times: but in both the effervescence is finiſhed in about three hundred and thirty ſix hours, the preciſe time that is ordinarily requir'd for the depuration of the maſs of blood in a human body, when the buſineſs is wholly left to nature; in the ſame manner as wine, beer, and cyder have each a peculiar time wherein their depuration is finiſhed.

The time ſpent in the effervescence.

The ſame in continued fevers and quartans;

24. But tho' the blood ſometimes in *intermittents*, as it happens in a *quartan*, attempts, and at length finiſhes its depuration in ſix months; yet by an exact computation it will appear that there is no more time employ'd here, than is, for the moſt part, naturally ſpent in compleating the depuration in continued fevers. For fourteen times twenty four hours, or fourteen natural days, make three hundred and thirty ſix hours; ſo that allowing five hours and a half for the duration of every fit of a quartan, the whole will be equal to fourteen days, that is, three hundred and thirty ſix hours. If now it ſhould be ſaid that a quartan ſometimes laſts above ſix months, which alſo holds in other intermittents; I anſwer, that the continued fevers of this conſtitution are likewiſe often prolonged beyond fourteen

(*t*) This account of the cauſe of *autumnal intermittents* is not a little obſcure and unſatisfactory; and it may ſeem ſtrange that this great man, who was ſo profeſſed an enemy to hypothetical ſpeculations, ſhould, notwithſtanding, ſo frequently attempt to reaſon upon matters, which lie ſo far out of the reach of the acuteſt underſtanding, that a little attention to the ſubject will convince us of the impoſſibility of arriving at any certain and demonſtrative knowledge thereof. Beſides, is it not trifling to make ſuch nice reſearches into cauſes, that, in all probability, will always remain latent, whilſt the effects are overlooked, from which alone we are to expect any advantage?

days:

days: but, in both caſes, if care be taken to keep up the efferveſcence in a proper manner throughout the courſe, and eſpecially towards the declenſion of the diſeaſe, the deſpumation will be finiſhed in the time abovementioned. Whereas if the fermentation be unſeaſonably check'd by cooling medicines, or glyſters, in this ſtage, no wonder the diſeaſe proves laſting: the procedure of nature being by this means diſturbed, and the texture of the blood in a manner looſened or broken, ſo that it cannot effectually attempt the deſpumation; which alſo ſometimes happens ſpontaneouſly in weakly conſtitutions, unleſs drooping nature be aſſiſted with cordials to enable her to finiſh the buſineſs of deſpumation. Chap. 5.

But different in ſome fevers.

25. It muſt likewiſe be further obſerved here, that what has been ſaid of the continuance of the fermentation is to be underſtood only of ſuch fevers as have arrived to a fixt ſtate; for there are fevers, both of the continued and intermittent kind, which are of a variable nature, and do not reach the limited period in their efferveſcence. Such are thoſe that ſometimes ariſe from a ſlight error in the non-naturals, as in aliment, drink, air, and the like: but they often terminate in a ſhort time; as they alſo do in young perſons whoſe blood is pure, and full of ſpirits. For as their fevers proceed from a certain ſpirituous, ſubtle, and volatile matter, they finiſh their fermentation ſpeedily, and go off.

The requiſites for fermentation.

26. Now in order to raiſe a fermentation, it is neceſſary that the fermentable matter, whether blood, wine, or any other liquor, be of ſo viſcous and tenacious a nature, as to detain, and, as it were, envelope the ſpirits therein contained; yet ſo as they may be able to be moved briſkly in the liquor, but not to fly off. Let it be remembered, however, that the liquors abovemention'd muſt not be ſo viſcous, as to oppreſs the ſpirits entirely, and ſo prevent their being moved at all (*u*).

27. Theſe

(*u*) It will not ſeem ſtrange that we have here ſo lame and imperfect an account of the requiſites for fermentation, if it be conſidered that our author might not perhaps be eminently ſkill'd in chemiſtry, and alſo that in his time this extenſively uſeful ſcience had received little improvement, and was far ſhort of the flouriſhing ſtate we now ſee it in. Whoever deſires to ſee a particular account of fermentation, may have recourſe to *Boerhaave*'s Chemiſtry, *Vol.* II. where he will find the

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27. Theſe particulars being laid down, which I conceive are rational and well-grounded, it will not appear ſtrange that I propoſe no other method of cure in intermittents than ſeems neceſſary to be uſed in continued fevers, to finiſh the buſineſs of their deſpumation in a proper manner: ſince they differ, as to the manner wherein nature uſually expels the morbid matter: *viz. by means of an efferveſcence limited to a fixt time:* tho' with reſpect to their kinds and the peculiarity of their nature, I own they differ greatly from continued fevers, and from each other likewiſe. The curative indications therefore muſt be taken either (1) from a cateful obſervance of the ſteps which nature takes to overcome the diſeaſe, that ſo we may quicken the fermentation already raiſed, and by this means recover the patient: or (2) we muſt endeavour to inveſtigate the ſpecific cauſe, in order to remove the diſeaſe by effectual and ſpecific remedies.

Intermittents how to be treated.

28. I have tried both methods with great care and application; but have not hitherto been able to cure *autumnal intermittents* before they had finiſhed their ſtated fermentation above ſpecified, however diſagreeable it has been to the patients to wait ſo long for their recovery. If therefore any one is poſſeſſed either of a certain method, or a ſpecific remedy that will not only ſtop the progreſs of, but thoroughly cure theſe diſorders, I think he ought to diſcover it for the good of mankind; and if he does not, I will venture to ſay, that he neither deſerves the character of a good, nor of a wiſe man. For it is not acting the part of a good man, to convert to his private advantage what might prove ſo eminently ſerviceable to the public: nor of a wiſe man to deprive himſelf of the bleſſing he might juſtly expect from heaven, by endeavouring to promote the public good. For honour and riches are held in much leſs eſteem by good men than virtue and wiſdom.

29. But tho' it be difficult to cure *autumnal intermittents*, yet I will ſet down what I have found do moſt ſervice in them. Frequent experience has taught me that it is very dangerous to attempt the cure by purging, (unleſs in the way hereafter to be mentioned) and

Bleeding and purging unſafe in autumnal intermittents.

the ſubject largely treated: or to Dr *Shaw*'s Chemical lectures, where it is treated with great clearneſs, method and conciſeneſs.

eſpeci-

eſpecially by bleeding. For in *tertians*, particularly in a very epidemic conſtitution, if bleeding does not prove a preſent cure, it prolongs the diſeaſe even in young, ſtrong, and otherwiſe healthy ſubjects; but aged perſons, after having long ſtruggled with it, are deſtroyed thereby, their death being generally immediately preceded by a mortal inflammation of the tonſils, as abovementioned (*w*). Again, bleeding cauſes thoſe ſymptoms to come ſooner, which, as we ſaid above, accompany autumnal intermittents at their decline, or directly ſucceed them; but it is ſo pernicious in *quartans*, as to occaſion the diſeaſe to laſt a year, in young perſons, which otherwiſe would have gone off in ſix months. And in the aged, who, if bleeding had not been uſed, might have recovered in a year, there is danger of the diſeaſe being prolonged thereby beyond its ſtated time, and of its proving mortal in the end. What has been obſerved of bleeding holds alſo of purging, with this difference only, that the latter is leſs dangerous, unleſs it be frequently repeated (*x*).

The cure of autumnal tertians.

30. I begin the cure of autumnal tertians in this manner: the patient being put to bed, and well covered, I endeavour to raiſe a ſweat by giving ſage poſſet drink, about four hours before the coming of the fit; and as ſoon as the ſweat begins I give two ſcruples of the greater *Pil. cochiæ* diſſolved in an ounce of the following mixture:

Take of aqua vitæ, *a pint*; Venice *treacle three ounces*; *ſaffron one dram: let them ſtand together in infuſion for uſe* (*y*). Theſe

(*w*) See above, *Par.* 12.

(*x*) Bleeding may ſometimes be very advantageouſly uſed; as where the intermittent is ſuſpected to proceed from an obſtructed circulation in the *viſcera* of the *abdomen*, to which hypochondriac perſons, and ſuch as have formerly been afflicted with the piles, are ſubject; and in pregnant women, who are in general plethoric, it is abſolutely neceſſary, in order to prevent a miſcarriage from the violent motion raiſed in the blood by the febrile ſymptoms. A ſingle bleeding, properly directed, has remov'd a ſtubborn quartan. To guide us in this particular, the ſeaſon of the year, the ſtage of the diſeaſe, the ſtrength of the patient, the ſtate of the fluids and ſolids, and other neceſſary circumſtances muſt be maturely conſidered and compared.

(*y*) Many inconveniences may juſtly be apprehended from the uſe of this extremely heating medicine, in young perſons of a ſan-

Sect. 1. These remedies being taken as directed, the sweat is to be encouraged for some hours after the usual time of the coming of the fit, with care to prevent checking it, which might otherwise be occasioned by the operation of the purgative.

Successfulness of the method.

31. I have found this more successful in the cure of this disease, than the giving the common decoction, suited to the same intention, made with *gentian root*, *the tops of the lesser centaury*, &c. and a little *sena* and *agarick*. For as it causes two contrary motions at once, *viz.* sweating and purging, it produces the same effect as the decoction, by disturbing and interrupting the usual course of the fit; and is more effectual, and as safe. Thus I have cured abundance of autumnal intermittents, and could not find out a better method during these years (z).

Manner of treating a double tertian.

32. When a *tertian* has varied its form, and is become a *double tertian*, on account of the patient's having been weakened, either by evacuations, or any other way, a sweat must likewise be raised, as above directed (30) and at the same distance of time from the coming of the next fit, either by giving the remedy there recommended, or some other powerful sudorific, which may also be repeated in the succeeding genuine fit: but the *Pil. cochiæ* must be omitted, because 'tis unsafe, as well as useless, to weaken the patient more by purging, and by this means promote the doubling of the fits, when he has been already debilitated thereby. In extreme weakness from this cause I prescribe the following electuary.

The electuary.

Take of the conserve of flowers of borage and bugloss, each an ounce; conserve of rosemary, half an ounce;

a sanguine constitution; so that if sweating be judg'd proper, it would be safer in most cases to give some mild sudorific, with frequent draughts of sack whey, sage-tea, or the like.

(z) This method seems impracticable, unless in strong phlegmatic constitutions, for in tender, weak, and delicate habits, the exciting two such directly contrary motions may be attended with fatal consequences; and this may be the reason it has not hitherto greatly prevailed, notwithstanding the uncommon deference that has been universally paid to our author's judgment. The present practice is highly improved both as to the certainty and safety of removing all kinds of intermittents, but the procedure is very different from that here directed.

candied

candied citron-peel, and nutmeg, and Venice *treacle, of each three drams; confection of alkermes, two drams, mix them up into an electuary; of which let him take the quantity of an hazel nut, morning and night; drinking after it six spoonfuls of the following julap.* Chap. 5.

Take of the distill'd water of meadow sweet, and treacle water, of each three ounces; syrup of cloves an ounce; mix them together. The julap.

Instead of the julap I sometimes give some simple plague water, sweetened with sugar; at the same time forbidding the use of glysters, and allowing chicken broth, water-gruel, *&c.* by way of diet.

33. With respect to *quartans*, whoever is but slenderly skill'd in physic cannot, I conceive, be ignorant how unsuccessful all the usual methods of cure hitherto directed have proved, unless by means of the *bark*, which yet more frequently checks, than cures the disease. For after it has lain dormant for two or three weeks, and the patient has had a short respite from its violence, it returns afresh as severely as before, and cannot generally be conquered in a short time, notwithstanding the bark be frequently repeated. This however shall not hinder me from communicating what I have experienced in relation to the method of giving it. *Quartans* how to be treated.

34. (1) The greatest caution must be had not to give it too early, namely, before the disease be in some measure spontaneously abated, unless the extreme weakness of the patient requires it to be given sooner; for the giving it too soon may render it ineffectual, and even fatal, if a sudden stop be thus put to the vigorous fermentation raised in the blood in order to its despumation (*a*). (2) We must not order purging, much less bleeding, The bark how to be given.

(*a*) The ill consequences attending the over hasty use of the bark in this case should seem owing to the roughness and astringency it is manifestly possessed of; whereby the febrile matter is prevented from going off, and perhaps driven back upon some of the noble internal parts: whence the intermittent is either changed to a continued fever, that generally proves of a bad kind, or otherwise to some obstinate chronical disorder; as a dropsy, consumption, scirrhous liver, jaundice, cachexy, *&c.* And in reality, upon this account, unless proper evacuations can be made before giving it, it is much safer to wait, if the disease

Sect. 1. bleeding, in order to carry off a part of the febrile matter, and render the bark more effectual; for they both weaken the tone of the parts, whence the diſeaſe returns ſo much the more ſpeedily and certainly, after the virtue of the bark is ſpent. It were better, in my opinion, to impregnate the blood with this medicine by degrees, and at diſtant intervals from the fit, rather than endeavour to ſtop it at once, juſt upon its coming; for by this means the bark has more time to produce its full effect in, and, beſides, the miſchief is avoided that might happen by putting a ſudden and unſeaſonable ſtoppage to the immediately approaching fit. (3) The bark muſt be repeated at ſhort intervals, that the virtue of the former doſe may not be entirely gone off, before another be given; and by repeating it frequently the diſeaſe will, at length, be perfectly cured.

35. Theſe reaſons led me to prefer the following method of giving the bark.

The electuary. *Take of the* Peruvian *bark, one ounce; ſyrup of roſes, two ounces; make an electuary thereof; take the quantity of a large nutmeg, every morning and night, on the intermediate or well days, till the whole be taken; and let it be repeated thrice, interpoſing a fortnight between each time (b).*

36. The

diſeaſe will give leave, till its violence be abated by a few fits, and a portion of the morbid matter diſcharged; which is partly agreeable to our author's ſentiments on this head.

(b) The ſimplicity and inelegance of this electuary are not ſufficient reaſons to reject it, tho' the method may upon the whole be liable to exception; and therefore I ſhall here ſubjoin ſome experienced rules and cautions, relating to the method of giving the bark.

(1) The general rule that forbids exhibiting the bark, whilſt the urine remains high-coloured, and lets fall no lateritious ſediment, will admit of an exception, frequent experience having ſhewn, that if the habit be not over-charged with vitiated juices, the *viſcera* be ſound, and manifeſt no ſigns of internal inflammation, this valuable medicine, preceded by proper evacuations, may be given with all deſirable advantage and ſafety, even to the aged, debilitated, and young perſons of a lively, florid conſtitution. (2) When the heat and other ſymptoms thereon depending are violent, nitre is advantageouſly mixed with it. (3) If it takes downwards, *liquid laudanum* may be given after each doſe, or it may be made up into an electuary with a due quantity of *diaſcordium*. (4) It may be mixt with different ingredients, and adapted by this means to all the complications

of

Chap. 5.

36. The bark might perhaps prove as ſucceſsful in *vernal* and *autumnal tertians* as it does in *quartans*: but, to ſpeak ingenuouſly upon this occaſion, in children and young perſons, affected with either of theſe diſeaſes, I think it beſt to forbear the uſe of medicines, and make no change as to air and diet; having hitherto found no inconveniency in leaving the cure wholly to nature, at which I have often been ſurprized, eſpecially in infants; for the depuration of the blood being finiſh'd, theſe diſtempers go off ſpontaneouſly. But contrariwiſe, if (1) a ſlender diet be directed, or (2) purgatives be now and then given, as they generally are, under pretext of opening obſtructions, and diſcharging the humours lodged in the firſt paſſages, or (3) eſpecially, if bleeding be uſed in an epidemic conſtitution, the diſeaſe will be conſiderably prolong'd, and alſo accompanied with ſeveral dangerous ſymptoms.

Medicines not needful in children and young perſons.

37. But in aged perſons, affected either with *autumnal tertians* or *quartans*, there is danger of theſe diſeaſes becoming not only obſtinate, but mortal; for which reaſon, if the bark and every other method prove ineffectual to a cure, nature muſt at leaſt be ſupplied with ſuch helps, as may enable her to finiſh her work. For doubtleſs, in weak bodies, unleſs the fermentation be kept up by cordials, a ſtrengthening diet, wormwood wine, and the like, the patient will be debilitated by irregular and ineffectual fits, and the diſeaſe

The aged require cordials, and a ſtrengthening diet,

of intermittents. (5) The palate ſhould be conſulted with reſpect to the choice of a proper form; but where it can be taken in powder, it generally proves more effectual than in decoction, infuſion, tincture, or extract. (6) The doſe ſhould be moderate, and often repeated. (7) It muſt never be given immediately before the coming, nor in the height or declenſion of the fit. (8) During a courſe of the bark, moderate exerciſe will do very conſiderable ſervice; but all kinds of medicines muſt be refrained that have a great tendency to agitate the juices, and diſturb the circulation. For efficacious and elegant preparations of the bark, recourſe may be had to Dr *Shaw's Practice of Phyſic, vol. I. p.* 140. *4th ed.* and his *Chemical Lectures, p.* 231.

De Gorter tells us that an ounce of the bark has been taken at once, without occaſioning any inconvenience, and yet has entirely removed a *quartan*; and adds that he has known ſome inſtances where the patients have taken the whole quantity directed at a time, from whoſe imprudence he learnt that it is needleſs to be ſo timorous in determining the doſe. See his *Med. Compend. tom.* 1. p. 274. And ſee alſo p. 278. of our author.

con-

Sect. 1. continue, till a violent fit comes, which, by reaſon of his extreme weakneſs, may deſtroy him in the cold fit. And this frequently happens in aged perſons, who have been weakened by a long courſe of purgatives; whereas they might have been ſupported, at leaſt for a ſhort ſpace, by ſome ſufficiently ſtrong cordial.

And change of air.

38. When the time required for the deſpumation of the blood is finiſh'd, or even earlier, perſons in years ſhould remove to a very different air, or, which is better, to a warmer climate, or at leaſt leave the place where they were firſt ſeized with this diſeaſe. It is very ſurprizing how much a change of air conduces to a perfect cure at this juncture, but before it is not only needleſs but improper. For tho' a perſon were to go to a warm *Southern* climate, the blood notwithſtanding, being once reduced to this morbid ſtate, muſt neceſſarily finiſh its depuration, which would vainly be expected from breathing a new and unuſual air, till the motion thereof be mended, and ſo far perfected, as to be capable of recovering a healthful ſtate. Such a remarkable change of air, therefore, is to be deferr'd till the diſtemper can be removed; ſo that in a *quartan*, for inſtance, which aroſe in *autumn*, it ſhould be deferr'd till the beginning of *February* (*c*).

If not, the fermentation to be quicken'd.

39. But if the patient does not care to change the air, or cannot conveniently, he ought at this juncture to make uſe of a medicine of ſufficient ſtrength at once to promote, and, if poſſible, to finiſh the languiſhing fermentation: for which purpoſe I would adviſe the following.

The mixture.

Take of the electuary of the egg, or Venice *treacle, one dram and a half*; aqua cœleſtis, *or common* aqua vitæ, *two ounces: make a mixture, to be given two hours before the fit.*

(*c*) The preſent practice can abundantly furniſh us with inſtances of the recovery of ſuch patients by a removal to a warmer air, when the diſeaſe had baffled all other remedies; and perhaps it will be generally allowed to be needleſs, if not dangerous, to defer it, till the conſtitution be nearly worn out; which may probably be the caſe, before the diſtemper be ſo far ſpent, as our author ſeems to judge requiſite, in order to make an attempt of this kind with ſafety and certainty.

I have

I have uſed this medicine with ſucceſs at the declenſion of the diſeaſe; but I acknowledge that if ſuch heating medicines be given ſooner, they either double the fit, or change the diſeaſe to a continued fever; which has alſo been obſerved by *Galen*. They may be given with caution to young perſons in this diſeaſe, but are unſafe in children (*d*). Chap. 5. But not till the declenſion of the diſeaſe.

40. Before I quit this ſubject, I muſt obſerve that what has been ſaid concerning the continuance of *autumnal intermittents*, and the time required for the deſpumation of the blood, is to be underſtood of that alone which nature uſually finiſhes by means only of the common medicines in uſe. For in treating of theſe matters my intent is not to diſcourage able and diligent phyſicians from ſearching after better methods of cure, and more effectual remedies in theſe diſeaſes; ſo far otherwiſe, that I do not deſpair myſelf of diſcovering, in time, ſuch a method, or remedy.

41. After the diſeaſe is cur'd, the patient muſt be carefully purged; for an almoſt inconceivable number of diſeaſes proceed from want of purging after autumnal intermittents, and I am aſtoniſhed this is ſo little noted and guarded againſt by phyſicians. For whenever either of theſe diſeaſes affected perſons in the decline of life, and purging was neglected, I could certainly foretel, that they would be ſeized with ſome dangerous diſeaſe afterwards, tho' they themſelves had not the leaſt ſuſpicion of it, on account of their ſeemingly perfect recovery. Purging neceſſary after it is gone off.

42. But purging muſt by no means be uſed till the diſeaſe is quite cur'd, becauſe tho' the *natural parts*, or inteſtines, may ſeem to be cleanſed hereby from the foul humours left there by the intermittent, yet freſh matter will ſoon be ſupplied by the return of the fever, occaſioned by the violence of the cathartic, and the di- But not before.

(*d*) It would now perhaps be thought raſh, imprudent, and ſomewhat ſavouring of empiriciſm, to venture upon ſo fiery an alexipharmic, unleſs in ſome extraordinary caſe. For when the tone of the ſolids is already greatly relaxed, and the juices much impoveriſhed, fatal effects may juſtly be apprehended from the uſe of ſuch a remedy. But in the preſent improved ſtate of phyſic we are happily ſupplied with much more gentle, yet as effectual medicines in this caſe; and the rough and violent methods of cure ſtand univerſally condemned and proſcribed.

Sect. 1. ſturbance of the juices; whence the diſeaſe will become more obſtinate. And daily experience ſhews that ſuch as in the declenſion of the diſeaſe comply with that theory which makes the cure conſiſt wholly in removing obſtructions, and evacuating the melancholy humour, ſuffer much by repeated purges; which, whatever be the nature of the humour diſcharged, exaſperate the fever, and ſo render it much more inveterate than it would otherwiſe have been.

Method of purging. 43. For this reaſon I never give a purge till both the perceptible fits are entirely gone off, and the alteration likewiſe (how ſlight ſoever it be) which is perceiv'd on thoſe days, when the fit uſually came; and even not till a month afterwards. And then I preſcribe a common laxative potion, ordering it to be repeated once a week for two or three months; and a quieting draught to be taken in the evening after the operation, to prevent the return of the fit, which might otherwiſe happen from the diſturbance which even the mildeſt cathartics are apt to raiſe (*e*).

The reaſons for it. 44. I direct purging at theſe conſiderable intervals, that a relapſe may not be apprehended; which indeed might eaſily be cauſed by the too frequent agitation of the blood and juices (*f*): but when there is no further danger from this quarter, I preſcribe the following apozem.

Take

(*e*) Our author here judiciouſly cautions againſt exhibiting purgatives too early, whereby a relapſe is frequently endangered. But it is not always neceſſary to purge, and is ſometimes detrimental; and tho' there may be caſes where a purgative may be repeated twice or thrice with advantage, yet there are very few inſtances where a long courſe of purging may not prove very pernicious: ſo that this ought not to be eſteemed a general rule.

(*f*) A *dropſy* is produced by frequent purgation, eſpecially in a *ſemi-tertian* and a *quartan*: and this ſpecies of a dropſy is increaſed by purgatives, and either cauſes a return of the intermittent, or changes it into a continued fever of a bad kind; but the body being ſtrengthened by aſtringent, warm, ſtomachic, and antiſcorbutic medicines, expels the water ſpontaneouſly.

When the intermittent is removed, nothing farther is to be done, only the patient ſhould continue to take half a dram of the bark, every day for a month, or an ounce in two weeks after; and thus there will be no fear of a relapſe. If a vomit or purge be given ſoon after the cure, the diſeaſe generally returns: but as at this time the appetite is uſually too quick and ſharp,

care

Chap. 5.

Take of Monk's *rhubarb, two ounces; the roots of aſparagus, butcher's broom, parſley, and polypody of the oak, of each one ounce; of the inner bark of aſh, and of tamariſk, each half an ounce; the leaves of agrimony, ſpleenwort and maiden-hair, each one handful; ſena cleanſed from its ſtalks, and moiſtened with three ounces of white wine, an ounce and half; dodder of thyme, half an ounce; troches of agaric, two drams; fennel ſeeds, four ſcruples: boil them together in a ſufficient quantity of water to a pint and half; adding towards the end three ounces of the juice of* Sevil *oranges; laſtly, ſtrain off the decoction, and mix therewith of the ſyrup of ſuccory with rhubarb, and of the magiſterial ſyrup for melancholy, of each one ounce and a half. Take half a pint of it every morning for three days running, and let it be repeated as there ſhall be occaſion.*

Vernal intermittents have fewer ſymptoms than autumnal ones.

45. I proceed now to enumerate the ſymptoms which accompany intermittents in their decline; and here it muſt be noted, that vernal ones have very few compar'd with autumnal; becauſe they are neither ſo laſting, nor ariſe from ſuch earthy and malignant juices.

A dropſy a capital ſymptom in the latter.

46. The principal of theſe ſymptoms, which occaſionally happens, is a *dropſy*; wherein the legs firſt ſwell, and then the *abdomen*: it ariſes from a paucity of ſpirits, occaſioned by frequent fermentations of the blood, in conſequence of the length of the diſeaſe, eſpecially in the aged; ſo that being extremely impoveriſhed, it can no longer aſſimilate the juices taken in with the aliment, a crude and indigeſted quantity whereof is, at length, thrown upon the legs; and theſe being ſo diſtended as to admit no more, the remainder is diſcharged into the *abdomen*, and thus forms a *true dropſy*. But this diſorder rarely happens in young perſons, unleſs it has been imprudently occaſioned by frequent purging during the courſe of the intermittent.

How to be treated.

47. A recent *dropſy* from the abovementioned cauſe is eaſily cured by aperients and purgatives; neither am I anxious about the conſequences when it proceeds from this cauſe, for then I conceive great hopes of ſucceſs: and, in reality, have recovered ſeveral by the uſe of the

care muſt be had not to overcharge the ſtomach. *De Gorter, Med. compend.* tom. 1, p. 152, 274.

Sect. 1. apozem above set down, (44) even without the mixture of any thing more appropriated to the dropsy. But I have observed, that it is to no purpose to endeavour to cure it by purging, whilst the intermittent lasts, which only renders that disease more obstinate without relieving the dropsy; for which reason we must wait till the intermittent is conquered, and then the cure of the dropsy may be successfully undertaken (*g*).

Infusions proper in this case.

48. But if the distemper be so urgent as not to admit of this delay, the cure must be attempted by infusions of *horse-radish root*, *the tops of wormwood*, and *the lesser centaury*, *juniper berries*, *broom ashes*, &c. in *wine*; which not only give relief by supplying the blood with fresh spirits, but likewise seasonably assist nature now upon the point of overcoming the disease.

The rickets, and the method of curing them described.

49. Children sometimes become hectic after both *continued* and *intermittent autumnal* fevers. The *abdomen*, in this case, swells and grows hard, a cough also and other consumptive symptoms frequently arise, which manifestly resemble the rickets: such patients must be treated in the following manner. According to the age of the child (*b*) give it a spoonful or two, more or less, of the purging potion above set down, every morning, for nine days, intermitting a day or two if need be; and in the mean time the purgative must be so proportioned, either by increasing or diminishing the dose, as to give but five or six motions a day. When the course of purging is over, let the *abdomen* be anointed with an opening liniment for some days: I generally use the following.

A liniment for anointing the abdomen.

Take of oil of lillies and tamarisk, each two ounces; the juice of briony roots and smallage, of each one ounce; boil them together till the aqueous moisture is exhaled; then add thereto of the ointment of marshmallows, and fresh butter, of each an ounce; of gum-ammoniac, dissolved in a proper quantity of vinegar, half an ounce; of yellow wax, enough to make the whole into a liniment.

(*g*) In this case all the water has been frequently discharged in a short time spontaneously by the conduits of urine, without the help of any medicine. *De Gorter, Med. Compend.* tom. 1. p. 152.

(*b*) See *Sect. I. Chap. IV. Par.* 35.

By

By this method I have cured ſeveral children of the true rickets. But the caution, before inculcated, concerning purging, muſt alſo be obſerved here (*i*). Chap. 5.

50. It is worth obſerving, that when children have been long afflicted with autumnal intermittents, there is no hopes of vanquiſhing the diſeaſe till the *abdomen* (eſpecially that part of it near the ſpleen) ſwells and grows hard; the diſtemper abating in the ſame degree, as this ſymptom manifeſts itſelf. Nor can we, perhaps, more certainly foretel that the intermittent will go off in a ſhort time, than by carefully attending to the ſwelling of the *abdomen*, in children, and to that of the legs, which ſometimes happens in grown perſons. The ſwelling of the *abdomen* in children, and of the legs in grown perſons, a good ſign.

51. The ſwelling of the *abdomen* which happens in children after intermittents, in thoſe years wherein the conſtitution of the air has a tendency to produce autumnal intermittents *epidemically*, appears to the touch, as if the *viſcera* contained matter hardened to a *ſchirrus*; whereas that which comes in other years yields to the touch, as if the *hypochondria* were only diſtended by wind. Hence it is worth notice, that the true rickets rarely happen, except in thoſe years wherein *autumnal intermittents* prevail. The true rickets when moſt common.

52. A pain and inflammation of the tonſils, after continued or intermittent fevers, attended firſt with a difficulty of deglutition, ſucceeded by a hoarſeneſs, hollow eyes, and *hippocratic* face, certainly foreſhew imminent death, without any hopes of recovery. And I have generally obſerved that profuſe evacuations, in patients almoſt worn out by the violence of the diſeaſe, together with the long continuance thereof, have conſpired to produce theſe fatal ſymptoms. Pain and inflammation of the tonſils, &c. bad ſigns.

53. There are ſeveral other ſymptoms, which uſually follow theſe diſeaſes, from a total neglect of purging, or an improper uſe of it; but I ſhall not mention them here, as they all require nearly the ſame method of cure, *viz.* the purging off the ſediment depoſited by the preceding efferveſcence, which, by its continuance in the body, has given riſe to theſe bad ſymptoms. It may however be proper here to take notice of a conſiderable ſymptom, which neither yields to purging, nor any other evacuation, and eſpecially not to bleed-

(*i*) See above, *Par.* 47.

Sect. 1.

ing, but is rendered more violent thereby. This is a peculiar kind of *madneſs*, which ſometimes follows upon inveterate intermittents, eſpecially quartans; and yields not to the ordinary method of cure, but after copious evacuations degenerates into a lamentable kind of folly for life.

A peculiar kind of madneſs, how to be treated.

Miſchief of repeated bleeding and purging here.

54. I have often been ſurprized to find no mention made of this diſorder by practical writers, as I have frequently met with it; and whereas the other kinds of madneſs uſually yield to plentiful bleeding and purging, this will bear neither: for when the patient is almoſt recovered, if a glyſter only of milk and ſugar be given, it immediately returns; and if repeated bleeding and purging be uſed, theſe evacuations may indeed abate the violence of the diſeaſe, but will certainly render the patient an ideot, and quite incurable. Nor will this ſeem ſtrange, if it be conſidered that the other kinds of madneſs proceed from the too great ſpirituouſneſs and richneſs of the blood, whereas this ariſes from its depreſſed ſtate, and vapidity, as I may term it, occaſioned by the long fermentation carried on by the fever, whence the ſpirits become utterly unable to perform the animal functions.

The proceſs of the cure.

55. I treat this diſorder in the following manner: I give a large doſe of ſome ſtrong cordial three times a day; for inſtance, of VENICE *treacle (k)*, *the electuary of the* egg, *the counteſs of* KENT's *powder*, *Sir* WALTER RAWLEIGH's *powder*, or the like, diſſolved in *plague* or *treacle* water, or any other cordial water. Cordials may alſo be given in other forms. During the courſe of the cure a ſlender, but reſtorative diet, and generous liquors muſt likewiſe be uſed; and the patient ſhould keep his room, and lie much in bed. This regimen may occaſion a coſtiveneſs, whence a fever may be apprehended, eſpecially from the uſe of theſe heating medicines: But there is in reality no danger of it, becauſe the ſpirits are ſo far waſted by the preceding diſeaſe, as not to be able to raiſe a new fever. In a few weeks the diſorder will abate by degrees, and then the cordials may be omitted for a few days; but the reſtorative method of

(k) *Venice* treacle is indeed a warm opiate, but I much doubt if it deſerves to be entitled a cordial in this caſe, as the opium it contains ſhould ſeem to relax and debilitate, more perhaps than the other ingredients will ſtrengthen and raiſe.

living

living muſt be continued, and the cordials repeated, after a ſhort interval, and perſiſted in till the perfect recovery of the patient. Chap. 5.

56. This method has ſometimes cured a *madneſs*, that did not ſucceed *intermittents*, particularly in cold and weak conſtitutions. I was called laſt year to *Salisbury* to conſult with my friend Dr *Thomas* for a lady, who was greatly diſordered in her ſenſes, and ſhe was recovered by it, tho' ſhe was then in her pregnancy. Succeſsful in another ſpecies of madneſs.

57. But the common kind of *madneſs*, wherewith lively perſons are uſually ſeized, without a preceding fever, is of another kind, and muſt therefore be treated in a very different manner, with reſpect to evacuations; though even in this kind alſo ſuch medicines ſhould be given, as ſtrengthen the brain and animal ſpirits. I ſhall here ſubjoin the cure thereof, though it does not properly belong to this place, to prevent any perſon's being deceived by the ſimilitude of the diſeaſes.

58. In young perſons of a ſanguine conſtitution let eight or nine ounces of blood be taken away from the arm; and repeat the operation twice or thrice, at the diſtance of three days; after which bleed once in the jugular: more frequent bleeding rather renders the patient an ideot than cures him (*l*). Then give half a dram, The common kind of *madneſs* how to be treated.

(*l*) This appears too limited a direction for bleeding, which in all caſes ſhould be prudently ſuited to the circumſtances and exigencies of the diſeaſe. The kind of madneſs here deſcribed is rarely found to yield, eſpecially in young and ſanguine perſons, without bleeding both more frequently and plentifully, along with brisk vomits, repeated, as there is occaſion, and the uſe of cold bathing; neither of which latter helps our author has mentioned. *Camphire* has been recommended in a large doſe, (*viz.* half a dram, morning and night) in maniacal diſorders of the bold kind by Dr *Kinneir*, who tells us that the practice has been attended with ſucceſs. See *Abridg. of the Phil. Tranſact.* publiſhed in 1734. Strong opiates, after proper evacuations, may be ſometimes uſed with advantage.

Hoffman recommends warm bathing in *maniac diſorders*, in the following terms. "It is not from reaſon alone, (ſays he) but from a long courſe of experience, that we aſſert the excellence of this remedy in theſe caſes; for we have ſeen numerous inſtances, both of inveterate melancholy, and raving madneſs, happily cured by its means, after the uſe of bleeding, diluting medicines, and medicines conſiſting chiefly of nitre. And this kind of cure I have recommended to many foreign phyſicians, who, as well as myſelf, find it highly ſerviceable and beneficial. Whence I have often wondered that this method of cure

Sect. 1. dram, or two ſcruples of *pil. ex duobus*, according as it operates, upon a ſet day, and repeat it only once a week, preciſely upon the ſame day of the week, till the diſorder goes off. By this method the humours, which in this diſeaſe uſually fly up to the head, will gradually be diverted to the lower parts.

59. On the intermediate days, during the courſe of the cure, give the following electuary, or ſome other medicine of the like kind.

A cordial electuary.

Take of the conſerve of Roman *wormwood, of roſemary, and of* Venice *treacle, each one ounce; of the conſerve of orange-peel, of candied angelica and nutmeg, each half an ounce; ſyrup of cloves, enough to make the whole into an electuary; of which let the quantity of a nutmeg be taken twice a day, drinking after each doſe a ſmall draught of* canary, *wherein* cowſlip flowers *have been infuſed cold.*

60. The continued fever and intermittents above deſcribed were almoſt the only prevailing epidemic diſeaſes, during the conſtitution of the years 1661, 1662, 1663, and 1664. How many years they might have prevailed before I cannot ſay; but this I certainly know, that from 1664 to 1667 they rarely appeared at *London*.

Particulars concerning the ſmall-pox of this conſtitution.

61. I ſhould treat likewiſe of the *ſmall-pox* of that conſtitution, ſince, as I before obſerved (*m*), they vary conſiderably, according to the different conſtitutions wherein they appear: but as I did not ſufficiently attend to them at that time, I ſhall only mention this peculiarity of them, *viz.* that in thoſe years they prevailed much in the beginning of *May*, but went off, upon the coming of the *autumnal epidemics*, namely the *continued* and *intermittent fevers*. The tops of the eruptions had ſmall pits for the moſt part, about the ſize of the head of a ſmall pin, and in the diſtinct kind the *eighth day* was attended with moſt danger; at which time the ſweat or moiſture, which had hitherto conti-

for madneſs ſhou'd be ſo much neglected in our time; whilſt bathing has, from the earlieſt ages, been employed for this purpoſe: inſomuch that the antient phyſicians had recourſe to it as a thing they entirely depended upon." See *New experiments, &c. upon mineral waters, by Dr Fred. Hoffman*, tranſlated by Dr *Shaw*, p. 188. Par. 16.

(*m*) See *Sect.* I. *Chap.* II. Par. 12, 16.

nued,

nued, went off ſuddenly, and the external parts became dry, neither could the ſweat be raiſed again by any kind of cordials; a *delirium*, great reſtleſſneſs, pain and ſickneſs, a frequency of making urine in ſmall quantities ſucceeded, and the patient died in a few hours very unexpectedly. Chap. 5.

SECT. II. CHAP. I.

The epidemic conſtitution of the years 1665, *and* 1666, *at* London.

1. THE preceding winter having been extremely cold, and accompanied with a continued froſt till ſpring, which went off ſuddenly towards the end of *March*, that is, in the beginning of the year 1665, according to the *Engliſh* computation of time, there then aroſe *peripneumonies*, *pleuriſies*, *quinſies*, and other inflammatory diſorders, which quickly made great devaſtation; and with theſe there alſo appeared a continued *epidemic fever*, of a very different kind from thoſe of the foregoing conſtitution, which uſually ſeiz'd ſcarce any body at that time of the year. For (1) the pain in the head here was more violent; (2) the vomitings more copious; (3) and the looſeneſs, which was generally prevented in the former fevers by a vomit, was increaſed thereby in the preſent fever, and yet the vomiting continued; (4) the external parts were dry, as in the fevers of the preceding conſtitution; but after bleeding, eſpecially, a ſweat was eaſily procured, and being encouraged ſoon abated the ſymptoms; and this might be done at any time of the diſeaſe, whereas in thoſe fevers it could not be ſafely attempted till the thirteenth or fourteenth day, and was not eaſily raiſed then; (5) the blood taken away in this fever often reſembled that of perſons in pleuritic and rheumatic diſorders, but was leſs ſizy. The diſeaſes of this conſtitution enumerated.

2. Theſe were the diagnoſtic ſigns of this diſeaſe at its riſe; but towards the middle of the year, the *plague* appeared, accompanied with ſeveral of its peculiar ſymptoms; as *carbuncles*, *buboes*, &c. and ſpreading more The *plague*, and its progreſs deſcribed.

and

Sect. 2. and more every day, came to its height about the *autumnal equinox*, at which time it deſtroyed near eight thouſand perſons in one week, tho' at leaſt two thirds of the inhabitants had retired into the country, to avoid the infection. Afterwards it began to abate, and was ſo far conquered by the winter's cold, as to ſeize very few during that ſeaſon, and the following ſpring, when it went off entirely: whereas the fever prevailed (tho' not ſo epidemically) all the ſubſequent year, and continued to the ſpring of the year 1667. I proceed now to treat of this *fever*, and the *plague*.

CHAP. II.

Of the peſtilential Fever, and Plague of 1665, *and* 1666.

Some fevers falſely eſteemed malignant.

1. I Have already curſorily obſerved, that ſome fevers are uſually ranked amongſt thoſe of the malignant kind (*n*), whereas the great violence of their ſymptoms, which ſeems to countenance this opinion, does not proceed from the contagious nature of the diſeaſe, but from unſkilful treatment. For when we do not cloſely enough attend to the ſolution thereof appointed by nature, but inconſiderately purſue a different method, we greatly diſorder the animal œconomy; whence the diſeaſe, contrary to its nature, now different from what it uſed to be, is accompanied with ſeveral irregular ſymptoms. But a true *malignant* fever rarely happens (*o*), and

A true malignant fever rare.

(*n*) See *Sect.* I. *Chap.* II. Par. 13.

(*o*) The unſkilful are frequently deceived by imagining a kind of malignity in diſeaſes, and this error proceeds from a want of ſufficient enquiry into the antecedent cauſes, and inattention to the ſymptoms and entire ſtate of the diſeaſe; and hence ariſe great miſtakes in practice. It is not yet univerſally agreed on what is meant by the term *malignity*, whence it is difficult to form ſo clear and juſt an idea of it, as may enable us to apply it with certainty to ſome fevers, and authoriſe the method of cure thence derived. The fevers which are generally called malignant, upon examining their various ſymptoms, ſeem to proceed from a *coagulation*, or *diſſolution* of the juices, and accordingly require a different treatment; *volatile and attenuating medicines* being proper in the former, and *mild acids*, *cooling emulſions*, *agglutinants*, *hart's-horn jelly*, &c. in the latter. And

and totally differs from other kinds of fevers, that are so called from the irregularity of the symptoms, being indeed of the same species with the plague, only not so violent: for which reason I will treat of the cause and cure of both in the same chapter. Chap. 2.

The air produces diseases by a secret disposition;

2. That the air obtains a secret disposition, or temperature, productive of different diseases at different times, is apparent to such as consider that the very same disease, in one season, proves epidemic, and destroys great numbers, and in another seizes but few persons, without proceeding further: as is manifest in the *small-pox*, and more particularly in the *plague*, our present subject.

not easily discoverable.

3. But of what nature the constitution of the air is, which gives rise to these diseases, I am as ignorant, as of several other things, about which philosophers cannot agree (*p*): whatever it be, we ought at least to thank God that he permits pestilential constitutions of the air, productive of that great destroyer, the *plague*, to happen much more rarely than such as produce less fatal distempers: for the *plague* seldom rages violently in *England*, above once, in thirty or forty years (*q*). A few persons in different places die of this disease for some years after a great *plague*, and it usually goes off by degrees; because the pestilential constitution of the air continues still in part, and is not yet entirely changed to a more healthful state; this therefore should be esteemed only as the gleanings of a preceding harvest.

And as these medicines act by manifest qualities, it may reasonably be inferred, that the fevers also arise from a manifest cause: so that the mistaken notion of malignity falls to the ground. The fevers that are generally esteemed of a truly malignant kind, proceed from some particular contagious qualities of the air, not cognizable perhaps by the senses, from corrupt and putrified aliment, the bite of venomous animals, &c. but these are not near so common as is usually imagined.

(*p*) There are many phænomena that exceed our narrow comprehension, which are not therefore to be contemn'd; but where the nature of the cause cannot be known from reasoning, the visible effect should always be carefully noted, in order from thence to form safe rules for practice.

(*q*) It is a common opinion, and countenanced by authors of great name, that we are necessarily *visited* with the plague once in thirty or forty years; which is a mere fancy, without foundation either in reason or experience; and therefore people ought to be delivered from such vain fears. *See Dr* Mead on the Plague, p. 70.

To

Sect. 2. To the ſame cauſe it is owing that the fevers which prevail for a year or two after a ſevere plague, are generally peſtilential; and tho' ſome have not the genuine ſigns of the plague, yet they are much of the ſame nature, and require the like treatment, as ſhall hereafter be ſhewn.

Cauſes of the plague.

4. But beſides the conſtitution of the air, as a more general cauſe, there muſt be another previous circumſtance to produce the plague, *viz.* the receiving the *effluvia*, or *ſeminium*, from an infected perſon, either immediately by contact, or mediately by peſtilential matter, conveyed from ſome other place. And when this happens in ſuch a conſtitution, as we have mentioned above (*r*), the whole air of that tract of land is quickly infected with the plague, by means of the breath of the diſeaſed, and the ſteam or vapour ariſing from the dead bodies, ſo as to render the way of propagating this dreadful diſeaſe by infection entirely unneceſſary: for tho' a perſon be moſt cautiouſly removed from the infected, yet the air, received in by breathing, will of itſelf be ſufficient to infect him, provided his juices be diſpoſed to receive the infection.

Time of its riſe, and its progreſs.

5. Tho' this diſtemper, when it is only *ſporadic*, ſeizes ſome few perſons, without any regard to the ſeaſon, the infection being, as it were, communicated from one to another; yet when an epidemic conſtitution of the air likewiſe prevails, it ariſes in the intermediate ſeaſon between ſpring and ſummer; this ſeaſon being the fitteſt to produce a diſeaſe, the eſſence of which chiefly conſiſts in an inflammatory ſtate of the juices, as we ſhall afterwards ſhew. Again, this diſeaſe has its times of increaſe and declenſion, like other kinds of natural things. It begins at the time above ſet down, as the year advances it ſpreads, and as that declines it abates, till, at length, winter introduces a ſtate of the air contrary to it.

If not influenc'd by the changes of the ſeaſon, would prove exceedingly deſtructive

6. For if the changes of the ſeaſon were to have no effect on this diſeaſe, the true peſtilential *ſeminium*, unconquerable by any alteration of the air, would be conveyed from one perſon to another in a continued ſucceſſion; ſo that when once it had got into a populous city, it would rage more and more, and never ceaſe till it had deſtroyed all the inhabitants. But that the con-

(*r*) See *Par.* 3.

trary

trary frequently happens, appears from the number of the dead, which roſe to ſome thouſands in one week in *Auguſt*, but decreaſed very much, and was inconſiderable towards the end of *November* (*s*). I muſt own however, what ſome authors have likewiſe aſſerted, that the *plague* appears at other ſeaſons of the year; but this ſeldom happens, and it is not then very violent. Chap. 2.

A peſtilential air unable of itſelf to breed the plague.

7. Mean time I much doubt if the diſpoſition of the air, tho' it be peſtilential, is of itſelf able to produce the *plague*; but the plague, being always in ſome place or other, it is conveyed by peſtilential particles, or the coming of an infected perſon from ſome place where it rages into an uninfected one, and is not epidemic there, unleſs the conſtitution of the air favours it. Otherwiſe I cannot conceive how it ſhould happen that when the *plague* rages violently in one town in the ſame climate, a neighbouring one ſhould totally eſcape it, by ſtrictly forbidding all intercourſe with the infected place: an inſtance of which we had ſome few years ago, when the plague raged with extreme violence in moſt parts of *Italy*, and yet the Grand Duke by his vigilance and prudence entirely prevented its penetrating the borders of *Tuſcany* (*t*).

The ſymptoms of the plague.

8. The plague uſually begins with chilneſs and ſhivering, like the fit of an intermittent; ſoon after, a violent vomiting, a painful oppreſſion at the breaſt, and a burning fever, accompanied with its common ſymptoms ſucceed, and continue till the diſeaſe proves mortal, or the kindly eruption of a *bubo*, or *parotis*, diſcharges the morbific matter, and cures the patient. Sometimes the diſeaſe, tho' rarely, is not preceded by any perceptible fever, and proves ſuddenly mortal; the purple ſpots, which denote immediate death, coming out, even whilſt the perſons are abroad about their buſineſs.

(*s*) This is readily accounted for by ſuppoſing an emendation of the qualities of the *air*, and the reſtoring of it to a healthful ſtate, capable of diſſipating and ſuppreſſing the malignity. See *Dr Mead* on the Plague, p. 66.

(*t*) It does not appear that the *air*, however corrupted, is uſually capable of carrying infection to a very great diſtance; but that commonly the *plague* is ſpread from town to town by infected perſons and goods: for there are numberleſs inſtances, where the *plague* has cauſed a great mortality in ſome towns, while other towns and villages, near them, have been entirely free. *ib.*

Sect. 2.

ſineſs. But it is worth obſerving, that this hardly ever happens but in the beginning of a very fatal *plague*, and never in its decline, or in thoſe years wherein it is not *epidemic*. Again, ſometimes ſwellings appear, without having been preceded either by a fever, or any other conſiderable ſymptom; but I conceive that ſome ſlight and obſcure ſhivering always precedes the ſeizure: now ſuch as are attack'd in this favourable manner may ſafely follow their buſineſs, as if they were in health, and need not obſerve any particular way of living.

The eſſence of this and other diſeaſes inexplicable.

9. As to the eſſence of this diſeaſe, I do not undertake to define it with exactneſs (*u*); and whoever ſhould call upon me to ſhew what it is that conſtitutes any particular ſpecies of a diſeaſe, might perhaps ſeem as impertinent, to the thinking part of mankind, as I ſhould appear, were I to aſk him the ſame queſtion about a horſe, for inſtance, amongſt animals, or betony, amongſt plants. For nature produces whatever ſhe cauſes to exiſt by fixt laws, and a method of operating known only to herſelf, and conceals the eſſence and conſtitutive differences of her productions in the greateſt obſcurity. Hence every ſpecies of diſeaſes, as well as of animals and vegetables, is endowed with certain peculiar and univocal properties, reſulting from its eſſence. However, an enquiry into the manner of curing diſeaſes, may proceed very ſucceſsfully, tho' we are ignorant of their cauſes, becauſe the cure of moſt diſeaſes is not effected by this kind of knowledge, but by a ſuitable and experienced method.

The cauſe of the plague.

10. But to return to our ſubject: as the riſe of all ſimilar diſeaſes is uſually deduced by us, in our preſent ignorance of things, from ſome depravation of the firſt or ſecond qualities, it is probable that the plague is a peculiar fever of its own kind (*w*), ariſing from an inflammation

(*u*) The ſpecific nature of the peſtilential *miaſm*, (ſee the term explained in *Quincy's Phyſical Dictionary*) wherein the eſſence of the plague conſiſts, is abſolutely undeterminable *a priori*, as it does not come under the notice of the ſenſes; ſo that all the knowledge of it we are to expect is only to be had from its effects, whence it ſhould ſeem to be partly of a putrid, ſulphureous, fermentative nature, and partly of a very acrimonious and cauſtic, but more of an alkaline than an acid nature.

(*w*) "The plague, or peſtilential fever, is defined by *Hoffman*, the moſt acute of all the ſpecies of fevers, proceeding "from

flammation of the more ſpirituous particles of the blood, which, by reaſon of their fineneſs and ſubtlety, ſeem moſt likely to receive it. When it is poſſeſſed of the higheſt degree of ſubtlety, it ſuddenly diſſipates the natural heat, and deſtroys the patient, as is manifeſt in the beginning and height of an epidemic conſtitution. The bodies of ſuch as periſh thus ſuddenly by the violence of the diſeaſe, are totally covered with purple ſpots, the fibres of the blood being broke, and its texture wholly diſſolved, by the violence of the inteſtine ſtruggle. Chap. 2. Whence it occaſions ſudden death.

11. Now this fatal cataſtrophe may be occaſioned by the exceeding ſubtlety of the contagious matter, even without a febrile ebullition, or any other perceptible ſymptom; quite otherwiſe than when the morbific cauſe is not ſo ſubtle, and the inſtrument that endangers life more obtuſe, which is often the caſe. To ſhew the difference by a familiar example: Let a needle, or any other ſharp-pointed inſtrument, be forcibly thruſt under a pillow, and inſtead of raiſing it up, as an obtuſe inſtrument would do, it will go through it (*x*).

12. But

" from a contagious or poiſonous *ſeminium*, or miaſm, uſually " brought from the *Eaſtern* parts, and proving mortal, unleſs " the poiſon be ſoon expelled by buboes and carbuncles, by the " vigour of the vital motions or powers."

It differs from other malignant, contagious and eruptive fevers in the following particulars. (1) It is the moſt acute of them all, and ſometimes proves mortal the firſt or ſecond day. (2) In our climate it is neither *epidemic* nor *ſporadic*, but only cauſed by contagion brought from infected places. (3) It does not go off, like other putrid and malignant fevers, by a copious ſweat, a looſeneſs, *&c.* but is terminated *critically* by humours that come to ſuppuration. (4) The peſtilential *ſeminium* readily adheres to ſpungy and porous matters, and is conveyable thus to a great diſtance, without any loſs of its pernicious quality. And (5) the plague has this farther remarkable particularity, that its progreſs is check'd by cold; whence it ſeldom, if at all, prevails in a cold ſeaſon, and in cold countries; but, on the contrary, rages violently and frequently in a hot ſeaſon, and in warm climates.

(*x*) The ſimile here uſed is very inadequate, and not at all illuſtrative of the author's reaſoning; and many ſuch occur in his writings. It muſt be acknowledged, this method of illuſtration, when rightly applied, lets in great light to the argument; but if otherwiſe, nothing is more fallacious and inconcluſive. Falſe ſimiles, and erroneous analogies always render matters more obſcure, and create great confuſion and perplexity in the mind. With reſpect to ſimiles in particular, let it be remembered that, to be perfectly concluſive, the ſimili-

tude,

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And when chiefly.

12. But ſudden death rarely happens, and only, as before intimated, towards the beginning, or increaſe of the *plague* (*y*). For this diſeaſe generally begins, like other fevers, with chilneſs and ſhivering, which are ſoon ſucceeded by heat, and this continues till the inflamed parts of the blood are expelled by nature to the emunctories, and there ſuppurated in the manner of common *phlegmons*. But if the inflammation be leſs conſiderable, it uſually generates ſuch fevers as are commonly called *peſtilential*, as it frequently happens at the end of a *peſtilential conſtitution*, and perhaps even a year or two afterwards, till that ſpecies of fevers becomes extinct.

The *eryſipelas* nearly reſembles the plague.

13. In my opinion, the inflammation which the *Latins* call *ignis ſacer*, and we St *Anthony's fire*, or an *eryſipelas*, is a good-deal like the plague. For ſkilful phyſicians eſteem it a continued fever, ariſing from the corruption and inflammation of the thinner part of the blood, which nature, to get clear of, throws out upon ſome external part of the body, where a tumor, or rather (for frequently there is no very remarkable tumor) a large red ſpreading ſpot, uſually called a *roſe*, ariſes; but the fever is *critically* terminated in a day or two by this tumor, or eruption, and is ſometimes accompanied with a pain in the glands of the arm-pit, or groin, as in the *plague*.

Proofs thereof.

14. Moreover, the *eryſipelas* begins much in the ſame manner as the plague, *viz.* with a ſhivering, followed by a feveriſh heat; ſo that ſuch as have never had this diſeaſe before judge it to be the plague, till it manifeſts itſelf at length in the leg, or ſome other part. To this may be added, that ſome authors ſuſpect there is a kind of malignity join'd with this diſeaſe, and accordingly place the cure of it in the uſe of ſudorifics and alexipharmics (*z*). But the inflammation here, as ſoon as it has raiſed an ebullition, by means whereof the lightly parch'd particles of the blood are in a ſhort time expell'd, goes off ſpontaneouſly, and does no farther miſchief (*a*).

15. But

tude ſhould only be carried on between ſuch things as fall under the ſame *genus*; as between animals and animals, plants and plants, minerals and minerals; and ſo of the reſt.

(*y*) See above, *Par.* 8.

(*z*) *Vid. Sennert. lib.* II. *cap.* XVI. *de Febr. ſymptomat. contin.*

(*a*) The *Eryſipelas* and *plague* greatly reſemble each other in the

15. But the plague is much more violent than an *eryſipelas*; being, by its exceeding ſubtlety, fitted to paſs thro' the innermoſt receſſes of the body like lightening, and ſuddenly deſtroys the ſpirits, and ſometimes diſſolving the texture of the blood, before nature, oppreſſed by the ſpeedy progreſs of the diſeaſe, is able to raiſe a *feveriſh ebullition*, which is the common inſtrument ſhe uſes to expel whatever vitiates the blood. Chap. 2. The *plague* more violent than an *eryſipelas*.

16. If my opinion, of this diſtemper's ariſing from inflammation, be controverted, let it be conſidered that the preſence of a fever, and alſo ſeveral other particulars confirm it; as for inſtance (1) the colour of the blood taken away here, which plainly reſembles that taken away in pleuritic and rheumatic diſorders; (2) the dark livid colour of the *carbuncles*, not unlike the mark left by an actual cautery; (3) the *buboes*, which are equally diſpoſed to inflammation, as other tumors of any kind, and terminate in abſceſſes, as moſt inflammations uſually do; (4) the ſeaſon of the year in which an *epidemic plague* commonly ariſes, ſeems likewiſe to ſtrengthen my opinion; for at the ſame time, namely betwixt *Spring* and *Summer*, pleuriſies, quinſies, and other inflammatory diſeaſes uſually become *epidemic*; and I never knew them more common than they were for ſome weeks preceding the beginning of the late *plague* at *London*. Neither is it at all material that the very ſame year, that proved fatal to ſo many thouſands, was otherwiſe very mild and healthy, and that ſuch as eſcap'd the plague never enjoyed better health; and likewiſe that thoſe who recovered were not ſubject to a cachexy, and other indiſpoſitions, uſually ariſing from the foul remains left by preceding diſtempers; and farther, that *impoſthumes* and *carbuncles*, tho' of the largeſt ſize, after the inflamed particles, together with the *ſanies*, was diſcharged, were eaſily cured by the common chirurgical methods. Cauſed by inflammation.

the following particulars. (1) In their leading ſymptoms, viz. ſudden ſhivering, loſs of ſtrength, violent pain in the head and back, vomiting, *&c.* (2) The expulſion of the malignant matter to the ſkin, between the third and fourth day, with an abatement of the ſymptoms. (3) A tumour, redneſs, and pain being firſt perceived in or near the groin, and thence deſcending to the feet. (4) In affecting the *parotides* when the head is threatened, and the glands of the arm-pit when the breaſt is endangered. (5) Inflaming the glands of the arm pit and breaſt. And (6) in the danger occaſioned by the ſtriking in of the morbid matter.

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17. But here perhaps it may be aſked, how it happens, if the *plague* be an inflammatory diſeaſe, that heating medicines, as moſt alexipharmics are, ſhould be ſo ſucceſsfully uſed, both for prevention and cure. To this I reply, that theſe medicines only relieve by accident, namely by means of the ſweat which they procure, whereby the inflamed particles of the blood are exhal'd, and expell'd; but if they fail of raiſing a ſweat, as it frequently happens, the blood being more inflamed by this additional heat, ſoon manifeſts the bad effects of ſuch kind of remedies. As to prevention, I am well aware how much the uſe of warm antidotes is generally commended, but with what advantage has not yet appeared. Too free an uſe of wine, and the taking of other ſtrong preſervatives every day, at ſet hours, have occaſioned this diſeaſe in numbers of perſons, who otherwiſe might probably have eſcaped it.

Alexipharmics only do ſervice as ſudorifics.

18. As to the cure of theſe fevers, ſome perhaps will charge me with preſumption and imprudence for undertaking to treat thereof, as having lived at ſome diſtance from the town, during the greateſt part of the time that the late plague prevailed, and conſequently being not ſufficiently furniſhed with obſervations relating thereto. But ſince ſome phyſicians of greater abilities, who courageouſly ſtaid in town at the peril of their lives, whilſt the *plague* raged, have hitherto declined publiſhing what they have learnt of its nature from a large practice, it is hoped every good man will excuſe me for communicating my ſentiments of it, founded on a few of my own obſervations.

Manner of treating the plague.

19. And firſt, the indications of cure are to be conſidered; which muſt always be directed either (1) *to aſſiſt nature in expelling the diſeaſe, by keeping cloſely to her method of procedure herein*; or (2) *diſtruſting the method ſhe uſually takes to overcome the inteſtine enemy, to ſubſtitute a different and ſafer one from art.* But here perhaps ſome may object that the *plague* may alſo be ſucceſsfully enough treated by *anti-peſtilential* alexipharmics, with forms of which the works of practical writers abound. But whether the aſſiſtance this kind of medicines affords ſhould not rather be aſcribed to their apparent virtue of raiſing copious ſweats, whereby they at the ſame time open a paſſage for the morbific matter to eſcape, than to any occult quality given them by

by nature to expel the peſtilential poiſon, admits of great diſpute. Chap. 2.

20. Neither is there reaſon to doubt of theſe alone, but likewiſe whether the alexipharmics of other diſeaſes do not relieve by promoting ſome kind of evacuation, rather than by any inherent ſpecific virtue. For inſtance, whoever (with reſpect to the venereal diſeaſe) aſſerts that *mercury* and *ſarſaparilla* are true alexipharmics for the *virus* thereof, ſhould produce ſome examples, where the former has ſometimes effected a cure without raiſing a ſalivation or purging, and the latter without occaſioning ſweat; which I conceive it will be difficult to find. But to me it ſeems probable that the peculiar remedy of the *plague*, and proper alexipharmic of its poiſon, lies yet concealed in the boſom of nature, and that this diſtemper can only be removed by mechanical methods. Dubious how alexipharmics relieve.

21. To conſider therefore the firſt intention above-mentioned more at large (*b*), which tends *to aſſiſt nature in expelling the morbific matter, agreeably to her own method of procedure*; it muſt be obſerved that in the true *plague*, when nature of herſelf commits no error, nor is forced out of the way by violent meaſures, ſhe finiſhes the cure by an abſceſs in the emunctories, whence the matter is diſcharged; but in a *peſtilential fever* the cure is performed by an univerſal perſpiration, thro' the whole ſurface of the body. Hence we may learn that the method of cure muſt be diverſified, agreeable to the different procedure which nature points out in both diſeaſes. For if one was to endeavour to diſcharge the matter of the true plague by ſweat, it would be oppoſing nature, becauſe ſhe attempts to do it by impoſthumes: and, on the other hand, to endeavour to expel the matter of a peſtilential fever, otherwiſe than by ſweat, is to purſue a method directly contrary to the procedure and diſpoſition of nature. Firſt intention of cure more fully conſidered.

22. We are yet unacquainted with a ſet of certain remedies, capable of promoting the natural expulſion of the morbific matter in the true *plague*, or, in other words, of forwarding the eruption of the impoſthumes, unleſs it be ſuppoſed that a ſtrengthening diet and cordials may promote this end: but, in reality, I ſhould greatly apprehend that the inflammation, already too vi- Sweating ſometimes prejudicial in the plague.

(*b*) See above, *Par.* 20.

Sect. 2. olent, might be farther increaſed thereby. And indeed experience has convinced me that ſweats are ineffectual in this caſe: for tho' I muſt own that when a profuſe ſweat has been kept up for three or four hours, and afterwards ſuddenly ſtopp'd, a tumor appears, yet I conceive it is not at all owing to the ſweat, becauſe there are no ſigns of a ſwelling whilſt the ſweat flows moſt plentifully, and when this is gone off, the ſwelling may ariſe, as it were, by accident, *viz.* in conſequence of nature's being eaſed of a part of her load, whereby ſhe was too much oppreſſed, by means of the ſweat, and of the conſiderable heating of the body by cordials given to raiſe the ſweat. But the uncertainty and danger of driving out the morbific matter by impoſthumes cauſed by ſweat, ſufficiently appears from its having proved fatal to near a third part (to ſpeak within compaſs) of ſuch as underwent this treatment. Whereas, on the contrary, ſeveral perſons, in whom the tumors appeared in the regular and natural way, even whilſt they were about their buſineſs, and without the leaſt apparent diſorder of any natural, vital, or animal function, recovered in a ſhort time; unleſs ſuch as happened unfortunately to fall into the hands of ſome unſkilful practitioner, and by his advice, tho' in perfect health, endeavoured to ſweat in bed; from which time they began to grow worſe, and, at length, the diſeaſe increaſing, afforded a melancholy proof of the perniciouſneſs of the advice, by their death.

Not certainly terminated by tumors.

23. Moreover, that the termination, or *critical* ſolution of the *plague* by tumors or impoſthumation is both uncertain and dangerous, is manifeſt from a *bubo*, which ſometimes riſes kindly at firſt, and with an abatement of the ſymptoms, but afterwards ſuddenly diſappears, and inſtead thereof purple ſpots ſucceed, which are certain ſigns of death: and the cauſe of its ſtriking in ſhould juſtly ſeem to be aſcribed to the copious ſweats, intended to promote its eruption, which waſted a conſiderable part of the matter thro' the pores, that ſhould have ſerved to fill and keep it up.

No certain method of curing it.

24. However it be, this at leaſt evidently appears, that providence has graciouſly pointed out a certain method of expelling the morbific cauſe in other diſeaſes; but, for this ſcourge of our tranſgreſſions, has given us only a very uncertain one: and perhaps the cauſe of

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the great deſtructiveneſs of this diſeaſe may be as well aſcrib'd to this ſource, as to its malignity; for in the *gout* and other diſeaſes, where there is little ſuſpicion of malignity, the ſtriking in of the morbific matter proves as certainly pernicious. Hence it clearly follows, that the phyſician, who in the cure of other diſeaſes ought to tread cloſely in nature's ſteps, muſt here renounce her guidance: and for want of ſtrictly attending to the truth of this maxim, the *plague* has proved much more deſtructive, than it would otherwiſe have been. Chap. 2.

Nature not to be followed here.

25. Since then it appears quite unſafe to follow nature in her method of curing this diſeaſe, we are in the next place to conſider in what manner the ſecond intention is to be anſwered, which conſiſts *in attempting the cure by a different one:* And this I conceive is only to be effected by *bleeding*, or *ſweating*. As to the former, I am well aware that it is generally condemned in this diſeaſe; but, ſetting aſide vulgar prejudices, I ſhall here briefly and equitably examine the reaſons uſually brought againſt it.

Bleeding or ſweating moſt likely to relieve.

Bleeding examined, and how to be uſed.

26. And, firſt, I appeal to the phyſicians who continued in town during the late plague, whether free and repeated bleeding, before a ſwelling appeared, was ever obſerved to prove fatal to any of the infected? But it is not at all ſurprizing that bleeding in a ſmall quantity, or after the appearance of a ſwelling, ſhould always be prejudicial: for in the former caſe the management of the cure is taken out of the hands of nature, who uſed all her endeavours to raiſe a tumor, without ſubſtituting in its ſtead any other ſufficiently effectual method to expel the morbific matter; and, in the latter, bleeding, by attracting from the circumference to the center, occaſions a directly oppoſite motion to that of nature, which is made from the center to the circumference. And yet nothing is more frequently urged as a capital argument, by thoſe who condemn bleeding in general in this diſeaſe, than the miſchief of bleeding in this improper manner; as may be collected from *Diemerbroeck*, and other writers of obſervations. But for my own part I cannot aſſent to their reaſonings, till I know what anſwer they will make to the queſtion above propoſed.

Commended by many eminent writers.

27. It is certain that ſeveral writers of great character have judg'd bleeding proper in the plague; the principal of which are *Ludovicus Mercatus*, *Joannes Coſtæus*, *Nicolaus*

Sect. 2. *Nicolaus Maſſa, Ludovicus Septalius, Trincavellius, Foreſtus, Mercurialis, Altomarus, Paſchalius, Andernachus, Pereda, Zacutus Luſitanus, Fonſeca, &c.* But *Leonardus Botallus*, a celebrated phyſician of the laſt century, is the only one I know of who places the whole of the cure in as copious bleeding as we demand. I ſhall tranſcribe his words, that I may not be judged ſingular in this practice.

By *Botallus* in a high degree.

28. " In ſhort (ſays our author) I conceive there is " no plague wherein bleeding may not prove more be- " neficial than all other remedies, provided it be ſea- " ſonably uſed, in due quantity; but I am of opinion " it ſometimes does no ſervice, either, becauſe per- " ſons have recourſe to it too late, or uſe it too ſparing- " ly, or commit ſome error in both theſe particulars." And a little farther he ſubjoins, " But if our fears be ſo " great, and we take away ſo ſmall a quantity of blood, " how is it poſſible to judge exactly what good or miſ- " chief bleeding may do in the plague? For if a diſeaſe " (which requires four pounds of blood to be taken a- " way, in order to its cure, and yet but one is taken " away) deſtroys the patient, it does not therefore " prove deſtructive becauſe bleeding was uſed, but be- " cauſe it was performed in an improper, and, per- " haps, in an unſeaſonable manner: but ill deſigning " and indolent men always endeavour to lay the fault " on that, not becauſe it did really do miſchief, but " becauſe they vilely deſire to give every body an ill " opinion of it. Or, ſuppoſing they do not do it out " of wickedneſs, they cannot be excuſed from igno- " rance and perverſeneſs, both which are doubtleſs per- " nicious, but the former much more ſo." Then proceeding to confirm his reaſonings from experience, he goes on thus: " Theſe particulars being attended to, " no ſenſible perſon can juſtly cenſure bleeding in theſe " diſeaſes, but muſt rather highly eſteem and commend " it as a divine remedy, and practiſe it with aſſurance; " which indeed I have done for theſe fifteen years paſt. " For I found no ſpeedier and ſafer remedy in peſtilen- " tial diſeaſes, than copious and ſeaſonable bleedings in " all my patients, which were exceeding numerous, " both at the ſiege of *Rochel*, and four years ago at " *Mons* in *Hainault*, at *Paris* for theſe two years paſt, " and

" and laſt year at *Cambray* (*c*)." To theſe remarks the author adds ſome inſtances of perſons cured by this method, which I here omit for brevity ſake; but muſt beg leave to relate a very uncommon caſe, no way foreign to our preſent ſubject, which happened a few years ſince in *England*. Chap. 2.

History of cures from bleeding plentifully.

29. Amongſt the other calamities of the civil war that ſeverely afflicted this nation, the plague alſo raged in ſeveral places, and was brought by accident from another place to *Dunſtar* caſtle in *Somerſetſhire*, where ſome of the ſoldiers dying ſuddenly with an eruption of ſpots, it likewiſe ſeized ſeveral others. It happened at that time that a ſurgeon, who had travelled much in foreign parts, was in the ſervice there, and applied to the governor for leave to aſſiſt his fellow ſoldiers who were afflicted with this dreadful diſeaſe in the beſt manner he was able; which being granted, he took away ſo large a quantity of blood from every one at the beginning of the diſeaſe, and before any ſwelling was perceived, that they were ready to faint and drop down; for he bled them all ſtanding, and in the open air, and had no veſſels to meaſure the blood, which falling on the ground, the quantity each perſon loſt could not of courſe be known. The operation being over, he ordered them to lie in their tents; and tho' he gave no kind of remedy after bleeding, yet, of the numbers that were thus treated not a ſingle perſon died; which is ſurprizing (*d*). I had this relation from colonel *Francis Windham*,

(*c*) Bleeding in the beginning of this diſeaſe ſhould ſeem unſafe, as it always, in ſome meaſure, ſlackens the courſe of the blood to the external parts, and conſequently checks perſpiration; whence the poiſon is detained in the body. Beſides the terror and apprehenſion the diſeaſed are generally under immediately hurries the blood to the internal parts, and bleeding having a like effect muſt therefore needs be detrimental. But if cuſtom, a fulneſs of blood, or high living ſhould render it neceſſary, it may be uſed upon the ſecond or third day, a gentle ſudorific having been previouſly given; becauſe by leſſening the quantity of the blood the propulſion of the virulent matter to the glands is facilitated and promoted, and with ſtill greater certainty, provided the courſe of the blood to the external parts be afterwards aſſiſted by mild ſudorifics.

(*d*) The ſucceſs that attended this very ſingular method will in all probability be no encouragement to a prudent practitioner to attempt the ſame upon a like occaſion, nor ſcreen the author from the cenſures he ſeems juſtly liable to on account of his violent

Sect. 2. *Windham*, a gentleman of great honour and veracity, and at that time governor of the caſtle.—I ſhall ſet down what I have met with worth notice, with reſpect to this ſubject, when I come to deliver the few obſervations I was enabled to make whilſt the late *London plague* prevailed.

Sweating preferred to bleeding.

30. But tho' I greatly approve of this method, and have formerly experienced its uſefulneſs in many inſtances; yet, for ſeveral reaſons, I prefer the diſſipation of the peſtilential ferment by ſweat to its evacuation by bleeding; becauſe ſweating does not weaken the patient ſo much, nor hazard the reputation of the phyſician.

Its inconveniences.

But this however has its inconveniences too; for (1) in many, and eſpecially in young perſons of a hot conſtitution, a ſweat is not eaſily raiſed, and the more you endeavour to raiſe one in ſuch ſubjects, by heaping on clothes, and giving powerful ſudorifics, ſo much the greater danger there is of cauſing a *delirium*, or, which is ſtill worſe, after having been deluded a while with vain expectations, *peſtilential* ſpots are at length forced out inſtead of ſweat.

31. (2) As the chief malignity of this diſeaſe lies in the more ſpirituous parts of the blood, whence the motion of its groſſer particles is generally ſomewhat more languid than in other inflammations, this finer part acquires a much more violent motion by this additional heat, and at length entirely breaks down all the *fibres of the blood now preternaturally diſtended*. And from this diſſolution of the ſanguineous fibres I judge the origin of the *peſtilential* ſpots or eruptions ſhould be derived; be-

violent and improper meaſures. To bleed in ſo irregular and extravagant a manner, in a diſeaſe that is generally accompanied with an extreme lowneſs of ſpirits, and loſs of ſtrength, ſeems a very irrational and unſafe practice; but to treat a number of perſons thus, without any regard to the difference of conſtitution, the different manner of their being affected, and other circumſtances, argues great raſhneſs, unſkilfulneſs, and an obſtinate attachment to a vague, diſorderly and ill-eſtabliſhed empiriciſm. Not to mention that ſome would loſe more blood than others, before they became faint, which however appears to have been the circumſtance that determined him to ſtop the bleeding; and that the quantity loſt muſt have differed conſiderably in particulars, as the orifice happened to be ſmaller or larger, and the blood thicker or thinner: whence again it is manifeſt he acted rather by caprice and humour than ſound and deliberate judgment.

cauſe,

cauſe, like the marks left by violent ſtripes on ſome fleſhy part of the body, they are at firſt of a deep red, but ſoon after turn blue or black. Chap. 2.

32. (3) Again, in ſuch as are pretty apt to ſweat, if the ſweat be ſtopt too early, *viz.* before the morbific matter be totally expelled, the *buboes*, which began to riſe kindly at the decline of the ſweat, by thus waſting a part of the matter intended to fill them, either readily ſtrike in, or at leaſt never become true abſceſſes (as it uſually happens in the *ſmall-pox* when the patient has ſweat copiouſly in the beginning) and the matter thereof, being re-admitted into the blood, raiſes a violent motion therein, by which means the *peſtilential* ſpots, which denote imminent death, are often driven out in the manner above deſcribed.

33. But, in order to ſhew more clearly how to prevent theſe and other inconveniences, I will faithfully ſet down all I have done and obſerved in this diſeaſe, beginning from the firſt appearance of the late *plague*.

34. At the beginning of *May*, in the year 1665, I attended a lady, about one and twenty, of a ſanguine conſtitution, who, beſides the burning fever, which began a little earlier, had frequent vomitings, and other febrile ſymptoms. I began the cure with bleeding, and next day, to guard againſt a looſeneſs, directed a vomit, which operated pretty well: for, as I have already obſerved, a looſeneſs uſually comes in the declenſion of a fever, for want of giving a vomit, when it was indicated by the retchings in the beginning (*e*). Viſiting her next morning, I found ſhe had a looſeneſs, which perplexed me much, having rarely met with this ſymptom for ſome years before. Hence I judg'd that this was no common fever, as the event alſo ſhewed, and conſequently required to be treated in a different manner from that abovementioned, which I had hitherto conſtantly uſed with ſucceſs. Upon this, a ſenior phyſician being joined with me in conſultation, bleeding was repeated by our joint advice, which the age, conſtitution of the patient, and the violent ebullition of the blood ſeemed to demand; moderate cooling cordials were alſo given, and glyſters injected every other day. At the decline of the diſeaſe we directed ſome of the ſtronger alexipharmics, becauſe there aroſe very uncommon and irregular ſym- An extraordinary caſe.

(*e*) See *Sect. I. Chap. IV. Par.* 9.

ptoms,

Sect. 2.

ptoms, which are generally eſteemed ſigns of conſiderable malignity; but all theſe means availed nothing, and the patient died about the fourteenth day.

Thoughts occaſioned thereby.

35. The ſingular nature of this fever ſet my head at work for ſome days afterwards; and at length recollecting, (1) that the violent heat continued even after repeated bleeding; (2) that the patient's cheeks were red; (3) that ſome drops of blood diſtilled from her noſe a little before her death; (4) that her blood when cold reſembled that taken away in a pleuriſy; (5) that ſhe had a cough, and dull pains in the *vital parts*, or breaſt; and (6) that it was that ſeaſon of the year, which includes the end of ſpring and beginning of ſummer, and which is leſs diſpoſed to produce continued fevers; all theſe dividing, as it were ſpontaneouſly, at this time, and either becoming intermittents, or ſuddenly turning to pleuriſies, and the like inflammatory diſorders; and laſtly (7) that pleuriſies were very *epidemic* at the ſame time: Having, I ſay, duly conſidered theſe particulars, I concluded that this fever, tho' it had not the pathognomonic or diſtinguiſhing ſigns of a *pleuriſy* or *peripneumony*, was ſymptomatic, and occaſioned by an inflammation lurking near the *vital parts*, tho' it was unaccompanied with pain in the ſide, or great difficulty of breathing. In ſhort, I came at length to this concluſion, that I ought to have followed the ſame method here, that I had frequently uſed in a pleuriſy with good ſucceſs. And indeed it afterwards fully anſwered my expectations; for being called ſome little time after this to a man affected exactly in the ſame manner, I began and finiſhed the cure by repeated bleeding, after the method already commended in the *pleuriſy*. And about the end of *May*, and beginning of *June*, this fever being then very *epidemic*, I recovered numbers by the ſame means. From this time forwards that dreadful *plague* began to rage with great violence, which afterwards made ſuch devaſtation, that in the ſpace of ſeven days it deſtroyed as many thouſand perſons in this city only.

A new method of cure the reſult.

36. Whether the fever under conſideration deſerves to be entitled a *plague*, I dare not poſitively affirm: but this I know by experience, that all who were then ſeiz'd with the true *plague*, attended with all its peculiar concomitants, and for ſome time afterwards, in my neighbourhood, had the ſame train of ſymptoms both in the beginning

beginning and thro' the courſe of the diſeaſe. But when I was in danger from the near approach of the *plague* to the houſe wherein I lived, yielding at length to the ſolicitations of my friends, I accompanied the vaſt numbers that quitted the city, and removed my family ſome miles diſtant from it. But I returned to town ſo very ſoon afterwards, and whilſt the *plague* yet raged ſo violently, that on account of the ſcarcity of abler phyſicians I could not avoid being called to aſſiſt the infected. And not long after I attended ſeveral perſons in fevers, which to my great ſurprize I found were of the ſame kind and nature as thoſe I had ſo ſucceſsfully treated before my departure: for which reaſon, truſting to my own experience for a better guide, and preferring it to all manner of trivial rules, I ſcrupled not to direct bleeding again. Chap. 2.

The peſtilential fever cured by copious bleeding.

37. I continued this practice of plentiful bleeding, along with the uſe of a ptiſan and the like cooling diet, in numbers with wonderful ſucceſs; till at length it failed me in a few inſtances thro' the obſtinacy of the patient's friends, who were ſo unreaſonably prejudiced againſt it, as not to let me take enough blood away, to the great detriment of the diſeaſed, from whom, as the cure turned chiefly upon bleeding, either a ſufficient quantity of blood, or none at all, ſhould have been taken away. Finding my endeavours ſo warmly oppoſed, I judged that the diſcovering another method of curing this diſeaſe would be of eminent ſervice for the future.

Miſchief of not taking away enough blood.

38. I ſhall here relate an inſtance of the miſchief I once innocently did, not by bleeding, but becauſe I was hindered from taking away as much blood as I judged requiſite.—I was called to a young man, of a ſanguine complexion, and robuſt conſtitution, who had been ſeized with a violent fever two days before, attended with vertiginous pains in the head, exceſſive vomiting, and other ſymptoms of the like kind; and finding upon enquiry that there was no ſign of a ſwelling, I immediately directed a large quantity of blood to be taken away, the top whereof, when cold, reſembled corrupt pleuritic blood; and I alſo preſcribed a ptiſan, and cooling juleps and broths. In the afternoon bleeding was repeated in the ſame quantity, and again, in like manner, the next morning. Calling upon him in the evening I found him much better, nevertheleſs his friends

Inſtanced in a particular caſe.

mightily

Sect. 2. mightily oppoſed farther bleeding, which yet I earneſtly contended for, aſſuring them that by bleeding him only once more he would be out of danger, but that if they continued to oppoſe it, bleeding had better have been wholly omitted, and the cure undertaken by ſweat; adding, in ſhort, that otherwiſe he would certainly die. The event confirmed my prognoſtic; for whilſt we were diſputing about the operation, we loſt the opportunity of doing it, for purple ſpots appeared next day, and the remains of the peccant matter, which ought to have been entirely carried off, (as bleeding ſo frequently repeated left no room to expect an abſceſs) corrupting the whole maſs of blood, and deſtroying the texture thereof by its extraordinary ſubtility, the patient died in a few hours afterwards.

39. Having therefore frequently met with ſuch perplexing obſtacles, I ſollicitouſly bent my thoughts to diſcover, if poſſible, as effectual, and at the ſame time a leſs exceptionable method of curing this diſeaſe. And after frequent and long conſideration of the matter I pitch'd upon the following, which has ſince proved always ſerviceable, and every way compleat.

A ſafer method ſubſtituted in its place

40. Firſt, if a *ſwelling* has not yet appeared, I bleed moderately, according to the ſtrength and conſtitution of the patient, after which a ſweat is readily and expeditiouſly raiſed, which otherwiſe would not only be difficultly procured in ſome ſubjects, but there would alſo be danger of increaſing the inflammation thereby, and thus driving out the purple ſpots. And the immediately ſucceeding ſweat makes abundant amends for the conſiderable miſchief, which the loſs of blood, tho' in a ſmall quantity, would otherwiſe occaſion. After bleeding, which I direct to be done in bed, ſo ſoon as all things are in readineſs to raiſe a ſweat, I immediately order the patient to be covered over with clothes, and a piece of flannel to be applied to his forehead, which laſt expedient contributes more towards raiſing a ſweat, than one would eaſily imagine. Then, if the patient does not vomit, I adminiſter theſe or the like ſudorifics:

A ſudorific bolus.

Take of Venice *treacle, half a dram; the electuary of the egg, a ſcruple;* Gaſcoign's *powder, twelve grains: cochineal, eight grains; ſaffron four grains;*

and

and the juice of kermes enough to make the whole into a bolus; to be taken every six hours, drinking after it six spoonfuls of the following julep. Chap. 2.

Take of the distill'd water of carduus benedictus, *and compound* scordium *water, of each three ounces; treacle water, two ounces; syrup of cloves, an ounce: mix them together for a julep (f),* A sudorific julep.

41. But if there be a *vomiting*, as it frequently happens in the *plague* and *pestilential fevers*, I forbear sudorifics, till, by the weight of the clothes, and throwing part of the sheet over the face now and then to collect the steams, the sweat begins to appear. For it is well worth observing that, as soon as the rays of the morbific matter get to the circumference of the body, the looseness and vomiting, occasioned by their being turned back on the internal parts, and lodging in the stomach and intestines, immediately cease spontaneously; so that how excessive a vomiting soever had preceded, the medicines afterwards taken are well retained, and succeed to our wish in exciting sweat. Sudorifics when to be given.

42. I remember that being desired by an apothecary to visit his brother, who was dangerously ill of a *pestilential fever*, and mentioning the giving a sudorific, he said he had already given several strong ones without effect, the patient having thrown them up by vomit. To this I answered that he might prepare one of the most nauseous of those that had been exhibited, and I would easily prevent his vomiting it up. The event verified my promise; for the patient having first sweated moderately, by the weight of the bed-clothes only, kept down a large bolus of *Venice* treacle, which causing him to sweat plentifully, he recovered.

43. But to resume my subject: I direct the sweat to be continued for twenty four hours, by giving draughts of sage posset-drink, or mace ale, between times, strictly The sweat to be continued 24 hours.

(f) *Theriaca*, and the like solid medicines, being offensive to the stomach, are not the most proper *sudorifics*. I should rather commend an infusion in boiling water of *Virginia snake-root*, or, in want of this, of some other warm *aromatic*, with the addition of about a fourth part of *aqua theriacalis*, and a proper quantity of syrup of lemons to sweeten it. From which, in illnesses of the same kind with the *goal fever*, which appears the nearest to the *pestilence*, I have seen very good effects. *See Dr Mead on the Plague*, p. 163.

caution-

Sect. 2. cautioning againſt wiping off the ſweat, and not allowing the patient's linnen to be changed, however moiſt or foul it be, till twenty four hours after the ſweat is gone off: and this I recommend to be obſerved with particular care. For if the ſweat vaniſhes in leſs time, the ſymptoms immediately return with their former violence, and the health of the patient is greatly endangered, which a longer continuance of the ſweat would have quite ſecured.

Objections to it anſwered.

44. And, in reality, I wonder much at *Diemerbroeck* and others, when I conſider upon how ſlight a pretext they are induced to ſtop the ſweat, namely to preſerve the ſtrength of the patient. For (1) that the patient is ſtronger, whilſt the ſweat flows than before, muſt have been obſerved by every one that is but ſlenderly acquainted with the treatment of this diſeaſe. (2) I ſhall not ſcruple to publiſh and defend what practice and experience have taught me, with reſpect to this matter. Several, who by my advice were kept in a ſweat for twenty four hours, have been ſo far from complaining of greater weakneſs from thence, that they have declared that in the ſame proportion the ſuperfluous humour was thus carried off, they perceived their ſtrength increaſe. And towards the latter part of the time I have often obſerved, with ſurprize, that there appeared a more natural, genuine and copious ſweat than the former occaſioned by the ſudorific, and which gave greater relief, as if it were truly *critical*, and terminated the diſeaſe. (3) Again, I do not ſee what inconvenience would attend refreſhing the patient with reſtorative broths and liquids, when the ſweat is at the height, and then the objection of want of ſtrength to bear long ſweats, vaniſhes. If, therefore, a faintneſs be perceived towards the end, I allow the patient to ſup a little chicken-broth, the yolk of an egg, or the like, which, together with the cordials and draughts, uſually directed to keep up the ſweat, ſufficiently ſupport the ſtrength. But in a matter of fact ſo evident, it is needleſs to uſe many arguments; for what clearly ſhews the advantages of this method is, that whilſt the patient continues to ſweat, he judges himſelf in a fair way of recovery, and in the opinion of the attendants ſeems in no farther danger; but as ſoon as the ſweat ceaſes, and the body begins

begins to dry, he grows worſe, a kind of relapſe being thereby occaſioned. Chap. 2.

What is to be done after the ſweat is gone off.

45. For twenty four hours after the ſweat is gone off, I adviſe the patient to be cautious of catching cold, to let his linnen dry on his body, take all his liquids warm, and alſo to continue the uſe of the ſage poſſet drink. Next morning I give the common purge, made of an infuſion of *tamarinds, the leaves of ſena, rhubarb, with manna and ſolutive ſyrup of roſes diſſolved in the ſtrained liquor* (*g*). And by this method I recovered ſeveral perſons, who were ſeized with a *peſtilential fever* the year after the plague, and did not loſe a ſingle patient after I began to uſe it (*h*).

46. But

(*g*) See *Sect. I. Chap. IV. Par.* 35.

(*h*) The intentions of cure in the *plague*, as delivered by *Hoffman*, are, (1) to aſſiſt nature in promoting the diſcharge of the poiſon received, by the proper outlets, and chiefly by thoſe critical tumors whereby it is generally expelled; and (2) to keep up the ſtrength and ſpirits, and remove the urgent ſymptoms. He adviſes to be ſparing in the uſe of remedies, obſerving that few are beſt: and judiciouſly cautions againſt heating medicines, or alexipharmics, as they are commonly entitled, which increaſe the anxiety and heat, promote the diſſolution of the juices, and force the *peſtilential miaſm* from the firſt paſſages into the blood, and upon the nervous parts: of this kind are all volatile urinous and oleous ſpirits, and volatile ſalts. Mixtures with acids are given with great advantage and ſafety. Opiates generally prove detrimental, but mild cordials do ſervice. An emetic is very proper to be given, as ſoon as a ſickneſs at ſtomach is perceived along with a *cardialgia*; and being immediately followed by a ſudorific, has been found to remedy the diſeaſe in the beginning. *Nitre* is excellent in full habits, bilious or ſanguine conſtitutions, and where the heat is conſiderable, the fever violent, and accompanied with thirſt, and pain in the head. But where there is a drowſineſs, low pulſe, coldneſs of the extremities, and great terror has preceded, nitrous medicines ſhould be refrained. It is always ſafer to mix *nitre* with *camphire*, whereby the vaporous nature of the *camphire*, and the cooling one of the *nitre* are admirably corrected, and a medicine obtained, that is not only alexipharmic, but effectually checks an inflammation. Laxatives are extremely hurtful in the beginning of the diſeaſe, but excellent in the declenſion. The extreams of heat and cold are equally to be avoided in the courſe of the cure.

Buboes, if they appear late, ſhould be promoted by drawing applications, cupping glaſſes, and even bliſters. When they appear, their ſuppuration is to be promoted by digeſtive cataplaſms, prepared of *figs, the roots of white lillies, roaſted onions, linſeed meal, honey and ſaffron*; or by ripening plaiſters applied thereto, ſuch as *diachylon with the gums, melilot, or mucilage*

plaiſter

Sect. 2.

46. But where a ſwelling has appeared, I have hitherto forbore bleeding, even in ſuch as are not very apt to ſweat, apprehending the ſudden death of the patient might prevent the intended ſweat, from a return of the morbific matter into the emptied veſſels. Yet bleeding might perhaps be uſed ſafely enough, provided a ſweat were raiſed immediately afterwards, which being continued for the ſpace abovementioned, may diſperſe and waſte the whole maſs of the humour by degrees, and with much leſs danger than would attend the waiting a long time for a kindly ſuppuration of the impoſthume, which is very uncertain in ſo violent a diſeaſe.

Bleeding how practicable with ſafety

47. To conclude; wherever it ſhall appear to the reader that I am miſtaken in point of theory, I aſk his

plaiſter. After ſuppuration they are to be opened and cleanſed, and incarned with balſam of *Arcæus*, mixt ſometimes with *Baſilicon*; allowing time for the *ſanies* to be diſcharged, and not healing them up too haſtily. The cure of *carbuncles* is to be attempted by anointing their edges with a digeſtive liniment, and covering them with cataplaſms made of *roaſted garlick, pigeons dung*, Venice *treacle, and oil of turpentine*, and when the eſchar, or ſcab, falls off, anointing the place with *Egyptian ointment*, or the like. But if there be a gangrenous corruption, and it ſeems to ſpread, the part affected muſt be ſcarified, and a liquor applied thereto, which powerfully checks inflammation and corruption; ſuch as the following, the good effects whereof I have frequently experienced.

Take of rectified ſpirit of wine, four ounces; camphire, two drams; ſaffron, and artificial nitre, each a dram: let them infuſe together.

Artificial nitre is made of ſpirit of ſal-ammoniac and ſpirit of nitre, and perfectly diſſolves in ſpirits of wine.

If theſe means fail, have recourſe to the actual cautery, and afterwards, to ſoften the eſchar, anoint it with freſh butter.

By way of prevention, the ſafeſt and likelieſt means to be uſed are, (1) to quit the infected place; (2) to avoid whatever weakens the body, checks perſpiration, and breeds crudities in the firſt paſſages: as exceſſive bodily labour, too intenſe application of mind, ſitting up late, warm bathing, all copious evacuations, overloading the ſtomach, *&c.* (3) if the body be full of foul humours, to correct their vitiated quality, by temperate balſamics mixt with acids, taken in a moderate doſe, and not too frequently; (4) to drink generous liquors at proper times in moderation, and eſpecially rheniſh wine, which, on account of its gentle acidity, is eſteemed excellent againſt putrefaction; and laſtly (5) to guard againſt violent paſſions, endeavouring to preſerve a conſtant firmneſs of mind, and ſhaking off all timorouſneſs and dejection.——Thus far the excellent *Hoffman*.

pardon;

pardon; but with reſpect to practice I declare that I have faithfully ſet down all particulars, and have no where propoſed any thing which I have not thoroughly experienced. And, in truth, when I come to die, I truſt I ſhall have the ſatisfaction of being inwardly aſſured that I have not only endeavoured, with the utmoſt diligence and integrity, to recover the health of all thoſe who have been my patients, of whatever rank or condition they were, none of whom have been otherwiſe treated by me, than I deſire to be, if I ſhould be ſeized with the ſame diſtempers; but alſo that I have contributed, to the utmoſt of my abilities, that the cure of diſeaſes might, if poſſible, be proſecuted with greater certainty after my deceaſe; being of opinion that any acceſſion to this kind of knowledge, though it ſhould teach nothing more pompous than the cure of the tooth-ach, or corns, is of much greater value than all the vain parade of refinements in theory, and a knowledge of trifles, which are perhaps of as little ſervice to a phyſician in removing diſeaſes, as ſkill in muſick is to an architect in building. Chap. 2.

The term *nature* explained.

48. In the laſt place I ſhall ſubjoin a ſhort note, leſt perhaps my opinion of *Nature* be taken in a wrong ſenſe, or, at leaſt, not ſufficiently underſtood. In the foregoing diſcourſe I have frequently made uſe of the term *Nature*, and aſcribed various effects to her, as if I would thereby repreſent ſome one ſelf-exiſting being, but every where diffuſed throughout the machine of the univerſe, which, being endowed with reaſon, governs and directs all bodies, ſuch a one as ſome philoſophers ſeem to have conceived the *ſoul* of the *world* to be. But as I neither affect novelty in my ſentiments or expreſſions, I have made uſe of this antient word in theſe pages, if I miſtake not, in a qualified ſenſe only, and as it is underſtood and applied by judicious perſons. For, by *Nature*, I always mean "a certain aſſemblage of "natural cauſes, which, tho' deſtitute of reaſon and "contrivance, are directed in the wiſeſt manner, whilſt "they perform their operations, and produce their ef-"fects:" Or, in other words, that ſupreme being, by whoſe power all things are created and preſerved, diſpoſes them all in ſuch manner, by his infinite wiſdom, that they proceed to their appointed functions with a certain regularity and order, performing nothing in

Sect. 2. vain, but only what is beſt and fitteſt for the whole frame of the univerſe, and their own peculiar nature; and ſo are moved like machines, not by any ſkill of their own, but by that of the artiſt (*i*).

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(*i*) This not being the uſual medicinal acceptation of the term *Nature*, we ſhall here ſubjoin a clearer and fuller definition of it from *Hoffman*. "By *Nature* we mean no more than "the progreſſive and circular motion of the blood and juices, "depending on the reciprocal contraction and dilatation of "the heart and veſſels, and the reſt of the ſolids, wherein the "fluids are contained, by which due motion of the ſolids and "fluids, there is both a continual ſecretion made of the uſeful "or nutrimental parts, which ſhould be retained for the ſer-"vice of the body, and an excretion of the uſeleſs and excre-"mentitious parts, which ſhould be diſcharged through the "proper outlets and ſtrainers." In another place he expreſſes his ſenſe of the term more conciſely, ſaying, "*Nature* is a "word we uſe to ſignify the ſtructure, mechaniſm and contri-"vance of the body, acting with certain powers, according "to certain neceſſary and mechanical laws, aſſigned it by its "maker."

Hippocrates briefly ſtiles it, "The aggregate of all things "that concur to perfect health;" and inſinuates that it ought to be the foundation of all reaſoning in phyſic.

Whereas the word *nature* is made uſe of by phyſicians in the cure of all diſeaſes, I will plainly declare my ſentiments of what we underſtand by that word. That there is ſomething within us, which perceives, thinks, and reaſons, is manifeſt beyond contradiction, and yet the nature of that *ſomething* cannot be fully and perfectly comprehended in this life. Wherefore I ſhall reſign the diſquiſition of this point to thoſe, who, while they know too little of, and care leſs for things falling under their ſenſes, take great pleaſure in inveſtigating thoſe things, which human reaſon is incapable of conceiving. However, thus far the ſoundeſt philoſophers agree concerning it, that it is ſomewhat incorporeal. For how can ſluggiſh matter, which is of itſelf void of all motion, be the ſource and firſt cauſe of thought, the moſt excellent of all motions? Wherefore it is ſufficiently evident that this firſt mover within us is a ſpirit of ſome kind or other, entirely different and ſeparable from terreſtrial matter, and yet moſt intimately united with our body.—Moreover, to me it ſeems probable, that this active principle is not of the ſame ſort in all; that the almighty creator has endowed man with one ſort, and brutes with another, that the former ſo far partakes of a divine *nature*, as to be able to exiſt and think after its ſeparation from the body; but that the latter is of ſuch an inferior order, as to periſh with the body. The former was by ſome of the antients called *Animus*, the latter *Anima**; and they

* Juv. Sat. XV. 148.

——————————— mundi
Principio indulſit communis conditor illis
Tantum *Animam*, nobis *Animum* quoque.———

Vide etiam Daviſii Not. ad Ciceron. Tuſc. Diſput. Lib. I. Cap. 10.

believed,

SECT. III. CHAP. I.

The epidemic Conſtitution of the Years 1667, 1668, *and part of* 1669, *at* London.

1. IN the Year 1667, at the approach of the *vernal equinox*, the *ſmall-pox*, which, during the immediately preceding *peſtilential conſtitution*, appeared very rarely, or not at all, began to ſhew itſelf, and ſpreading more and more every day, became *epidemic* about *autumn*; after which, its violence being abated by degrees, upon the coming on of the *winter*, it decreaſed, but returned again the following *ſpring*, and prevailed, till it was check'd, as before, by the ſubſequent *winter*. It afterwards increaſed a third time with the approaching *ſpring*, but did not then rage ſo ſeverely, nor ſo generally, as it had done the two foregoing *ſummers*: and in *Auguſt*, 1669, it totally diſappeared, and was ſucceeded by an *epidemic dyſentery*. The *ſmall-pox* was more general in town for the firſt two years of this conſtitution, than I ever remember it

The progreſs of the *ſmall-pox* of this conſtitution.

believed, that they were both ingendered in our ſpecies: but this I take to be an erroneous poſition. For as their *Anima* ſuffices for the functions of life in brutes, ſo our *Animus* ſtands not in need of ſuch an aſſiſtant. Now this matter, if I am not miſtaken, ſtands thus: ſuch is the compoſition of our fabrick, that when any thing pernicious has got footing within the body, the governing mind gives ſuch an impulſe to thoſe inſtruments of motion, the animal ſpirits, as to raiſe thoſe commotions in the blood and humours, which may relieve the whole frame from the danger in which it is involved. And this is done in ſo ſudden a manner, that it ſhould ſeem to be the effect of inſtinct, rather than voluntary motion; though it be effected in us at the command of the *Animus*, and in brutes by the power of the *Anima*. And, indeed, thoſe very motions, which are commonly called *natural* and vital, as thoſe of the heart, lungs and inteſtines, which perſevere through the whole courſe of life, even when the will cannot be concerned in them, as they have their beginning from the mind, ſo they are perpetually under its direction. I could eaſily bring many arguments in confirmation of theſe ſentiments, but they would be ſuperfluous in this place. *See Stack's Tranſlation of Dr. Mead's Diſcourſe on the Small Pox and Meaſles, p.* 15, &c.

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to have been, either before or ſince; and nevertheleſs, as it was at that time the genuine and a kindly ſort, it deſtroyed few in compariſon of the multitudes that were ſeized with it.

A good kind.

A new *fever* aroſe at the ſame time,

2. At the ſame time the *ſmall-pox* firſt appeared, there aroſe a new kind of *fever*, not much unlike it, except in the eruption of the puſtules, and the ſymptoms thereon depending; of which I ſhall treat particularly in the following pages. This *fever*, tho' it affected fewer perſons by far than the *ſmall-pox*, did notwithſtanding laſt as long; but in the *winter*, when that abated, this prevailed, and when the *ſmall-pox* returned again in the *ſpring*, the *fever* went off, ſo as thus to leave the *ſmall-pox* the *predominant epidemic* of this conſtitution; the *fever* notwithſtanding never manifeſtly ceaſed during this ſpace, till at length it totally diſappeared, together with the *ſmall-pox*, in *Auguſt* 1669.

And a *looſeneſs*.

3. Theſe two *epidemic* diſeaſes were accompanied by a third, eſpecially the laſt *ſummer*, wherein this conſtitution prevailed, *viz.* a *looſeneſs*, the conſtitution of the air then inclining to the ſubſequent *dyſentery*. But however this be, at leaſt it appeared that this diſeaſe ſo nearly reſembled the then reigning *fever*, that it ſhould ſeem to be only the *fever* turned inwards, and fixed upon the bowels.

4. I ſhall treat of theſe three diſorders ſeparately, which may juſtly be called the ſole *epidemics* of this conſtitution. I begin with the *ſmall-pox*, of which I ſhall diſcourſe more at large, becauſe the kind that prevailed during this term of years ſeemed to me to be more particularly *genuine* and *regular* than any other, inaſmuch as it exhibited the ſame phenomena, and was every where attended with the ſame train of ſymptoms in all that were ſeized with it; from which, therefore, as being the moſt perfect in its kind, a true hiſtory of this diſeaſe, and the method of cure are to be taken.

Every conſtitution attended with its peculiar fever and ſmall-pox.

5. For it muſt be obſerved that every particular conſtitution of years has not only a proper and peculiar *fever* belonging thereto, but alſo a peculiar kind of *ſmall-pox*, which reſembles this ſpecies for this courſe of years, but a different one in the following years, tho' they may ſeem to reſemble each other as to certain appearances which are common to all the kinds: ſo much does nature vary in the production of *epidemic* diſeaſes.

6. But

6. But to reſume the ſubject: I will firſt give the hiſtory of this kind of the *ſmall-pox*, which I therefore call the *regular* kind, to diſtinguiſh it from the *irregular* kinds of the following years; and I will alſo ſubjoin the method of cure, which was attended with all deſirable ſucceſs. Chap. 2.

CHAP. II.

Of the regular Small-pox of the Years 1667 *and* 1668, *and part of the Year* 1669.

1. THE *ſmall-pox* in thoſe years it is *epidemic*, when it is alſo mild and *regular*, uſually begins about the *vernal equinox*, as did that now under conſideration; but in thoſe years wherein it is not only *epidemic*, but likewiſe *irregular*, and of a more dangerous kind, it ſometimes appears ſooner, *viz.* in the month of *January* (*k*); ſeizing whole families, and ſparing none of what age ſoever they be, unleſs ſuch as have already had it, not even ſuffering thoſe to eſcape who have been afflicted with the *baſtard* kind, which are no way a-kin to this diſeaſe (*l*). There are are two kinds of this *ſmall pox*, as well as of that which happens *in all years*, the *diſtinct* and *confluent*, which, tho' they differ not eſſentially, as ſome phraſe it, are yet eaſily diſtinguiſhed by ſome remarkable ſymptoms peculiar to each kind (*m*). When the *ſmall-pox* begins.

2. (1) The

(*k*) *Boerhaave* obſerves, that if the *ſmall-pox* ariſes in a place where it has not appeared for ſix years paſt, either towards the end of *January*, or in *February*, the following ſummer will be attended with a dangerous kind; but it may be eaſily cured in the beginning. Hence great attention muſt be had here to the nature of the diſeaſe, und the particular treatment it demands, *&c.* ſo that in the ſummer, when it will be of an extremely bad kind, we may be prepared to give ſuch medicines as agree beſt with this *epidemic* ſpecies; tho' it then generally proves mortal. But if the *ſmall pox* appears in *May*, it will be gentle, and of a favourable and healthful kind. See *Prax. med.* vol. v. p. 299.

(*l*) Scarce one of a thouſand who have had the *ſmall-pox* ever catch it a ſecond time, unleſs it be of a different kind; thus if a perſon has had the *diſtinct* kind, he may yet have the *confluent* one; but if he has had this ſort, he will never be ſeized with this diſeaſe again. *Ibid.*

(*m*) In my opinion, ſays Dr *Mead*, the *ſmall pox* may more accurately,

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Leading ſymptoms in the *diſtinct* kind.

2. (1) The *diſtinct* kind begins (1) with a chilneſs and ſhivering, immediately followed by (2) extreme heat, (3) violent pain in the head and back, (4) vomiting, (5) and in grown perſons a great tendency to ſweat; for I never obſerved ſuch a diſpoſition in children, either before or after the eruption; (6) pain in the parts immediately below the *ſcrobiculum cordis*, if they be preſſed with the hand; (7) ſleepineſs and *ſtupor*, eſpecially in children, and ſometimes convulſions, which happening after dentition is over, I always ſuſpect the *ſmall-pox* to be juſt approaching, and the eruptions appearing in a few hours afterwards generally verify the prognoſtic: ſo that, for inſtance, if a child be ſeized with a convulſive fit over night, as it uſually happens, the *ſmall-pox* comes out next morning; and I have frequently obſerved that the *ſmall-pox* immediately ſucceeding ſuch fits throws out large eruptions, is of a mild and favourable kind, and ſeldom proves confluent. And theſe are almoſt all the ſymptoms that accompany this diſeaſe in the beginning, and generally precede the eruption of the puſtules. But it may be proper to obſerve here, that where the blood is of a looſer texture, and ſo eaſily admits of a change, it ſometimes happens that the *ſeparation* is performed by degrees, without any conſiderable ſickneſs, before the expulſion of the matter ſhews itſelf by the eruption of the puſtules.

Time and manner of the eruption.

3. The *diſtinct ſmall-pox* come out moſtly on the fourth day incluſive from the beginning of the illneſs, and ſometimes a little later, but very ſeldom ſooner; at which time the ſymptoms are uſually much abated, or even go quite off, ſo that the patient thinks himſelf pretty well; but grown perſons are ſo inclined to ſweat, that it can hardly be prevented however thinly they are covered; and this diſpoſition continues till the

accurately, and agreeably to the nature of the diſeaſe, be divided into *ſimple* and *malignant*. I call *ſimple*, all that ſort in which the eruption is attended with a ſlight fever of ſhort duration, the puſtules fill kindly, make good matter in a few days, and, in fine, fall off in dry ſcabs.—The *malignant* ſort, is that in which the eruption appears with a malignant fever, the puſtules hardly come to any tolerable degree of maturity, and either ſuppurate not at all, or if they do in ſome meaſure, as the fever is never off, it is with great trouble that they at length end in little cruſts. *See Stack's tranſlation of his diſcourſe on the Small-pox*, &c. p. 21, 22.

puſtules

puſtules begin to ripen, and then vaniſhes ſpontaneouſly. The eruption proceeds nearly in the following manner: pale red puſtules, as large as the head of a ſmall pin, ſhew themſelves here and there on the face, firſt, or on the neck and breaſt, and afterwards on the whole body. During this ſtage of the diſeaſe, the throat is affected with a ſoreneſs, that increaſes as the puſtules riſe, which growing every day fuller and plumper, inflame the ſkin and fleſh of the neighbouring parts. Chap. 2.

4. For about the *eighth* day from the beginning of the diſeaſe, which is a time I always take particular notice of here, the ſpaces between the puſtules, that appeared before of a pale white, begin to grow red, and ſwell in proportion to the number of puſtules, with a throbbing pain of thoſe parts, which, continually increaſing, occaſions the inflammation and ſwelling above-mentioned, ſo that in the progreſs of the diſeaſe the eyelids are ſo filled and diſtended, as ſometimes to make the patient blind, and this tumour looks like a ſhining inflated bladder drawn over them. The blindneſs comes on ſooner, if a great number of puſtules fix on the eyes at the beginning of the eruption; immediately after the face, the hands and fingers ſwell in proportion to the number of the eruptions. The puſtules on the face, that till this day were ſmooth and red, now grow rough and whitiſh, which indeed is the firſt ſign of a beginning ſuppuration, and they likewiſe gradually diſcharge a yellow matter, in colour reſembling a honey-comb. The inflammation of the hands and face being in the mean time come to its height, cauſes the ſpaces between the eruptions to look of a pretty florid colour, not unlike a damaſk roſe: and in reality the more mild and genuine the *ſmall-pox* is, ſo much more the eruptions and their intermediate ſpaces approach this colour. As the puſtules in the face appear rougher and yellower every day as they ripen, ſo, on the contrary, thoſe of the hands and other parts appear ſmoother and not ſo white. Beginning and progreſs of the ſuppuration.

5. On the *eleventh* day the ſwelling and inflammation manifeſtly abate, and the eruptions both of the face and the reſt of the body being come to their maturity and juſt bigneſs, (which in theſe years equalled that of a large pea) dry and ſcale off; and in this kind of *ſmall-pox* they uſually quite diſappear on the *fourteenth* or *fif-* The puſtules began to dry on the 11th day.

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teenth day. But the eruptions of the hands, being generally more obſtinate than thoſe of the other parts, and yet freſh and white, remain a day or two after the reſt, and thoſe of the face and body ſcale off; but theſe burſt, and ſo vaniſh. The puſtules of the face are ſucceeded by a ſcurf, or branny ſcales, and theſe ſometimes by pits or pock-marks; for when the puſtules firſt fall off, the ſkin looks ſmooth, but theſe ſcales coming on and falling off alternately, do at length make thoſe pits, that frequently continue viſible long after the recovery of the patient in this diſeaſe; tho' the *diſtinct ſmall-pox* very rarely leaves any marks behind it. It was chiefly that kind, that raged the laſt ſix months of the year, that pitted, for thoſe which preceded made no marks, unleſs it proved the *confluent* ſort, as we ſhall hereafter remark. The patient was either quite coſtive, or had few ſtools throughout the whole courſe of the diſtemper. And let this ſuffice for *the diſtinct ſmall-pox.*

The confluent ſmall pox deſcribed.

6. (2) That kind of the *ſmall-pox* which we call the *confluent*, is attended with the ſame ſymptoms in common as the *diſtinct*, only they are all more violent; the *fever*, *anxiety*, ſickneſs and vomiting, *&c.* being more ſevere, by which ſigns a ſkilful phyſician diſcovers it to be the *confluent* kind, even before the eruption. Nevertheleſs the patient is not ſo ready to ſweat in this kind as in the other juſt deſcribed, where the great tendency thereto generally foreſhews that the *ſmall-pox*, which will ſoon appear, will not run together. Moreover a looſeneſs ſometimes precedes, and continues a day or two after the eruption; which I have not hitherto met with in the diſtinct ſmall pox.

The puſtules generally come out on the third day.

7. This kind of *ſmall-pox* generally comes out on the *third* day, ſometimes earlier, but ſcarce ever later, whereas the *diſtinct* appears on the *fourth* day incluſive from the beginning of the diſtemper, or later, but very rarely before, and the ſooner the puſtules come out before the fourth day, the more they run together (*n*). However, tho'; to ſpeak in general, the *confluent* kind

(*n*) Moſt practitioners obſerve that the ſlower the ſmall-pox come out, the milder they prove, and the better they ripen. Thoſe appearing on the firſt day of the illneſs are eſteemed the worſt kind, thoſe on the ſecond milder, thoſe on the third, ſtill more gentle, and on the fourth, the moſt favourable. *Boerhaave, Prax. med. Vol.* v. p. 302.

ſcarce

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ſcarce ever appears ſo late as the fourth day, yet ſometimes the eruption may be deferred by ſome violent ſymptom to the fourth or fifth day, *e. g.* (1) ſometimes a ſharp pain in the loins, reſembling a fit of the ſtone; (2) ſometimes in the ſide, like a pleuriſy; (3) ſometimes in the limbs, as in the rheumatiſm; or laſtly, (4) in the ſtomach, attended with great ſickneſs and vomiting. In theſe caſes, which however are not common, I have obſerved the ſmall-pox to come out later than ordinary, as being retarded by the extreme violence of the ſymptoms above enumerated; which indeed being more ſevere than uſual, when they ariſe in the very beginning, manifeſtly indicate that the ſubſequent ſmall-pox will be of the *confluent* kind, and not void of danger.

8. I proceed next to remark that, tho' the ſymptoms accompanying this diſeaſe in the beginning, in the *diſtinct* kind, go off, as I ſaid above, immediately after the eruption, it nevertheleſs happens much otherwiſe in the *confluent* kind; the fever, and other ſymptoms, afflicting the patient for ſeveral days after the puſtules appear.

Sometimes they come out like an *eryſipelas*, or the *meaſles*.

9. Sometimes this ſort comes out like an *eryſipelas*, and ſometimes like the *meaſles*; from which they cannot be diſtinguiſhed, at leaſt as to the outward appearance, unleſs by a phyſician well acquainted with theſe diſeaſes. But whoever carefully attends to the different time of the eruption in theſe diſeaſes, and other circumſtances, which from the hiſtory of each will be found to differ extremely, will readily diſtinguiſh them. As the diſtemper increaſes, the puſtules, eſpecially thoſe of the face, do not riſe ſo high as in the *diſtinct* kind; but running together, appear at firſt like a red bladder covering the whole face, and making it to ſwell ſooner than in the *diſtinct* ſort, and at laſt they appear like a thin white pellicule, cloſely adhering to the face, and riſing little higher than the ſurface of the ſkin.

Begin to dry after the eighth day.

10. After the *eighth* day this pellicule grows every day gradually rougher, as appears by the touch, and inclines to a *brown*, and not to a *yellow* colour, as in the *diſtinct* kind. The roughneſs and colour of the ſkin daily increaſe, till at length the pellicule falls off in large ſcales: but when the diſeaſe has been very ſe-

vere,

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vere, it usually sticks to some parts of the face till after the twentieth day. The more violent the *small-pox* proves, the nearer the eruptions, as they ripen, incline to a dark brown colour, and the longer they are in falling off, if left to themselves; whereas contrariwise the less they run together, the yellower they grow, and the sooner they scale off. When this pellicule, or scab, which covers the face first falls off, it leaves no roughness behind, but it is immediately succeeded by branny scales, of a very corrosive nature, which not only make larger pits than the *distinct* kind generally do, but also much disfigure the face with unseemly scars. And in the *confluent* kind, if the disease has been very violent, the skin of the shoulders and back sometimes scales off, leaving these parts bare.

Whence the danger in this disease.

11. It must be observed that this disease is not to be esteemed dangerous because the body is full of pustules, but from the great number of them in the face; for if that be exceeding full, though there are but few, and those of the *distinct* kind, every where else, yet the patient is equally endangered, as if all the limbs were extremely full (*o*). But, on the contrary, tho' every part beside be very full, if there be but few in the face, the danger is less. What has been said of the number of the eruptions may also be affirmed of the kind, for the face plainly shews whether it be mild or severe.

The pustules largest in the hands and feet.

12. I have always observed in the *confluent small-pox*, that the eruptions in the hands and feet were larger than those of the other parts, and were gradually less and less the nearer they approached the body. And these are the observations on the eruptions, which I thought proper to premise.

A *salivation* and a *looseness* attend this kind.

13. The *confluent small-pox* is attended with two other symptoms, not less considerable than the eruptions, the swelling, or any one of those abovementioned, *viz.* (1) a *salivation*, or *spitting* in grown persons, and (2) a *looseness* in children. The former is so constant an attendant on this disease in grown persons, that I never met but with one patient in this kind who was free

(*o*) *Boerhaave* observes that the danger always rises in proportion to the number of pustules that seize the head, and advises bathing the feet before the eruption, in order to derive them more abundantly to the extremities. *Prax. med. Vol.* v. p. 316.

from

from it; but the latter, namely the looſeneſs, does not ſo certainly affect children. Whether provident nature has therefore ſubſtituted theſe evacuations, becauſe in this ſmall and flat ſort the morbific matter cannot be ſo entirely diſcharged, as by the larger and higher eruptions in the *diſtinct* kind, is what I do not pretend to determine; for I only write a hiſtory, and do not undertake to ſolve difficulties. This however I certainly know, that theſe ſymptoms not only generally accompany the *confluent ſmall-pox*, but that the evacuation made thereby is as neceſſary, as either the eruptions, or the ſwelling of the face and hands. Chap. 2

When the ſalivation begins and ends.

14. The ſpitting ſometimes begins as ſoon as the eruptions appear, and ſometimes not till a day or two after. The matter is for ſome time thin, and eaſily and plentifully expectorated; and, indeed this ſalivation is not much unlike that raiſed by *mercury*, only the *ſaliva* here does not ſmell ſo diſagreeably. But towards the *eleventh* day, the *ſaliva*, now become more viſcous, is raiſed with great difficulty; the patient is thirſty, coughs often whilſt he drinks, and the liquor flies out at the noſtrils; and from this day the ſalivation generally ſtops, tho' ſometimes, but very rarely, after it has ceas'd entirely for a day or two, it returns again. On the ſame day the ſwelling of the face and the ſpitting begin to abate, but then, inſtead of them, the hands commonly ſwell, or at leaſt ought to do ſo.

15. A looſeneſs does not ſeize children ſo ſoon as a ſalivation does grown perſons; but whenever it begins, unleſs it be ſtopped by art, it attends the diſtemper throughout.

The fever when higheſt.

16. In both kinds of the ſmall-pox the fever rages moſt from the beginning to the time of the eruption, after which it abates, and continues much more moderate till the ſuppuration begins, which being finiſhed, it goes off entirely.

17. I have always obſerved when the diſeaſe proved very violent, that the patient had a kind of fit towards evening, at which time (eſpecially) the more dangerous ſymptoms aroſe, and raged moſt ſeverely.

18. Having now given an accurate hiſtory of this kind of *ſmall-pox*, including its true and genuine ſymptoms, riſe and progreſs, as it naturally appears, I proceed

Sect. 2. ceed next to treat of the *irregular ſymptoms*, which happen in this diſeaſe, when it is unſkilfully treated.

The 8th day in the *diſtinct* moſt dangerous.

19. It is to be noted therefore that the irregular ſymptoms happening on the *eighth* day, in the *diſtinct* kind, and on the *eleventh* in the *confluent* (always calculating from the firſt beginning of the diſtemper) do moſt eminently concern the life or death of the patient, and ought therefore to be thoroughly conſidered; it being apparent that moſt of thoſe who periſh by either kind, die on the abovementioned days in each.

The hot regimen where improper.

20. For firſt in the *diſtinct* kind, if the patient ſweats pretty freely, (which, as we remarked above, uſually happens in grown perſons) he conceives all will go well, hoping the venom or malignity of the diſeaſe will by this means be expelled thro' the pores of the ſkin, and therefore think it right to promote the ſweat by cordials and a hot regimen; and he purſues this method the more willingly, both becauſe he ſeemed to have been relieved thereby in the beginning, and likewiſe becauſe it agrees better with the ill-grounded opinion of the attendants. But thoſe particles being at length expelled by ſweat, which ſhould have ſerved to raiſe the puſtules, and ſwell the face, on the *eighth* day, the face, which ought to ſwell and be inflamed in the intermediate ſpaces, contrariwiſe appears flaccid, and thoſe ſpaces white, or pale, whilſt the puſtules look red, and continue elevated even after the death of the patient. And the ſweat, which had flowed freely to this day, now ceaſes ſuddenly and ſpontaneouſly, and cannot be raiſed again even by the warmeſt cordials. Mean time the patient is ſeized with a delirium, great reſtleſsneſs and ſickneſs, a frequency of making urine in ſmall quantities, and dies in a few hours contrary to expectation. But it muſt here be obſerved that if the eruptions be few, the diſeaſe happen in the winter, and in a perſon in years, or if bleeding has been uſed, this hot regimen, of which we have juſt treated, does not then ſo certainly hinder the ſwelling of the face, and is not ſo fatal, as where the eruptions are many, or the diſeaſe happens in the ſpring or ſummer ſeaſon, and the patient is in the prime of life, and no blood has been taken away.

The mortal ſymptoms thence occaſioned.

The 11th day moſt dangerous in the *confluent* kind.

21. But in the *confluent* kind there is moſt danger, and the greateſt number die on the *eleventh* day; for as the

the ſpitting, which had hitherto preſerved the patient, commonly ceaſes ſpontaneouſly about this time, unleſs the ſwelling of the face keeps up a little longer, and that of the hands, now manifeſtly beginning, ſupplies its place, death muſt needs enſue. For it muſt be conſidered, that in this kind of *ſmall pox*, where the eruptions are ſo ſmall, not only the ſalivation, but alſo the ſwelling of the face and hands, is abſolutely requiſite in order to a proper diſcharge of the morbific matter; and if either be wanting, or goes off too ſoon, the patient muſt periſh immediately. But it happens too frequently in this hot diſtemper, that the texture of the blood is ſo much weakened and broke, and ſo highly inflamed, by an over-hot regimen, as to be no longer able to perform the expulſion of the inflammatory particles in a ſlow and gradual manner (not to mention now the miſchiefs proceeding from forcing ſweat improperly) whence either the face and hands do not ſwell at all, or the ſwelling vaniſhes with the ſalivation; for tho' the ſwelling of the face ought to abate a little on this day, yet it ſhould not go off entirely till a day or two after, the ſwelling of the hands in the mean while continuing and increaſing, which is one of the moſt certain ſigns of recovery, as the contrary is of imminent danger. Chap. 2.

22. However this be, the *ſaliva*, which till this day continued crude and thin, and was eaſily expectorated, now becomes ſo viſcid and tough, as to endanger ſuffocation, and when the patient drinks, the liquor falls down the wind-pipe, whence it is thrown up thro' the noſtrils with a violent cough. He is ſeized with a hoarſeneſs, a great *ſtupor*, and drowſineſs, and being wholly oppreſſed by the violence of the diſeaſe, generally ſinks under theſe ſymptoms on the abovementioned day. Whence the danger

23. There are alſo other ſymptoms, which happen in any ſtage of the diſtemper, and which are equally common in the *diſtinct* and *confluent* kinds of ſmall-pox. For inſtance, a *delirium* ſometimes ſeizes the patient, occaſioned by the exceſſive ebullition of the blood, and the heat is ſo intolerable, that he endeavours in a furious manner to get looſe from thoſe that confine him in bed. Sometimes the ſame cauſe produces a very different or contrary effect as it ſeems, namely a kind of *coma*, ſo that A *delirium* how caus'd

Sect. 3. that the patient dozes almoſt always, unleſs he be conſtantly rouzed.

Whence a *coma*; and purple ſpots.

24. Sometimes alſo in this diſeaſe, as in the *plague*, the texture of the blood being looſened by the violence of the inflammation, purple ſpots appear in the ſpaces between the eruptions, which are generally fore-runners of death: This happens oftener when the conſtitution of the air chiefly favours this epidemic diſeaſe. Sometimes ſmall black ſpots, ſcarce ſo large as pins heads, and depreſſed in the middle, appear on the top of the eruptions in different places; which, as they proceed from too much heat, do at length by the uſe of a cooler regimen acquire a brown, and afterwards by degrees a yellow colour, which naturally belongs to the genuine and regular ſmall-pox. This is apparent to thoſe who are acquainted with this diſeaſe, in which all the ſymptoms become proportionably milder, the nearer the eruptions, when come to ſuppuration, reſemble this colour, and *vice verſa*.

Whence bloody urine.

25. Again, the blood of young perſons, and ſuch as are in the vigour of life, is ſometimes ſo much inflamed in this diſeaſe, eſpecially if too free an uſe of wine or any other ſpirituous liquor has preceded, as to break thro' the arteries into the bladder, and ſo occaſion *bloody urine* (*p*); which is one of the moſt dangerous ſymptoms that appear throughout the courſe of this diſtemper.

A ſpitting of blood owing to the ſame cauſe.

26. Moreover, ſometimes, but not ſo frequently, a ſpitting *of blood* proceeds from the ſame cauſe. But either of theſe hemorrhages uſually happen in the beginning, before the eruptions appear; or if they ſhew themſelves in ſome places, yet in moſt others they lie concealed under the ſkin, in great abundance, and are

(*p*) A redneſs of the urine has been ſometimes taken for bloody urine, it may therefore be proper to obſerve, that if this colour depends on a mixture of blood therewith, it will, after the urine has ſtood a while to ſettle, congeal and fall to the bottom, leaving the urine clear at top.

This dangerous ſymptom ſhould ſeem to proceed from the acrimony of the juices, and a diſſolution of the texture of the blood, the mixture and coheſion of its parts being deſtroyed by the conſiderable degree of putrefaction which accompanies this diſeaſe. And from the ſame cauſe may proceed the bloody ſtools, often happening here (but not once mentioned by our author) and every other hemorrhage.

of

of that kind which would prove moſt *confluent*, unleſs one of the abovementioned ſymptoms ſhould terminate the diſeaſe by deſtroying the patient. Chap. 2.

When a ſtoppage of urine happens.

27. Sometimes alſo, eſpecially in young perſons, there happens a total ſuppreſſion of urine, either at the height, or declenſion of the *diſtinct* kind.

The ſymptoms from cold, copious bleeding, and over-purging.

28. There are likewiſe other ſymptoms that ſometimes ariſe from a contrary cauſe to thoſe above enumerated; namely when the patient has been injured either (1) by too intenſe cold, (2) improper bleeding in a very large quantity, or (3) over-purging; whence the eruptions ſometimes ſuddenly ſink, and a looſeneſs comes on, which, in grown perſons, as we have before obſerved, proves highly dangerous, the *variolous* matter being thereby ſtruck in, ſo that nature is utterly unable to expel it in a proper manner by the pores. Beſides by this means the ſwelling of the face and hands is check'd, which is to be eſteemed as favourable a ſymptom as even the eruption of the puſtules, unleſs they be very few indeed.

The former rare.

29. But the ſymptoms occaſioned by taking cold are very rare in compariſon of thoſe that ariſe from the hot regimen; for as this diſeaſe may with great reaſon be reckoned amongſt thoſe of the moſt inflammatory kind, a miſtake on this hand happens much more frequently than on the other.

The diſeaſe an inflammation of the blood and juices.

30. What the eſſence of this diſeaſe is, I ingenuouſly own I know not, by reaſon of a natural defect in the underſtanding common to me and all mankind; but upon a thorough conſideration of the abovementioned ſymptoms, it ſhould ſeem to be an inflammation of the blood and juices (*q*), (yet of a different kind from other inflammations) in removing which, nature, during the firſt two or three days, endeavours to concoct and digeſt the inflamed particles, which, being afterwards thrown out on the ſurface of the body, ſhe further ripens, and, at length, totally expels in the form

(*q*) The virulent matter, occaſioning this diſeaſe, ſeems to be of an acrimonious and inflammatory nature, whence the pain, heat, redneſs, ſwelling, eroſion and ulceration; and alſo to partake of a cauſtic and putrefactive nature, whence, by its ſubtle inteſtine motion, it deſtroys the texture and union of the parts, and corrupts them; and this more properly regards the malignity of the diſtemper, and is particularly manifeſt in the malignant, or bad *ſmall-pox*.

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of ſmall abſceſſes. Hence, in order to lay ſome foundation for the method of cure, regard muſt be had to two different ſtages of this diſeaſe; the firſt whereof is that of the *ſeparation*, and the ſecond that of the *expulſion*.

Has two ſtages.

(1) The ſeparation.

31. (1) The *ſeparation* is moſtly accompanied with a febrile ebullition, and is ordinarily finiſhed in *three* or *four* days, during which nature is employed in collecting the inflamed particles together that vitiate the blood, and expelling them to the fleſhy parts, which being over, the former calm returns; the diſturbance raiſed in the blood, whilſt this was doing, being now quieted. The ſeparation being thus finiſhed by means of the ebullition of the blood, (2) the *expulſion* ſucceeds next, which is performed, during the reſt of the time the diſeaſe continues, by means of thoſe ſmall abſceſſes in the fleſh. For as they differ not in their nature from other abſceſſes, ſo, like thoſe, they uſually run thro' the ſtates of crudity, ſuppuration, and exſiccation, which, if they finiſh right, there is no danger, as the cure chiefly depends thereon; but if not, very ſad ſymptoms will ſucceed. And indeed the expulſion requires ſo much longer time than the ſeparation, becauſe *this* is performed in a thin fluid body, and, as I may ſay, in the boſom of nature, whereas *that* is performed in a thick, denſe ſubſtance, and at a greater diſtance from the fountain of life.

(2) The expulſion.

The indications.

32. Theſe particulars being premiſed, the indications that ariſe are (*r*); (1) that ſuch an equable ebullition of the blood be maintained, that it may neither

(*r*) The indications of cure here, as delivered by *Hoffman*, are to aſſiſt nature with proper helps in correcting, expelling, and ſuppurating the *variolous* matter. And to this end (1) the acrimonious, vitiated, cauſtic matter muſt be corrected, and, according to the manner of ſpeaking uſed by the antients, *concocted*, and the violent motions of the vaſcular and nervous ſyſtem in the beginning of the illneſs, moderated; (2) the eruption muſt be promoted, by raiſing or depreſſing the fever, as it ſhall be found neceſſary, that ſo all the matter may be propell'd to the external parts; but the *ſecondary* fever coming on at the ſuppuration muſt be check'd, and the violent ſymptoms remedied; (3) in the declenſion, when the puſtules dry and ſcale off, purging muſt be uſed to cleanſe the blood and juices from the foulneſs they have contracted in the courſe of the illneſs, by which means the diſorders ariſing from the remains of the diſtemper are ſeaſonably prevented.

finiſh the ſeparation too haſtily, by riſing too high, nor retard, or render it imperfect, by ſinking too low; (2) that the abſceſſes, or eruptions be very carefully kept up, ſo that, running thro' their proper ſtates, they may at length entirely diſcharge the matter they contain, and vaniſh. Chap. 2.

Method of anſwering the firſt indication.

33. (1) To treat therefore briefly of the firſt indication: great caution is required, eſpecially during the ſeparation, that the ebullition may not riſe too high, either by heaping too many clothes on the patient, overheating the air, by keeping too large a fire in the room, or uſing heating medicines and cardiacs. And theſe muſt be particularly guarded againſt, if either the patient be in the prime of life, or his blood be too much enriched by ſpirituous liquors, or it be the ſpring ſeaſon, or, at leaſt, only the beginning of ſummer. Otherwiſe the ſeparation, which ſhould be carried on ſlowly and gradually, for the better promoting an univerſal deſpumation, will by this means be hurried on too faſt, and thus either there will not be a ſufficient number of particles collected, or perhaps ſome particles may be brought to ſecretion, which nature would not otherwiſe have ſecreted, were it not that, being forced beyond her juſt limits, ſhe is thus made to hurt herſelf. For when ſuch particles are ſeparated as are unfit for ſeparation, the motion of *others* that have a tendency thereto, is hindered by their mixing with theſe, and thus they are rendered leſs fit for expulſion.

The ſeparation is not to be too much promoted.

34. To me, indeed, it ſeems agreeable to reaſon, that the more time nature employs in carrying on and finiſhing the ſeparation, provided the ebullition does not quite flag, ſo much the more certainly and univerſally it is completed, upon which the ſucceſs of the ſubſequent cure muſt needs principally depend, as a different event muſt manifeſtly enſue from the contrary method. For as over-early fruit does not come to perfection, ſo no good ariſes from this hot regimen, but on the contrary it frequently happens that the patient either falls immediately into a *delirium*, or, which is a worſe ſymptom, profuſe ſweats ariſe, whereby ſuch particles are ſeparated as are unfit for ſeparation, and not agreeable to the nature of *pus*, (which however is the genuine product of this ſeparation) or elſe, the eruptions, being driven out

Ill effects of this procedure.

Sect. 3. too much by cardiacs and a hot regimen, run all together (a ſhocking ſight) and forebode death.

35. Theſe and the like ſymptoms are ordinarily occaſioned by ſuch errors, whereas I never obſerved any harm done by the other method: for nature, being left to herſelf, finiſhes her work in her own time, ſeparating and expelling the *variolous* matter, in the proper way and manner, ſo as not to ſtand in need of our help, at leaſt not in the young and robuſt. Nor in reality have I ever obſerved or heard that any perſon periſhed becauſe the *ſmall-pox* did not come out at firſt, but too many have died in whom they came out well and hopefully in the beginning, but afterwards ſtruck in and ſunk before they came to maturity (*s*).

36. But

(*s*) Is not this obſervation contradicted in numerous inſtances when the ſmall-pox prevails? Are not phyſicians frequently obliged to have recourſe to warm alexipharmics to drive out the eruptions, whilſt they lie very thick underneath the ſkin, without proceeding farther, tho' the uſual time for their coming out be paſt? And this often happens, either becauſe the fever is too languid, in which caſe moderately heating and generous medicines are apparently required; or becauſe the patient labours under a paucity or lowneſs of ſpirits, occaſioned by terrifying apprehenſions that the diſeaſe may prove mortal, whence a ſtop is conſequently put to the eruptions, and life, in reality, endangered. For it is manifeſt that the paſſions of the mind occaſion great and ſudden alterations in the circulation of the blood and juices, and the functions of the parts thereon depending. Thus anxiety, fear, or apprehenſion is found to relax the ſolid parts, and check the circulation; whence we are directed to the remedies proper to be uſed in this caſe, which ſhould be ſuch as may reſtore the tone of the ſolids, and quicken the motion of the fluids, in a manner ſuited to the particular exigency, of which kind are mild cordials; and beſides theſe, we ought, upon all occaſions, to endeavour to encourage the patient, and make him chearful and eaſy, or divert his attention from the danger; for as long as the mind gives way to inquietude and concern, all remedies are ineffectual.

When the eruption does not come forward as it ought, but the patient complains of reſtleſſneſs, exceſſive heat, and other bad ſymptoms, the immoderate hurry muſt be quieted, eſpecially in thoſe of a hot conſtitution; and becauſe the matter or venom of the puſtules is then more acrimonious and malignant, it muſt be corrected and cooled by cooling powders with cinnabar, or cooling infuſions (where the patient has an averſion to powders, which children and very young perſons generally have) to which a fourth or fifth part of dulcified ſpirit of nitre may conveniently be added, and likewiſe by emulſions and draughts of the ſame kind, a proper quanti-

ty

Chap. 2.

36. But tho' it is improper and dangerous, by cardiacs or a hot regimen, to raiſe the ebullition, once begun, too high; ſo contrariwiſe the danger is equal in depreſſing it by bleeding, vomits, purgatives, glyſters, and the like evacuations, the due ſecretion of the ſeparable parts being in great meaſure prevented hereby. For tho' the common and trite objection to bleeding and other evacuations be of no force, namely that *it is improper to move the humours from the circumference to the center, as nature ſeems to affect the contrary in this diſeaſe*, becauſe a quite different effect has often been obſerved to follow upon the uſe of theſe means, *viz.* a ſudden eruption of the ſmall-pox; nevertheleſs there are other forcible reaſons in readineſs to diſſuade from this practice, if by any means it can be refrained. For, to treat briefly of the principal of them; (1) by theſe evacuations, not only the ebullition is too much diminiſhed, by means of which the parts intended for deſpumation ſhould have been carefully ſeparated; but (2) the matter alſo is waſted, which ſhould continually ſerve as fuel to the ſecretion once begun, whence it frequently happens that the eruptions, which came out kindly in the beginning, and perhaps ſo much the better from the previous uſe of the abovementioned evacuations, ſink ſoon after, as if they were ſuddenly ſtruck in; occaſioned chiefly by a want of a freſh ſupply of matter to ſucceed the former, and finiſh the ſeparation. But notwithſtanding what has been advanced, if there be the leaſt ſuſpicion that the ſmall-pox, which are coming out, will be of the *confluent* kind, it will be highly ſerviceable not only to bleed immediately, but likewiſe to

Danger of diminiſhing the ebullition too much.

Bleeding and vomiting excellent in the *confluent ſmall pox.*

ty of ſome acidulated liquor for common drink, and a cool regimen. But ſometimes the ſmall-pox comes out badly in cold conſtitutions, or ſinks, and ſtrikes in, and ſo occaſions great reſtleſſneſs and ſickneſs; in which caſe nature is to be ſtimulated and aſſiſted by gentle alexipharmics, and ſome proper diſtilled waters. A decoction of figs and diaphoretic or pectoral herbs is excellent in this caſe, eſpecially if the patient has a cough at the ſame time, and it be drank plentifully and warm; and if the ſymptoms be violent, it is proper to apply bliſters to the arms and feet. But when the diſeaſe is milder, and yet the puſtules do not come out very kindly, there is often occaſion for nothing more than gentle diaphoretic draughts made of ſuitable diſtilled waters, and cooling powders, and made agreeably acid by an addition of ſome acid ſyrup. *Heiſter, Compend. Med.* p. 69.

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give a vomit; for reaſons we ſhall, in another place, ſet down at large.

The ſecond indication how to be anſwered.

37. (2) To proceed now to the ſecond indication, which reſpects the time of expulſion; during which the ſeparated matter is expelled by means of ſmall abſceſſes, or puſtules. Here we are to endeavour to keep them up in a proper manner, ſo as they may duly and regularly reach the period aſſigned them.

Danger of over-heating the patient towards the beginning of the expulſion.

38. As I conceive therefore it has been clearly ſhewn that it is highly dangerous to keep the patient too hot during the time of ſeparation, when there is a fever, and the eruptions ſcarce yet appear; ſo likewiſe an error of this kind is equally dangerous at any time of the diſeaſe, and eſpecially towards the beginning of the expulſion, whilſt the puſtules are yet in a ſtate of crudity. For tho' the blood be conſiderably freed from the inteſtine tumult, by the ſeparation being finiſhed, and the tranſlation of the matter to the fleſhy parts, yet being ſtill weak, and having ſcarcely acquired a new ſtate and texture, it is eaſily affected by the immoderate heat ariſing from all parts, and ſo, upon the leaſt occaſion given, inflames with a tendency to a new ebullition; which does not, like the former, endeavour to promote ſeparation, for we ſuppoſe that buſineſs over, but, inſtead thereof, not only produces the dangerous ſymptoms before mentioned, but diſturbs the eruption begun, and proves detrimental, by putting the contents of the puſtules into violent motion. And by this means either the particles already ſecreted, and depoſited in the habit, being hurried away by the violent and rapid motion of the blood, are abſorb'd thereby; or the fleſhy parts, being heated beyond the degree requiſite for ſuppuration, do not finiſh it ſo completely; or laſtly, perhaps, upon the coming of this new diſorder, the texture of the blood, and the tone of the fleſhy parts are ſo broken and weakened, that they cannot overcome the matter expelled, and digeſt it in the uſual way of abſceſſes (*t*).

39. But

(*t*) All heating medicines to drive out the *ſmall pox* deſerve to be condemned in general; for they put the blood and juices into violent motion, increaſe the heat, anxiety, convulſions, and *delirium* where theſe ſymptoms occur, and alſo render the *variolous* matter more acrimonious and ſubtile, whence a gentle

ſmall-pox

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39. But mean while we muſt not be ſo intent upon preventing an immoderate ebullition of the blood, as to check the eruption of the puſtules, by expoſing the patient to the injuries of the cold. The fitteſt degree of heat to promote their expulſion is the natural one, and ſuch as is ſuitable to the temper of the fleſhy parts; and whatever exceeds or falls ſhort of it, is dangerous on either hand.

The eruption not to be check'd

40. From what has been delivered therefore it ſeems manifeſt that this diſeaſe, and the proper method of curing it, reſt on a ſlippery foundation; and for this reaſon I dare venture to aſſert that the reputation of the phyſician, who is frequently employed in it, will be expoſed to cenſure; for not only the vulgar are apt to attribute the cauſe of the patient's death to the over officiouſneſs of the phyſician, but even the profeſſors of the ſame art gladly take occaſion from thence to defame their brother, and haranguing before partial judges, eaſily get him condemned, with this view, that they may gain greater eſteem themſelves, and build their riſe upon the ruin of others; which is a practice utterly unbecoming men of letters, and even the meaneſt artizans, and who have any regard for probity (*u*). Again, we may

The method of curing this diſeaſe precarious.

ſmall pox is eaſily converted into a bad and malignant kind: and ſo far are they from procuring an equal and conſtant eruption, that they rather expel the matter, not duly prepared, too ſoon, ſo that it does not keep its future ſtage, but in a ſhort time after ſtrikes in, with great danger to the patient. Beſides, they diſſolve the blood too much, waſte the mild nutritious juice, and at the ſame time exhauſt the ſtrength by the copious ſweats they occaſion. *See the note (s) p.* 114.

(*u*) Doubtleſs our excellent author had experienced this ungenerous treatment in his own particular; and in effect we find him afterwards pathetically complaining of it: which affords a melancholy proof that neither great abilities, unqueſtionable candour and integrity, nor the moſt indefatigable endeavours to ſerve mankind can ſecure a perſon, who leaves the common road, from the unjuſt cenſures of the narrow ſpirited, diſingenuous, and prejudiced part of the profeſſors of the ſame ſcience. Whoever make a new diſcovery, which tends to overthrow a ſet of prevailing notions and rules, (venerated probably more for their antiquity than juſtneſs) and eſtabliſh a truly rational theory, and more effectual methods of practice, muſt expect to meet with great oppoſition from the ignorant, envious and prepoſſeſſed, and be treated as raſh innovators, deſigning and intereſted perſons, however conſpicuous they may be for learning, prudence, and extenſive humanity.

Sect. 3. may from hence obſerve, which is leſs ſurprizing, that nurſes, who are generally too buſy and officious, often ſucceed ill in treating the diſeaſe: for it is a difficult matter, and exceeds the underſtanding and abilities of ignorant women, to aſcertain the degree of heat requiſite in this caſe, eſpecially, ſince in order thereto the ſeaſon of the year, the age of the patient, his manner of living, and other like circumſtances muſt be conſidered together, which in reality demands a prudent and ſkilful phyſician.

Cardiacs when and how to be given.

41. If the puſtules happen to ſtrike in, or the ſwelling of the face and hands ſink, either from unſeaſonable bleeding, or taking cold, recourſe muſt be had to cardiacs (*w*), but we muſt be careful of giving them too freely. For tho' blood has been taken away, it may notwithſtanding happen, that apprehending the loſs of ſtrength from thence, and therefore giving either ſtrong cordials, or uſing them frequently to prevent it, a new ebullition will be ſuddenly raiſed, the blood being yet weak, and eaſily affected by a hot *ſtimulus*; whence frequent ebullitions are excited therein, to which the death of the patient is rather to be aſcribed, than to the preceding bleeding. And let this ſuffice with reſpect to ſuch particulars as may anſwer the primary intentions.

The treatment of this diſeaſe particularized.

42. Now, to come cloſer to practice: as ſoon as the ſigns of the diſeaſe appear, I confine the patient within doors, forbid the uſe of wine and fleſh-meats, and allow *ſmall-beer* moderately warm with a toaſt for common drink, and ſometimes ſuffer it to be drank at pleaſure (*x*). For his food I direct water-gruel, barley-gruel, roaſt-apples, and other kinds of aliment, that are neither remarkably heating, nor cooling, nor hard to digeſt. Nor do I much diſapprove of the common country fare, of

Such was the uſage our illuſtrious friar *Bacon*, and the ſagacious *Harvey* met with from a number of their cotemporaries: and who can hope to paſs uncenſured, when men of their eminent knowledge could not eſcape?

(*w*) Theſe ſymptoms may alſo be occaſioned by a decay of ſtrength, ſitting up too long, terror, &c. and, unleſs immediately remedied by ſome proper cordial, life is endangered. Bliſters are eminently ſerviceable here. *See the note (s) p.* 114.

(*x*) It ſhould be obſerved, that if there be a looſeneſs, or a diſpoſition thereto, ſmall beer muſt be refrained; all malt liquors being peculiarly apt to encourage this diſcharge. In this caſe rice-water, harts horn drink, and the like, are much more proper liquors.

milk

milk with roaſt-apples bruiſed in it, provided it be given warm, and ſparingly. I immediately forbid a hotter regimen, and the uſe of all kinds of cardiacs, whereby ſome injudiciouſly endeavour to force out the ſmall-pox before the *fourth* day, which is the natural and proper time for the eruption; for I am very ſure that the ſlower the puſtules come out, the more general the ſeparation of the variolous matter will be, the better they will ripen, and the leſs danger there will be of their ſtriking in: whereas if they be driven out too ſoon, the matter, being yet crude and indigeſted, is precipitated, and deceives our expectation, like over-early fruit (*y*). Chap. 2.

Miſchief of forcing out the puſtules before the *fourth* day.

43. Again, by this over-haſty procedure, there is great danger (eſpecially in hot and florid conſtitutions, whoſe active principles more than ſufficiently ſupply the place of cardiacs) leſt nature, being too much irritated and hurried, ſhould overſpread the body with the *ſmall-pox*, and ſo render that the *confluent* kind, which, without this precipitancy, would have been a favourable *diſtinct* one. The ſmall-pox muſt not therefore be expelled upon the firſt ſuſpicion of this diſeaſe, becauſe the patient is generally very ſick and reſtleſs before the

(*y*) With regard to diet, ſays Dr *Mead*, it ought to be very ſlender, moiſtening, and cooling; ſuch as *oatmeal*, or *barley-gruel*, &c. Nevertheleſs, as the food is to be adapted to the ſeveral ſtages of the diſeaſe, the beſt regimen in the beginning is that, which will keep the body open, and promote urine. Theſe advantages are obtained by boiling preſerved fruits with their food, eſpecially *figs*, *damaſcene plums*, and *tamarinds*; and giving them ſubacid liquors for drink; *as ſmall-beer acidulated with orange or lemon juice*; *whey turned with apples boiled in the milk, or with wine*; *emulſions made with barley-water and almonds*; *Moſelle or Rheniſh wine plentifully diluted with water*; or any other things of this kind.—When this ſort of diet did not keep the body open, the *Arabian* phyſicians added *manna* to it; but this they did ſparingly, and with caution. *For it is quite neceſſary*, ſays *Avicen*, *that the body be open in the beginning** ; which is one of the moſt important advices that can be given in this diſeaſe, if to it be added, that urine muſt be made plentifully. For there is a wonderful correſpondence between the ſkin and the kidneys; whereby whatever fluid is wont to be ſecreted by the cuticular glands, may with great eaſe be evacuated by the urinary paſſages. Wherefore, it is very proper to draw off as much of the matter of the diſeaſe, as can be done, by theſe paſſages, in order to prevent the overloading of the internal parts. *Stack's Tranſlation of the Doctor's Diſcourſe on the Small-pox*, p. 35.

* De variolis & morbillis.

Sect. 3. eruption; for not a ſingle inſtance can be produced of its having proved mortal, however ill the patient has been, either becauſe the puſtules did not come out directly, or becauſe nature was deficient in expelling them ſooner or later, unleſs where ſhe was prevented by an hot regimen, and an over-early uſe of cardiacs (z). For I have more than once obſerved in the young and ſanguine, that the uſe of a hot regimen, and cardiacs given with deſign to expel the puſtules before the due time, have ſo little promoted their eruption, that, on the contrary, they have proved a check thereto. For the blood being heated by this means, and put into a more violent motion than is requiſite for performing the ſeparation in a proper manner, only ſome certain ſigns of the diſeaſe diſcover themſelves; the eruptions in the mean time lying concealed under the ſkin, and not riſing higher, whatever cordials be adminiſtered to promote their elevation; till, at length, the blood being reduc'd to its moderate and proper temperature, by allowing the uſe of ſmall beer, and taking away part of the clothes whereby the patient was conſiderably heated, I have commodiouſly made way for the eruption of the puſtules, and by this means removed the danger.

Ill effect of confining the patient in bed before the *fourth* day.

44. And, in my opinion, they have as little reaſon on their ſide, who ſo obſtinately confine the patient in bed, provided he keeps his room, as thoſe who give cordials in ſo haſty and improper a manner: for *bloody urine*, *purple ſpots*, and other mortal ſymptoms above ſpecified, happen only from a too early confinement in bed, eſpecially in young perſons (*a*). But on the *fourth* day

(*z*) See above, *Par.* 35.

(*a*) Let this be a general rule, to keep the patient in bed during the firſt days of the diſtemper, taking care to defend him from the inclemency of the winter by proper means, and to moderate the exceſſive heat in ſummer by cool air. To chill, and, as it were, to freeze up the ſick in winter, is not the part of a prudent phyſician, but that of a fool-hardy empiric, trying experiments at the expence of unhappy people's lives.—Wherefore a mean is to be obſerved herein, by managing the patient in ſuch a manner, as neither to ſtifle him with heat of cloaths, nor check the eruption and perſpiration by cold. However, great care ought to be taken, in general, to ſupply him with pure and cool air, which he may take in plentifully: becauſe a hot air cauſes difficulty of breathing, checks the ſecretion of urine, and increaſes the number of puſtules

day I order the patient to be put to bed, at which time, if the eruption does not come kindly forward, it is proper to give ſome gentle cardiac, at leaſt once, to drive out the puſtules. Amongſt the medicines that produce this effect, thoſe called paregorics, or opiates, ſuch as *liquid laudanum*, *diaſcordium*, &c. given in a ſmall quantity, mixed with ſome proper *cordial water*, are the beſt for this purpoſe; for as they abate the ebullition of the blood, nature expels the morbific matter with greater eaſe and convenience (*b*). But I would not adviſe the giving a cardiac before this juncture, even tho' there be a looſeneſs, and that ſhould ſeem to indicate ſuch a remedy. For tho', as we obſerved above, a looſeneſs may ſometimes precede the eruption of the *confluent ſmall-pox*, occaſioned by inflammatory *effluvia*, or humours diſcharged into the inteſtines from the maſs of blood, which during the firſt days of the illneſs is greatly heated, and in violent motion; yet nature will as certainly expel theſe *effluvia* of the variolous matter by the ſkin, whereupon the looſeneſs goes off ſpontaneouſly, as ſhe commonly does the ſame *effluvia*, which, being turned inward upon the ſtomach, occaſion a vomiting in the beginning of the diſeaſe.

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Opiates beſt to promote the eruption.

Not to be given before the *fourth* day.

45. But it is to be obſerved, that if I am called to a ſtrong young man, who, beſides, has given occaſion to the diſtemper by too free an uſe of wine, or any other ſpirituous liquor, I eſteem it not enough to check the ebullition of the blood, for him to keep from bed, and refrain cordials, unleſs bleeding in the arm be alſo uſed (*c*): but if this be oppoſed, on account of the prevailing

Bleeding when requiſite.

puſtules on the internal organs of the body; the conſequences whereof we may juſtly apprehend to be inflammations, and, towards the end of the diſeaſe, gangrenes. *Stack's Tranſlation of the Doctor's Diſcourſe on the Small-pox*, p. 33.

(*b*) Opiates here are reckoned amongſt the cardiacs, as they promote the eruption, which, however, they ſhould ſeem to do only inaſmuch as they diminiſh the tenſion of the ſolids, and ſo check the circulation, by which means the ſeparation and expulſion are conſiderably promoted, eſpecially where the fever is high, and the blood and juices conſequently move with great velocity.

(*c*) A full and ſtrong pulſe, a redneſs of the face, a pain and heavineſs in the head and loins, a ſwelling of the veins, youthfulneſs, a ſprightly diſpoſition, a cuſtom of bleeding, and the ſuppreſſion of a critical evacuation, indicate bleeding the firſt or

ſecond

Sect. 3. vailing prejudice of the vulgar, at leaſt I judge it incumbent on me to propoſe it. For by the inflammation of the blood, cauſed by the heat of the ſpirituous

ſecond day. Thus the anxiety, and oppreſſion of the breaſt ſoon vaniſh, the ſpots appear copiouſly in the ſkin, nor is there reaſon to apprehend ſuch violent ſymptoms after the eruption. For an over-fulneſs of blood has often been obſerved to hinder the due propulſion of the *variolous* matter to the external parts, and occaſion the puſtules to appear only diſtinct; whilſt the matter left in the habit produces various ſpaſmodic, convulſive ſymptoms, a *delirium*, a ſuffocation, and even an apoplexy, towards the declenſion of the diſeaſe. But where the pulſe is hard, low and ſmall, the veſſels leſs turgid, the ſtrength languid, the conſtitution phlegmatic, the patient a child, or a youth, the body corpulent, a vomiting, cough and looſeneſs happen in the beginning of the illneſs, the patient ſubject to faint upon bleeding, a vein muſt not be opened, leſt by taking away too much blood, the matter ſhould be detained in the body, and the eruption prolonged for ſeveral days, not without danger. *Hoff. Med. ration. ſyſtem. tom.* IV. p. 154, 155.

It is agreed on all hands, that this remedy is not very ſuitable to the tendereſt age. But yet, as the blood of infants is generally too thick, and too much in quantity for the bulk of the body; and as they are often ſeized with convulſions, upon the appearance of the diſeaſe, ſome evacuation ought to be made; which may be ſafely effected by leaches applied to the temples, or behind the ears. Likewiſe, if blood cannot be drawn from the arm, in moſt young ſubjects either of the jugulars may be opened without inconvenience.—That regard is to be had to the patient's ſtrength, of what age ſoever, is manifeſt to all. But the weakneſs is ſeldom ſo great, as not to bear ſome loſs of blood, unleſs it be after ſome extraordinary evacuations. Nor is the pulſe to be over-much depended on in this caſe; for it often happens, that the thickneſs of the blood prevents the ſecretion of the uſual quantity of animal ſpirits in the brain, and that the vital fluid is not propelled from the heart with due force; in which caſe, by removing the oppreſſion, the patient's ſtrength is obſerved even to increaſe with the bleeding.—But in what proportion blood is to be taken away, will be beſt determined by the vehemence of the diſeaſe. Many of our phyſicians imagine they have done their duty when they have ordered one bleeding, and are vaſtly cautious of opening a vein at all, after the firſt appearance of the puſtules, for fear of checking the eruption. But this is certainly an ill-timed caution; for in youths and adults it is often neceſſary to draw blood two or three times, only with an intermiſſion of two or three days between each time. And indeed bleeding is ſo far from being an obſtacle to the eruption of the puſtules, if the patient be not too weak, that it forwards it conſiderably; and for the very ſame reaſon, that, in large abſceſſes, when there is too great a fullneſs, and the heat too intenſe, the ſuppuration is brought on quicker and better by taking away ſome blood. *Stack's Tranſlation of the Doctor's Diſcourſe on the Small-pox*, p. 36, &c.

liquors,

liquors, together with the intenſe heat that naturally accompanies this diſeaſe, the motion thereof is rendered ſo violent, that it frequently burſts thro' the veſſels into the bladder, or occaſions purple ſpots, and other like ſymptoms, which perplex the phyſician in the courſe of the diſtemper, and deſtroy the patient.— And let theſe rules ſuffice with reſpect to what is to be done before the eruption. Chap. 2.

What is to be done in the *diſtinct* kind.

46. As ſoon as the puſtules appear, I examine carefully whether they are of the *diſtinct* or *confluent* kind; as they differ extremely from each other, tho' both have ſome ſymptoms in common. If therefore from the largeneſs, paucity, and ſlow eruption of the puſtules, the ceaſing of the ſickneſs, and other violent ſymptoms, which in the *confluent* ſpecies continue after the eruption, they appear to be of the *diſtinct* kind, I order the patient to be refreſhed with ſmall-beer, water-gruel, barley-water, *&c.* in the manner above directed. And if it be ſummer, the weather exceeding hot, and the puſtules few, I ſee no reaſon why the patient ſhould be kept ſtifled in bed; but rather that he may riſe and ſit up a few hours every day, provided the injuries ariſing from the extremes of heat or cold be prevented, both with reſpect to the place wherein he lies, and his manner of clothing. For when the patient ſits up between whiles, the diſtemper finiſhes its courſe with greater eaſe, and alſo more expeditiouſly, than if he had been conſtantly kept in bed, which not only prolongs the illneſs, but likewiſe promotes the febrile heat, and occaſions a painful inflammation upon the riſing of the puſtules. But if the coldneſs of the ſeaſon, or a numerous eruption, makes it neceſſary for the patient to keep his bed conſtantly, I take care to prevent his lying warmer, or with more cloaths on him, than he uſed to do whilſt in health; and that only a moderate fire be made in the room morning and night, unleſs it be the winter ſeaſon. Neither do I require he ſhould lie always in the ſame place in bed, leſt a ſweat be raiſed, which I abſolutely maintain (ſupported both by the reaſons above alledged, and by experience) cannot be promoted without conſiderable danger.

Advantages of keeping from bed.

Promoting ſweat bad.

Warm *Canary* to be given in the declenſion.

47. In the declenſion of the illneſs, when the free exhalation of the *effluvia* proceeding from the *matter*, now changed into *pus*, is prevented by the hardneſs and

Sect. 3. and dryneſs of the puſtules, it will be proper to give five or ſix ſpoonfuls of *canary*, warm, or ſome other mild cardiac, leſt theſe putrid *effluvia* return again into the blood (*d*). And in reality at this time, and not before, cardiacs and a warmer and more cordial diet may be allowed; as ſugar-ſops, oatmeal caudle, *&c.* Nor will any thing further be needful in the kindly *diſtinct* ſort, provided the patient will conform to this temperate method and diet; unleſs perhaps reſtleſſneſs, watchings, or other ſymptoms, threatening a *delirium*, ſhould occaſionally require an opiate.

48. This is the true and genuine method of treating this kind of ſmall-pox, and will prevail after my deceaſe, notwithſtanding the ill-grounded prejudices of thoſe that oppoſe it. And tho' I do not deny that abundance have recovered by a contrary treatment, yet it muſt alſo be acknowledged (and is deſervedly to be lamented, if it be conſidered that this *diſtinct* kind is not at all dangerous in its own nature) that numbers have died, and that many more would have periſhed, unleſs they had been ſaved by the cold ſeaſon in which the diſeaſe happens, or by bleeding not long before, which is otherwiſe unneceſſary and uſeleſs. For this reaſon, therefore, if either through the obſtinacy of the friends, or the diffidence of the patient, the preceding regimen be oppoſed, I eſteem it ſafeſt to bleed, which indeed, tho' it is in its own nature prejudicial in this kind of ſmall-pox, inaſmuch as it diſturbs the ſeparation, and leſſens the ſupplies intended to keep up the eruptions and ſwelling, yet it makes ſome little amends for the injuries of the ſubſequent hot regimen, and therefore renders this method, which I would not uſe, unleſs compelled thereto, leſs dangerous.

Bleeding ſometimes neceſſary.

49. From what has been ſaid, it will be eaſy to ſolve the common difficulty; *viz. whence it happens that ſo few of the poorer ſort die in this diſeaſe, in compariſon of the rich that arr deſtroyed thereby*; for which indeed

Why more rich perſons die than poor.

(*d*) To prevent the contents of the puſtules in a ſtate of ſuppuration from entering into the veſſels, *Boerhaave* alſo obſerves that there is not a nobler remedy than *Canary* wine, drank moderately, *e. g.* to the quantity of an ounce, three or four times a day. Opium may be given ſparingly, to check the violent motion of the blood and juices. If theſe avail not, he adds, "I know not what will relieve." *Prax. med. vol.* v. p. 319.

ſcarce

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ſcarce any other cauſe can be aſſigned, than that by reaſon of the narrowneſs of their circumſtances, and ordinary way of living, they have not the means of injuring themſelves, as the rich have, by a more elegant diet. But this diſeaſe has proved fatal to abundance more of the common people, ſince they knew the manner of uſing *mithridate*, *diaſcordium*, *harts-horn drink*, &c. than it uſually did in the leſs learned, but more prudent ages: for at preſent there is ſcarce an houſe without ſome illiterate, preſuming woman, who, to the deſtruction of mankind, practiſes an art ſhe never learnt.—And let this ſuffice with reſpect to the cure of the *diſtinct ſmall-pox*.

Difference between the *diſtinct* and *confluent ſmall-pox*.

50. But in the *confluent ſmall-pox* there is great danger: for I judge this kind differs as much from the other, as the *plague* does from this, tho' the vulgar, who admit names and words for things, hold the cure of both to be the ſame. In this kind of diſeaſe, as it proceeds from a greater inflammation of blood, more caution is required not to heat the patient; as we obſerved above, in treating of the former ſort. But though this kind naturally demands greater cooling than the other, yet in order to promote the ſwelling of the face and hands, (without which death muſt enſue) and the elevation and increaſe of the eruptions, and likewiſe becauſe the patient, on account of the painful ulcerations, cannot ſit up, it is proper he ſhould keep his body, and even his hands, in bed, provided he be lightly covered, and allowed to turn himſelf therein as he pleaſes; as we before intimated in treating of the *diſtinct* ſort (*e*). And in the declenſion of the diſtemper, upon the approach of the *ſuppurative fever*, he muſt not only be allowed this liberty, but admoniſhed to make uſe of it, and muſt be turned often night and day, to moderate the exceſſive heat, and prevent ſweat, by which the ſoft humour is diſcharged, wherewith the *ſmall-pox* ſhould be diluted to render them mild.

Neceſſity of keeping in bed in the *confluent* kind.

51. Since therefore, as we remarked above (*f*), a ſpitting conſtantly accompanies this kind of ſmall pox, which, as it is one of nature's principal evacuations, and is here ſubſtituted inſtead of that which ſhould have

(*e*) See above, *Par.* 46.
(*f*) See above, *Par.* 13.

been

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The ſpitting here to be kept up.

been made by puſtules (for the evacuation by puſtules does not go on ſo well in this low and flat ſort, as in the other) we muſt diligently endeavour to keep it at its height, and prevent its ſtopping too ſoon, either from the uſe of heating remedies, or by forbidding the free uſe of ſmall-beer, or ſome ſuch liquor. Now as the ſpitting, in its natural order, is to begin as ſoon as the eruptions appear, and abate on the *eleventh* day, but not vaniſh entirely till a day or two after; ſo if it goes quite off before that day, there is danger. For as the ſwelling of the face, whereby ſome part of the morbific matter is evacuated, always vaniſhes on that day, if the ſalivation ſtops at the ſame time, the patient is infected by the variolous matter, now become corrupt, as by a poiſon; and there being no way left for it to paſs off, the danger is imminent, unleſs perhaps, as it ſometimes happens, the ſwelling of the hands (which as it comes on later than that of the face, ſo it goes away more ſlowly) be ſo conſiderable, as to ſnatch the patient from impending death. The ſalivation, which is ſo very advantageous and neceſſary here, may be much promoted by drinking freely of ſmall-beer, or ſome other liquor that neither heats, nor excites ſweat.

How promoted.

52. But beſides theſe, in order to check the violent ebullition of the blood, in which this ſort of ſmall-pox greatly exceeds the *diſtinct* kind, and to keep up the ſpitting (the neceſſary evacuation in this diſeaſe) opiates are more proper than any other remedies; and tho' by their incraſſating quality they may ſeem in ſome meaſure to hinder the expectoration, yet I have long ſhaken off that prejudice, and given them in this diſeaſe with great ſucceſs, provided the patient was above *fourteen*. For as the blood of infants and children, who generally ſleep tolerably well throughout the courſe of this diſeaſe, ferments more gently, it ſtands leſs in need of ſuch a check; and moreover, by the uſe of this kind of remedies, the looſeneſs, which nature appoints to be an evacuation for children in this kind of diſeaſe, is ſtopt to the detriment of the patient.

Opiates excellent for this purpoſe.

Good effects of them in grown perſons.

53. But in grown perſons the frequent uſe of opiates is attended with the following advantages. (1) By procuring moderate reſt they abate the violent ebullition of the blood, and of courſe prevent a *delirium*; (2) they promote the ſwelling of the face and hands in a better

manner,

manner, which is a very conſiderable natural evacuation in this diſeaſe; (3) they keep up and prolong the ſwelling to its proper natural period; which greatly contributes to the patient's ſafety, as the ſwelling of the face often falls before, to the endangering the patient; for the heat of the blood being abated, the inflammatory rays are brought in due time to the hands, face, and the whole ſurface of the body, according to the nature of the diſeaſe; (4) they promote the ſalivation, which tho' it may be ſtopt in ſome ſubjects for a few hours, by means of ſo powerful an incraſſating medicine, yet the ſtrength being increaſed by theſe new helps, nature reſumes freſh vigour, and happily finiſhes the work begun; (5) moreover, I have obſerved that the ſpitting, which uſually abates about the *eleventh* day, and ſometimes earlier, to the great detriment of the patient, by giving opiates a few times has been raiſed anew, and not ceaſed before the fourteenth day, and ſometimes later. I uſually give about fourteen drops of *liquid laudanum*, or an ounce of ſyrup of white poppies, in a little *cowſlip-flower water*, or ſome ſuch diſtilled water; and if either of theſe medicines be given to grown perſons every night after the eruption is over, to the end of the diſeaſe, not only no inconvenience, but great ſervice will thence accrue to them, as I have frequently experienced. But I judge it proper to exhibit an opiate a little earlier than is otherwiſe uſually done; for it is eaſy to be obſerved in the worſt kind of *ſmall-pox*, that a hot fit, attended with reſtleſſneſs, anxiety, and other ſymptoms, generally comes on in the evening, which may in ſome meaſure be prevented by adminiſtering an opiate at ſix or ſeven at night.

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When beſt given.

54. In the next place, ſince a *looſeneſs* as certainly accompanies the *confluent ſmall-pox* in children, as a *ſalivation* does the ſame in grown perſons: nature, as we obſerved above, conſtantly providing one of theſe evacuations to expel the morbific matter; ſo I take care by no means to check this looſeneſs, any more than the ſalivation, both being alike improper. And the unſeaſonable endeavours of ſome imprudent women to ſtop the looſeneſs has proved fatal to abundance of infants, whilſt they falſely conclude it to be equally dangerous in *this* as in the diſtinct kind; not knowing that it is only detrimental in that kind where the evacuation is made

Danger of checking the *looſeneſs* here in children.

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made by puſtules, but is here the work of nature ſearching a paſſage for the diſeaſe to eſcape (*g*). Diſregarding therefore the looſeneſs, and aſſiſting nature, as *Hippocrates* directs, I go on as I begun, adviſing them ſometimes to keep the children in the cradle, and ſometimes to take them up, and if they be weaned I allow them the ſame diet as I before ordered for grown perſons.

The face to be anointed with oil of ſweet almonds in the decline

55. In the declenſion of the diſeaſe, when the face is ſtiff, occaſioned by the eruptions becoming cruſty, hard and dry, I anoint it frequently with *oil of ſweet almonds*, as well to eaſe the pain thence ariſing, as to promote a freer exhalation of the hot *effluvia*. I uſe no endeavours to prevent the pitting of the face, inaſmuch as oils, liniments, *&c.* only cauſe the white ſcurf to ſcale off more ſlowly (*b*), which, falling off, and coming on again alternately, after the patient has quitted his bed, and is pretty well recovered, is gradually ſucceeded by unſeemly ſcars. But the patient need not be very anxious about theſe, when by reaſon of a previous temperate regimen, the eruptions, having been little irritated, have contracted no cauſtic quality.

A different method ſometimes neceſſary.

56. Now, tho' this method, provided it be carefully and prudently ſuited to particular circumſtances, will prevent the abovementioned preternatural and dangerous ſymptoms, and render the diſeaſe very gentle and ſafe, yet in ſome caſes, which I ſhall here ſubjoin, I find it neceſſary to uſe a different method, in order to over-

(*g*) A looſeneſs, ſays *Hoffman*, even tho' it be conſiderable, is not to be apprehended here, for ſo far has it been from hindering either the eruption, or the ſuppuration, and ſtriking the matter in, that I have known it run thro' the whole courſe of the diſtemper, without danger. And as *petechial* malignant fevers are frequently terminated *critically* by a looſeneſs, ſo likewiſe experience ſhews that the ſame happens in the ſmall-pox. Elſewhere he ſays, that in a dry ſummer, the ſmall pox is particularly inflammatory, and readily accompanied with a looſeneſs, which is abſolutely not to be ſtopp'd, but only moderated by proper remedies; obſerving to avoid the heating regimen, and warm medicines, and likewiſe cooling the body, and refrigerating medicines. Neither, adds he, is a looſeneſs detrimental, when the *ſmall pox*, by reaſon of the irregularity of the ſeaſon, is complicated with *petechiæ*, but it is rather a wholeſome remedy, and admirably purges off the malignant and excrementitious humours.

(*b*) Unctuous and oily applications obſtruct the pores, hinder perſpiration, and make the pits much more viſible.

come

come and remove them, from what cauſe ſoever they ariſe before I am called. Chap. 2.

The face, how made to ſwell, in the *diſtinct* kind.

57. Firſt, therefore, if in the *diſtinct* kind, by means of an over-hot regimen, and continual ſweats, the face does not ſwell on the *eighth* day, but is flaccid, and the ſpaces between the eruptions look pale, whilſt theſe in the mean time ſhew themſelves in great abundance; beſides uſing my utmoſt endeavours for a more temperate regimen, and to check the violent motion of the blood, I immediately direct an opiate to be given, which by gently procuring ſleep (unleſs the brain be over-heated) and conſequently moderating the tumult raiſed in the blood, ſeaſonably determines it, together with the heat, to the face, as the nature of the diſeaſe demands.

Opiates or bleeding, when required.

58. But if the miſchief hence ariſing has proceeded ſo far, that the ſweat, which had hitherto flowed plentifully, ceaſes ſpontaneouſly, the patient is ſeized with a *delirium*, complains of great ſickneſs, and makes urine often in a ſmall quantity; in this caſe, the danger of death being imminent, I conceive he can only be relieved, either by giving opiates freely, or taking away a large quantity of blood, and expoſing his body to the open air. Nor indeed will what I have now propoſed ſeem ſo imprudent and unreaſonable, upon attending to thoſe who have eſcaped imminent death, by a plentiful bleeding at the noſe, ſuddenly ariſing. Moreover it muſt be conſidered that, in this dangerous extremity, death does not enſue becauſe the eruptions ſtrike in, for they appear red and plump, even when the patient is expiring, but becauſe the face does not ſwell. Now whatever tends to abate the heat of the blood (and I conceive none will deny that bleeding and moderate cooling have this virtue) muſt neceſſarily help to promote the ſwelling of the face, as much as the uſe of opiates, and apparently for the ſame reaſons.

Further explained with reſpect to bleeding.

59. But I would not have this underſtood as if I would adviſe bleeding immediately in every *delirium* happening in the *ſmall-pox*, ſince no ſymptom oftener occurs in this diſeaſe; but (1) in that only which happens becauſe the face does not ſwell, that is, in the *diſtinct* kind, the eruptions at the ſame time being pretty numerous; or (2) where the motion of the blood is become ſo violent and immoderate by means of a very

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hot regimen, and the uſe of cardiacs, as to render it unſafe to wait till it can be reduced to a due temper by opiates, and other medicines productive of the like effect. When the caſe is thus circumſtanced, the phyſician, conſulting his duty rather than a precarious reputation, ought either to bleed, as above intimated, or order the patient to be refreſhed with the open air; and to obtain the end here it has frequently ſeemed ſufficient to me, for the patient to riſe, and ſit up a while in his raving fit, by which expedient I have ſaved ſeveral from death. And beſides thoſe I have ſeen, there are numberleſs inſtances of perſons who by this means have been ſnatched from imminent danger. For ſome delirious perſons deceiving their nurſes (and thoſe who are light-headed uſe wonderful contrivances) and getting out of bed, have remained expoſed to the cold air, even in the night; and others again, either by ſtealth, unawares, or by intreaty have got cold water of their nurſes, and drank it, and thus by a happy miſtake recovered their health when deſpaired of (*i*).

Sitting up a while recommended in a *delirium.*

The caſe of a perſon recovered by the like treatment.

60. I will here communicate a ſingle inſtance, which I had from the perſon concerned. He told me that when he was a young man, he went to *Briſtol*, and was there ſeized with the *ſmall-pox* about *midſummer*, followed ſoon after by a *delirium*. His nurſe, going into the city, left him in the mean while to the care of ſome other perſons, intending to be back ſoon; but making a pretty long ſtay, the patient in the interim died, as the attendants thought; who conſidering the heat of the ſeaſon, and his corpulency, that the body might not ſmell, took it out of bed, and laid it naked on a table, throwing a ſheet over it. The nurſe at length returning, and hearing the ill news, entered the room to behold the ſad ſpectacle, and immediately throwing by the ſheet, and looking on his face, imagined ſhe ſaw ſome

(*i*) A *phrenzy* coming on the 4th day of the eruption, is juſtly eſteemed of very bad omen; inſomuch that Dr *Freind* ſays, that *he never ſaw a patient recover, who had had this ſymptom**. But I can poſitively declare, that I have had better fortune; having recovered many who had been ſeized with a *delirium* at that time, by drawing blood immediately, and then throwing in a glyſter. *Stack's Tranſlation of Dr* Mead's *Diſcourſe on the Small-pox*, p. 42.

* Epiſt. de quibuſdam variolarum generibus.

ſmall

ſmall ſigns of life, and therefore put him to bed again directly, and uſing ſome means or other brought him to himſelf, and he recovered in a few days. Chap. 2.

61. But to reſume our ſubject: if the *ſaliva*, in the *confluent* ſmall-pox, becomes ſo hard and viſcid by the preceding heat as to endanger ſuffocation, which, as we obſerved above, commonly happens on the *eleventh* day, a gargariſm muſt abſolutely be uſed, and great charge given to ſyringe the throat with it often night and day. *Small-beer or barley-water, mixed with honey of roſes*, may be uſed for this purpoſe, or the following:

A gargariſm to be uſed when the *ſaliva* is hard and tough.

Take of bark of elm, ſix drams; liquoriſe root, half an ounce; twenty ſton'd raiſins; red roſes, two pugils; boil them together in enough water to leave a pint and half; in which, when ſtrained off, diſſolve ſimple oxymel and honey of roſes, of each two ounces: mix the whole for a gargariſm (*k*).

The gargariſm.

But if the patient has been treated in a proper manner, the ſalivation, even tho' it has begun to abate, will ſo effectually anſwer its end, as to render this remedy needleſs. And in reality when the patient is every moment in danger of ſuffocation, oppreſſed with a *ſtupor*, and breathes with the utmoſt difficulty, 'tis not ſafe to truſt to this remedy. In this caſe I have ſometimes ſeaſonably and ſucceſsfully given a vomit of the infuſion of *crocus metallorum*, in a larger doſe than ordinary, *viz.* an ounce and half; becauſe the *ſtupor* is ſo conſiderable that a ſmaller quantity will not operate, but, by diſturbing thoſe humours which it cannot eject, greatly endangers the life of the patient. Neither can we wholly truſt to this remedy, and (which is truly to be regretted) we are hitherto unprovided with a more certain and effectual one to conquer this dreadful ſymptom, which alone deſtroys moſt of thoſe who die on the *eleventh* day in this kind of *ſmall-pox*.

A vomit ſometimes ſucceſsful in this caſe.

(*k*) If the ſpitting does not go on to our wiſhes, it ought to be promoted by medicines which ſtimulate the glands of the mouth; eſpecially *gargles* made of a decoction of *muſtard ſeed* and *pepper*, with the addition of *oxymel*. For in the *confluent* and *malignant* ſmall-pox, if this flux does not ariſe, and even continue to the end of the diſeaſe, it is a very bad ſign. *Stock's Tranſlation of Doctor* Mead's *Diſcourſe on the Small pox*, p. 69.

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62. As the other ſymptoms happening in this diſtemper are prevented, ſo likewiſe moſt of them are relieved by a temperate regimen. For inſtance, as the *delirium* abovementioned, proceeding from the too great heat of the brain, is removed by ſome way cooling the blood, ſo by the ſame means a *coma* is eaſily remedied, which ſeems to be a quite different ſymptom from the former, and ariſes from an obſtruction of the *cortical* part of the brain from hot *effluvia*, proceeding from the blood attenuated by a hot regimen, and heating medicines, being violently driven thither in great abundance.

Advantages of a temperate regimen.

A *coma* cured by cooling the blood.

63. By cooling the blood in this manner I have ſeen purple ſpots removed; but have not yet been able by this or any other method to ſtop *bloody urine*, or a *violent flux of blood from the lungs*, but ſo far as I have hitherto obſerved both theſe hæmorrhages certainly prognoſticate death.

And purple ſpots alſo.

64. In a *ſuppreſſion of urine*, which ſometimes happens in young and lively perſons from the great confuſion and diſorder of the ſpirits ſubſervient to this excretion, by reaſon of the immoderate heat and agitation of the blood and juices, I have had recourſe to all the kinds of diuretics; but nothing has ſucceeded ſo well with me as taking the patient out of bed, who being ſupported by thoſe about him, and taking two or three turns croſs the room, has immediately made water pretty plentifully to his great relief. To confirm the truth of this, I might here appeal to ſome phyſicians of my acquaintance, who by my advice have directed the ſame expedient to be uſed in the ſame caſe, and found it anſwer the end (*l*).

A ſuppreſſion of urine how cauſed and remedied.

65. But the ſymptoms proceeding from the ſtriking in of the *variolous* matter, by intenſe cold, or unſeaſonable evacuations, muſt be remedied by cardiacs, and a ſuitable regimen; which, however, muſt not be continued longer than theſe ſymptoms laſt. The principal of theſe are, a *depreſſion*, or *ſinking of the puſtules*, and

Cardiacs when particularly to be given in the *diſtinct ſmall-pox*.

(*l*) The moſt convenient method of relieving this ſymptom will be, to open the body by a *glyſter*, eſpecially if, the puſtules now appearing, there be any fear of taking cold, and then to inſiſt a little on diuretic medicines: for which purpoſe *Glauber's ſalt* is particularly uſeful, as it is both laxative and diuretic. *Stack's Tranſlation of* Mead's *Diſcourſe of the Small-pox*, p. 70.

a *looſeneſs*,

a *looſeneſs*, both in the diſtinct kind. For in the *confluent* kind neither the ſinking of the puſtules threatens danger, this being the nature of the diſeaſe, nor a looſeneſs in children, becauſe it promotes their recovery. In either caſe it is highly proper to give a cordial draught, made of ſome *proper diſtilled waters*, mixed with *diaſcordium*, *liquid laudanum*, *&c.* not only in order to remove the abovementioned ſymptoms, but at any time of the diſeaſe, if the patient complains of a pain at the heart and ſickneſs. But to ſpeak the truth, the ſymptoms of this kind very rarely happen, in compariſon of thoſe ariſing from the other more fatal, tho' leſs cenſured, extreme. And in reality I judge the rumor which has ſo much prevailed, of the frequent ſtriking in of the eruptions, to proceed from hence, that ſuch as have obſerved the depreſſion of them in the *confluent* kind, eſteemed it to be a ſtriking in of the *variolous* matter from taking cold, whereas here, it is only the nature of the diſeaſe: and they ſuſpect the ſame in the *diſtinct* kind, becauſe they look for the eruptions and increaſe of the puſtules before the due time; not having ſufficiently attended to the time wherein nature uſually finiſhes the ſuppuration of this ſort of ſmall-pox. Chap. 2.

When and where bleeding ſhould be uſed.

66. When the patient begins to recover, and the eruptions ſcale off, and he has eat fleſh a few days, for example, the *one and twentieth* day, I judge it requiſite to bleed in the arm, if the diſeaſe has been violent: for the inflammation communicated to the blood by the *ſmall-pox*, whether in grown perſons, or children, equally indicates bleeding, as the foulneſs collected in the habit does purging; as appears ſufficiently both from the colour of the blood taken away after a ſevere ſmall-pox, which exactly reſembles that of pleuritics, and likewiſe from the great inflammations that fall on the eyes after it is gone off, and other pernicious effects, ariſing from the blood over-heated and vitiated thereby. Hence alſo it follows, that ſuch as enjoyed a good ſtate before they had the ſmall-pox, are afterwards afflicted with a defluxion of ſharp hot humours upon the lungs, or ſome other part for the remainder of life. But if the puſtules were few, bleeding is unneceſſary: after bleeding I purge three or four times (*m*).

67. To

(*m*) There is no ſpecies of fever that requires the body to be tho-

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67. To theſe obſervations let me add, that after the patient has been long recovered from the *confluent* ſmall-pox, and riſes every day, there ſometimes happens a troubleſome ſwelling of the legs, which either goes off ſpontaneouſly after bleeding and purging, or is eaſily cured by the uſe of fomentations, made of *emollient* and *diſcutient* herbs, boiled in *milk*; as the leaves of *mallows*, *mullein*, *elder*, *laurel*, *and camomile and melilot flowers*.—And let this ſuffice for the hiſtory and cure of the *ſmall-pox*, that prevailed for theſe two years, which I chuſe to call *legitimate* or *regular*, in order to diſtinguiſh them from the other kinds that ſucceeded them.

The ſwelling of the legs how remedied.

CHAP. III.

The continued Fever of the Years 1667, 1668, *and part of* 1669.

The fever of this conſtitution deſcribed.

1. I Proceed now to treat of the *fever* that prevailed during this *variolous conſtitution*, and began and ended with the *ſmall-pox*. (1) The patient was ſeized with a pain below the pit of the ſtomach, and ſuch a foreneſs that he could not bear to have it touched, which ſymptom I do not remember to have obſerved in any other diſeaſe beſides this fever and this kind of ſmall-pox; (2) a pain in the head, a heat of the whole body, and alſo very viſible *petechiæ*; (3) little thirſt; (4) the tongue like that of a healthy perſon, unleſs that it was ſometimes white, but very rarely dry, and never black; (5) profuſe ſpontaneous ſweats in the beginning, which afforded no relief, and, being promoted by a hot regimen and hot medicines, ſoon endangered a *delirium*, augmented the number of the *petechiæ*, and rendered all the other ſymptoms more violent; (6) a laudable ſeparation in the urine from the beginning

thoroughly cleared of the remains of the diſeaſe, more than this. Wherefore, upon the patient's recovery, blood is to be drawn, if his ſtrength will bear it, and cathartics are to be given at ſeveral times at proper intervals. After which, the body is to be reſtored to its former ſtate by a courſe of milk, eſpecially that of aſſes, with ſuitable food, and the air and amuſements of the country. *Stack's Tranſlation of the Doctor's Diſcourſe on the Small pox*, p. 59.

of

of the illneſs, that gave hopes of recovery, but did not relieve the patient more than the abovementioned ſweats; (7) this diſeaſe, by wrong management, generally proved very obſtinate, neither terminating by way of *criſis*, nor ſpontaneouſly in the manner of other fevers; but continued for 6 or 8 weeks, accompanied with violent ſymptoms, unleſs death interpoſed, and put a ſtop to it ſooner; (8) when no conſiderable evacuation had preceded, and cooling julaps had been uſed, a pretty plentiful ſalivation ſometimes aroſe towards the decline, whereby the diſeaſe was carried off beyond expectation, provided this diſcharge was not checked by evacuations, or the uſe of heating medicines. Chap. 2.

2. Now as this fever depended upon that epidemic conſtitution of the air, which at the ſame time produc'd the ſmall-pox; ſo in effect, it ſeem'd to be nearly of the ſame nature therewith, except in thoſe ſymptoms which neceſſarily depended on the eruption. For they both attack'd in the ſame manner, and were attended with the like pain and ſoreneſs of the parts below the pit of the ſtomach, there was the ſame colour of the tongue, and conſiſtence of the urine, *&c.* The ſame profuſe ſweat aroſe in the beginning, and the ſame tendency to a ſalivation when the inflammation was violent, as accompanied the ſmall-pox, when it proved of the *confluent* kind. Since therefore this fever did alſo prevail chiefly at the time the ſmall-pox was more epidemic than I had ever known it here, no one can doubt their being of the ſame tribe. This I certainly know, that all the practical indications were manifeſtly the ſame in both diſeaſes, thoſe excepted, which the eruption of the ſmall pox, and the ſymptoms thence ariſing, afforded, which could not be expected in this fever, becauſe it was not attended with an eruption. And this indeed appeared very evident to me from the accurate obſervations I made in treating ſuch as had either of theſe diſeaſes. For theſe reaſons I muſt be allowed to call this a *variolous fever* (*a*), not becauſe I affect the giving new names

Nearly reſembled the ſmall-pox.

Therefore called a *variolous fever*.

(*a*) In 1729, in the month of *July*, the *ſmall pox* prevail'd much at *Plymouth*; and during this month a *ſlow putrid fever*, which remitted towards the end, and at length intermitted, became very epidemic there. It chiefly affected the head, ſtomach and loins, as if the ſmall-pox was coming on, and was attended with an oppreſſion of the breaſt, ſighing, and great faintneſs. Such a diſeaſe

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names to things, for no one can diſlike that more than I do, but in order to diſtinguiſh it from other fevers, and on account of the great ſimilitude which it bears to this ſort of the ſmall-pox.

Required a different treatment from the *ſmall pox.*

3. But how nearly ſoever this fever reſembled the ſmall-pox, no judicious perſon will conclude that it ought to be treated in the ſame manner; becauſe in the ſmall-pox the inflamed particles are thrown out upon the ſkin, by means of little abſceſſes, whereas in the preſent fever they are diſcharged by ſalivation. For the profuſe ſweats at the beginning were *ſymptomatical*, not *critical*, nature ſeeming to have intended no other evacuation in this diſeaſe than a ſpitting: which yet ſhe generally checks, either (1) by a looſeneſs, which frequently proceeds from inflammatory rays (*b*) conveyed thro'

it was perhaps that *Sydenham* entitled a *variolous fever*. It chiefly attack'd children, women, young, or weak perſons. The blood taken away was ſeldom viſcid; the urine moſtly crude, thin, and frequently let fall a cineritious, ſlimy and imperfect ſediment, reſembling flour, called by *Hippocrates* a *branny ſediment*: the more perfect the ſediment was, the more hopes there was of recovery. The tongue was not very dry, but appeared to be covered with a kind of viſcous browniſh *mucus*. Towards the declenſion of the diſtemper a looſeneſs, or ſometimes a dyſentery, eſpecially if a vomit had been omitted in the beginning, became very immoderate, and even proved fatal to ſome.

Bleeding, unleſs in the beginning, ſeldom did ſervice; vomits were highly neceſſary, and afterwards *frequent bliſters*, *gradually applied*, *gentle cardiacs*, *cinnabar*, *opiates*, *ſack whey*, *and diluting ſubacid liquors* drank plentifully, prov'd very beneficial. As ſoon as the ſigns of *coction* appear'd, namely a ſediment in the urine, and a remiſſion of the fever, the *bark* admirably aſſiſted the cure. If a *coma* or a *delirium* happen'd in the ſtate of the diſeaſe, there was occaſion to ſet cupping glaſſes on the neck and ſhoulders, to bleed, and immediately apply bliſters, eſpecially behind each ear, and to the head, and forthwith inject a laxative glyſter.

In the declenſion, lenient purges, eſpecially *rhubarb*, advantageouſly carried off the putrid remains of the diſeaſe; but ſtrong purgatives, or *aloetics* had very dangerous effects; for by the unſeaſonable uſe of theſe we have known the blood impoveriſh'd, and dreadful gripings occaſion'd: moreover after a purgative, tho' it was very gentle, a paregoric draught was altogether neceſſary.

Numbers were ſeized with this diſtemper, but few died of it. *Huxham de aere et morb. epid. p.* 33, 34.

(*b*) The expreſſion the author here uſes of *inflammatory rays*, conveys no clear idea of the cauſe of a looſeneſs; theſe rays not being ſufficiently underſtood, nor their exiſtence in the blood clearly prov'd. They are too ſubtile, one would think, to occaſion an irritation of the bowels, and too immaterial to furniſh ſupplies for the

thro' the meſenteric arteries into the inteſtines, and irri- Chap. 2.
tating them to diſcharge their contents, (as is uſual alſo in
pleuriſies, and other inflammatory fevers, by reaſon of the great commotion of the blood and the hot particles, endeavouring to be cooled); or (2) by the profuſe ſweats, which by the appointment of nature equally accompanied this fever and the ſmall-pox; and theſe ſweats being *ſymptomatical*, the ſalivation, that would otherwiſe have proved *critical*, was derived another way, whence, unleſs art ſuggeſted ſome other evacuation, the diſeaſe continued for ſome weeks, and did not come to concoction in the manner of other fevers.

4. But to go on with our enquiry: in order to come at a better knowledge of the nature of this fever, and eſtabliſh the curative indications on a ſolid foundation, it muſt be carefully noted that in the fever that prevailed during the *epidemic conſtitution* which gave riſe to *intermittents*, the matter to be ſeparated from the blood was ſo thick, that it could not be ſeparated without previous digeſtion, fitting it for a proper evacuation, at an appointed time, either by means of a *plentiful perſpiration*, or a *critical looſeneſs*; ſo that the phyſician had nothing more to do than to ſuit the treatment to the nature of the diſeaſe, ſo as on the one hand to prevent its riſing too high, and cauſing dangerous ſymptoms, and on the other to hinder its ſinking ſo low as to be unable to expel the morbid matter; a fever being the inſtrument of nature to perform this ſecretion.

5. Again, there is likewiſe in the plague a matter to be ſeparated from the blood, but as the parts thereof are very ſubtile and inflammable (ſo that ſometimes when they are violently irritated they pervade the blood like lightning, and can raiſe no ebullition therein) it paſſes thro' the maſs in a moment, and is only ſtopt in a gland, or ſome external part, where, being entangled, it occaſions an inflammation, and afterwards an impoſthume. Now an impoſthume is the inſtrument of nature whereby ſhe expels whatever injures the fleſhy part, as a fever is her inſtrument to carry off whatever is prejudicial to the blood. In this caſe

The matter in the *plague* very ſubtile.

the diſcharge. The looſeneſs therefore ſhould rather ſeem to proceed from ſharp humours ſtrained thro' the meſenteric arteries into the inteſtines, and irritating them to frequent ejections; whence both the irritation and the diſcharge may be eaſily accounted for.

therefore

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therefore it is the buſineſs of the phyſician to aſſiſt nature in a proper manner in her endeavours to diſcharge the peſtilential matter by theſe impoſthumes; unleſs perhaps it ſhould ſeem more adviſeable to ſubſtitute ſome other evacuation in its ſtead, which might be more in his power, and he could regulate with greater certainty than that of nature. In the ſame manner does nature proceed in expelling the variolous matter, tho' it is a groſſer ſpecies of inflammation, and diſcharged by means of numerous eruptions, inſtead of carbuncles and buboes, *&c.* ſo that in this caſe alſo the curative indications are to be ſo directed, as to promote the evacuation by the eruptions in a regular manner.

The *ſmall-pox* a groſſer ſpecies of inflammation.

No ſuch groſs matter in this fever.

6. But as in this kind of inflammatory fever we meet with no ſuch groſs matter requiring previous digeſtion before it can be expelled, as in the intermitting fever above deſcribed, ſo it is a fruitleſs endeavour to promote the ebullition in order to procure this kind of digeſtion. On the contrary, this procedure endangers the increaſing a diſeaſe, the eſſence whereof conſiſts in a very violent inflammation, and muſt likewiſe be improper here, becauſe nature has appointed no evacuation for this fever by eruptions, as we ſee in *peſtilential fevers* and the *ſmall-pox*; tho' in other reſpects it reſembles the latter. Hence it follows that the whole of the cure neceſſarily conſiſts in checking the inflammation, by evacuations and cooling remedies. Having this end therefore in view, I attempted the cure of this fever by the following method, to which it readily yielded.

Its cure.

7. Being called to a patient, I immediately directed bleeding in the arm, if great weakneſs, or eſpecially old age did not contra-indicate, and ordered the operation to be repeated every other day, for twice, unleſs the ſigns of recovery rendered it unneceſſary. On the intermediate days I preſcribed a glyſter of milk and ſugar, or the like to be injected; and directed the following julap, or one of the ſame kind, to be frequently uſed throughout the courſe of the diſeaſe.

The cooling julap.

Take of the diſtilled waters of purſlain, lettice, and cowſlip flowers, of each four ounces; ſyrup of lemons, an ounce and half; ſyrup of violets, an ounce; mix them together for a julap; and let three ounces of it be taken four or five times a day, or at pleaſure.

I al-

I allowed whey, barley-water, and ſuch liquors for common drink, and for diet, barley-broth, water-gruel, panada, roaſt apples, *&c.* but I forbad chicken broth, or any kind of broth made of fleſh. Chap. 3.

8. I chiefly recommended that the patient ſhould not keep his bed conſtantly, but riſe every day, and ſit up a good part of the day, having obſerved in this fever, as in the pleuriſy, rheumatiſm, and all other inflammatory diſorders, wherein bleeding and the cooling regimen are the principal remedies, that neither the moſt cooling medicines, nor frequent bleeding can do ſervice, whilſt the patient lies perpetually in bed, and is inflam'd by the heat thereof, eſpecially in the ſummer ſeaſon. And upon this account the ſweat which flow'd at times did not deter me from this method of cooling, both by giving cooling medicines, and forbidding a conſtant confinement in bed. For tho' one might reaſonably expect great advantages in purſuing an indication taken from what generally proves ſerviceable, yet I have found, by conſtant experience, that the patient not only finds no relief, but contrariwiſe is more heated thereby; ſo that frequently a *delirium*, *petechiæ*, and other very dangerous ſymptoms immediately ſucceed ſuch ſweats, which ſeem to ariſe more from wrong management than from the malignity of the diſeaſe. The danger of keeping the bed in this fever.

9. If it be here objected that this method of curing fevers runs directly counter to the theory of thoſe authors, who unanimouſly maintain that a fever is moſt properly and naturally cured by ſweat; beſides the teſtimony of a never failing experience, which is always on my ſide, in the cure of this particular fever, theſe reaſons alſo favour my practice: Firſt, I imagine that thoſe who contend for promoting ſweat in order to take off a fever, mean ſuch a one as appears after the previous digeſtion of ſome humour lodged in the blood, in preparing and moulding of which, that it might be diſcharged by ſweat, nature has employed ſome certain fixt time. But here the caſe is quite otherwiſe, for profuſe ſweats ariſe in the beginning of the diſeaſe, and alone make a conſiderable part thereof; and, if we may judge from all the ſymptoms, this diſeaſe ſeems to proceed rather from the ſole heat of the blood, than from ſome humour concealed therein, to be expelled, after due concoction, by ſweat. But granting there is ſuch an humour to be found in this The method of cure vindicated.

Sect. 3. this fever, as requires to be ripened by digeſtion, which is the caſe in many other fevers; yet to what purpoſe is it to comply with nature (whoſe violent efforts it is our buſineſs to moderate) by promoting theſe ſweats with cardiacs, or a hot regimen, when ſhe exerts herſelf too much already, ſince the trite axiom of *Hippocrates*, namely, that *concocted and not crude matters are to be evacuated* (c), relates to ſweating as much as to purging?

Exemplified in a caſe.

10. Whilſt this conſtitution prevailed, I was called to Dr *Morice*, who then practiſed in *London*, and now in *Petworth*. He had this fever, attended with profuſe ſweats, and numerous *petechiæ*. By the conſent of ſome other phyſicians, our joint friends, he was blooded, and roſe from his bed, his body being firſt wiped dry. He found immediate relief from the uſe of a cooling diet and medicines, the dangerous ſymptoms ſoon going off; and by continuing this method recovered in a few days.

Bleeding and cooling medicines beſt to ſtop the looſeneſs.

11. But to reſume our ſubject: neither did the looſeneſs, which often accompanied this fever, at all hinder my proceeding in the abovementioned method; having experienced that nothing proved ſo effectual in ſtopping this diſcharge, as bleeding, and cooling the blood by barley-water, whey, and other things above enumerated; inaſmuch as this looſeneſs proceeded from inflammatory vapours, ſeparated from the blood thro' the meſenteric arteries into the inteſtines, and vellicating theſe parts.

The hot regimen much more dangerous.

12. In reality this method ſucceeded admirably with me in the cure of this diſeaſe, and ſeemed better adapted to it than any other. I have however ſometimes ſeen a very different method uſed with ſucceſs, namely cardiacs and the hot regimen, but the patient always appeared to me to run great hazards unneceſſarily. For by this means the *petechiæ*, which were otherwiſe very few, became exceeding numerous, the thirſt, that was generally inconſiderable, was extremely increaſed, and the tongue, that was otherwiſe moiſt, and not much unlike that of healthy perſons, except, as we ſaid above, that it was whitiſh, appeared dry and criſp, and frequently turned black. Laſtly, even the ſweats, which they endeavoured to force by means of cardiacs, were, at

(c) *Cocta, non cruda, ſunt medicanda.* See Dr *Baker*'s eſſay on the agreement betwixt antient and modern phyſicians, p. 125.

at length, entirely ſtopt thereby. For too large a quantity of *ſerum* being drained off by the cutaneous ducts, the blood became unable to furniſh more of it, and the fluid part being quite waſted, wherewith it ſhould have been diluted, a dryneſs of the ſkin, and a ſtoppage of the pores enſued, (contrary to the ordinary courſe nature uſed to obſerve in this fever) till at length the blood, being again repleniſhed by the moiſture received from the aliment taken in, expels this *ſerum* together with the fever, partly by medicine, and partly by the force of the fever itſelf. But in reality this *criſis* was too forced, and too dangerous, and, which is ſtill worſe, it ſeldom happened. Chap. 3.

This fever often terminated by a ſalivation.

13. But ſince, as we obſerved above, the ſolution or cure of this *fever*, and of the *ſmall-pox* likewiſe, which ſo nearly reſembles it, was frequently effected by a ſalivation, which always proved beneficial; ſo that when it flowed copiouſly, I have known both the purple ſpots and fever vaniſh; upon this account, therefore, when the ſalivation begins, no evacuation muſt be made, either by bleeding or glyſters, ſince by the uſe of either it is odds but the humour is carried another way. But whey and other cooling things promote the neceſſary buſineſs of ſalivation; as, on the contrary, cardiacs, and all heating things, by thickening the matter, check its diſcharge.

The riſe of the *epidemic looſeneſs*.

14. Before this fever went quite off, and particularly in the year 1668, a *looſeneſs* became epidemic, without any manifeſt ſign of a fever, for the conſtitution at this time inclined to the *dyſentery*, which prevailed in the following year, whereof we ſhall treat in the next ſection. Nevertheleſs, I judged this looſeneſs to be the ſame fever with the then reigning variolous fever, and that it only differed in form, and appeared under another ſymptom. For having obſerved that a chilneſs and ſhaking did likewiſe ordinarily precede this looſeneſs, and further, that it generally aroſe from the ſame cauſe with the then reigning fever, it ſeemed probable to me that this fever proceeded from inflammatory rays turned inwards upon the inteſtines, and irritating them to this diſcharge; whilſt the blood, in the mean time, by this revulſion, was freed from the ill effects theſe rays would otherwiſe have occaſioned, without any viſible external ſign of a fever. To this we may add, that

Sect. 4. that the parts below the pit of the ſtomach were ſo tender as not to abide the touch, which ſymptom, as we mentioned above (*d*) happened in the ſmall-pox and fever of this conſtitution; and the ſame pain and tenderneſs of the fleſh often reached to the *epigaſtrium*, and ſometimes there was an inflammation, which ended in an impoſthume, and deſtroyed the patient: all which apparently ſhewed this looſeneſs to be of the very ſame nature and eſſence with the then reigning fever: and this opinion of mine was further confirmed from the good ſucceſs, which bleeding and the uſe of a cooling regimen always had in ſtopping this looſeneſs, for it readily yielded to this method, which is the ſame we uſed in the cure of the variolous fever, as we have frequently mentioned above. But when it was treated in a contrary manner, either (1) by giving *rhubarb*, and other *lenient purgatives*, to carry off the acrimonious humours, ſuppoſed to irritate the inteſtines to theſe diſcharges; or (2) by adminiſtering *aſtringents*; this diſeaſe, tho' naturally gentle, frequently proved mortal, as the bills of mortality of the current year ſufficiently teſtified.—And let this ſuffice for the epidemic diſeaſes that depended on this conſtitution.

Bleeding and a cooling regimen ſucceſsful in ſtopping it.

Lenient purgatives and aſtringents extremely prejudicial

SECT. IV. CHAP. I.

The epidemic conſtitution of part of the year 1669, *and of the years* 1670, 1671, 1672, *at* London.

1. IN the beginning of *Auguſt*, 1669, the *cholera morbus*, the *dry gripes*, and likewiſe a *dyſentery* that rarely appeared during the ten preceding years, began to rage. But tho' the *cholera morbus* proved more epidemic than I had ever known it before, yet nevertheleſs it terminated this year in *Auguſt*, as it always does, and ſcarce reached the firſt weeks of *September*. But the dry gripes continued to the end of *autumn*, and accompanied the dyſentery, and prevailed more generally

(*d*) See *Sect.* III. *Chap.* II. *Par.* 2. and above, *Par.* 1.

rally than that diſtemper. But upon the coming in of *winter*, this diſorder likewiſe vaniſhed, and appeared no more throughout the ſubſequent years wherein this conſtitution prevailed, whereas the dyſentery became more epidemic. Now I judge the cauſe of this to have been, that the then reigning conſtitution had not yet ſo perfect a tendency to a dyſentery, as to be able to produce all thoſe ſymptoms in every ſubject, which affect ſuch as are ſeized with this diſeaſe: for in the following *autumn*, when the gripes returned, the *dyſentery* was accompanied with every pathognomonic ſymptom. Chap. 1.

2. Between theſe gripes and the abovementioned dyſentery, which raged very univerſally, a new kind of fever aroſe, and attended both diſeaſes, and not only attacked ſuch as had been afflicted with either of the former, but even thoſe who had hitherto eſcaped them, unleſs that ſometimes, tho' very ſeldom, it was accompanied with ſlight gripings, ſometimes with ſtools, and at others without. Now as this fever in ſome meaſure reſembled that which frequently attended the abovementioned diſeaſes, it muſt be diſtinguiſhed from others, by the title of the *dyſenteric fever*; eſpecially ſince, as we ſhall afterwards ſhew, it only differed from the genius and nature of the dyſentery in this particular, that it had not thoſe diſcharges which always accompany the dyſentery, nor the other effects neceſſarily occaſioned by this evacuation. Upon the approach of winter the dyſentery vaniſhed for a time, but the dyſenteric fever raged more violently; and a mild *ſmall-pox* alſo appeared in ſome places. The riſe of the *dyſenteric fever*.

3. In the beginning of the following year, namely, in *January*, the *meaſles* ſucceeded, and increaſing every day till the vernal equinox, ſuffered few families, and particularly no children, to eſcape. But from this time they abated nearly in the ſame degree they had increaſed, and appeared no more throughout all thoſe years wherein this conſtitution prevailed, excepting only the following year, in which they ſeized a few at the ſame time they aroſe in the preceding year. The *meaſles* appeared in *January*, 1670.

4. This kind of the *meaſles* introduced a kind of *ſmall-pox*, which I was hitherto unacquainted with, ſo that to diſtinguiſh it from the other kinds, I chuſe to entitle it the *anomalous* or *irregular ſmall-pox* of the *dyſenteric conſtitution*, becauſe of its irregular and uncommon And introduced an *anomalous ſmall pox*.

Sect. 4. common ſymptoms, which differed conſiderably from thoſe of the *ſmall-pox* of the foregoing conſtitution; as will appear hereafter, when we come to give the hiſtory thereof. This ſmall-pox, tho' not near ſo common as the meaſles, attacked ſeveral perſons, till the beginning of *July*, when the dyſenteric fever prevailed, and became epidemic. But upon the approach of autumn, namely, in *Auguſt*, the dyſentery returned, and made a greater devaſtation than in the preceding yeaf, but it was checked by the winter's cold, as before: and theſe being conquered, the dyſenteric fever and ſmall-pox raged the winter throughout.

The courſe of the diſeaſes of 1670.

Intermittent tertians aroſe in *Feb.* 1671.

5. But about the beginning of *February* in the following year, *intermittent tertians* aroſe, whence both diſeaſes became leſs frequent. And tho' theſe tertians were not very epidemic, yet they prevailed more generally than any I had ever ſeen at any other time ſince the cloſe of that conſtitution, which, as we before obſerved, had ſo remarkable a tendency to produce them (*a*). But theſe, according to the manner of vernal intermittents, went off immediately after the ſummer ſolſtice. In the beginning of *July* the dyſenteric fever again reſumed the ſtation it held in the preceding years; and towards the decline of autumn, the dyſentery returned a third time, but did not rage ſo much as in the immediately foregoing year, wherein it ſeemed to have arrived at its height; but upon the approach of winter it vaniſhed, and the dyſenteric fever and ſmall-pox prevailed during the reſt of that ſeaſon.

The order in which the epidemic diſeaſes proceeded during 1671.

1672. 6. We obſerved above, that at the beginning of the two preceding years two remarkably epidemic diſeaſes raged, (*e. g.*) the *meaſles* at the beginning of 1670, and *intermittent tertians* at the beginning of 1671, and prevailed ſo conſiderably as to over-power the ſmall pox, and prevent its ſpreading much in the beginning of theſe years. But in the beginning of 1672, when thoſe obſtacles to its progreſs were removed, and this diſtemper reigned alone, it, of courſe, proved very epidemic till *July*, when the dyſenteric fever again prevailed, but ſoon gave place to the dyſentery, which returned a fourth time in *Auguſt*, and was then not only leſs frequent but attended with milder ſymptoms than in the former years. Moreover the

(*a*) See *Sect.* I. *Chap.* III. *Par.* 1, 5.

ſmall-pox

small-pox likewise attacked a few, so that it was not easy to distinguish which of the two diseases prevailed. I conceive indeed that the constitution of the air, having a less tendency to produce the dysentery, render'd the small-pox powerful enough to equal it, otherwise than it happened in those years wherein the dysentery proved extremely mortal in *August*. The winter, as usual, put a stop to the dysentery, but the fever and small-pox remained, and the latter, according to its nature, became the chief disease, and continued all winter, and attacked a few in the following spring, and likewise in the beginning of summer; but it was considerably milder than this kind had been before. Chap. 1.

7. But when I affirm that one epidemic disease is expelled by another, I do not mean that the yielding disease becomes quite extinct, but only less frequent; for during this constitution each disease appeared even in that season which least favoured it. For instance, the dysentery, tho' it be a disease particularly belonging to *autumn*, did perhaps attack a few in the spring, but very rarely.

How the diseases succeeded each other during this constitution.

8. We have therefore sufficiently proved that, during the course of this constitution, the dysenteric fever prevailed in the beginning of *July*, in which month *autumnal* fevers as certainly arise, as vernal ones do in *February*. But upon the approach of autumn the dysentery succeeded it, which, strictly speaking, is an autumnal disease; and this being overcome by the winter, the dysenteric fever and the small-pox prevailed, which last distemper continued all that winter, the next spring, and ensuing summer, till the return of *July*, when it was expelled by the epidemic dysenteric fever. —And these were the revolutions that happened whilst this constitution lasted.

Every general constitution has its peculiar periods.

9. It must further be observed, that as each epidemic disease is attended with its periods of increase, height, and decline, in every subject; so likewise every general constitution of years that has a tendency to produce some particular epidemic, has its periods, according to the time it presides; for it grows every day more violent, till it comes to its height, and then abates nearly in the same degree, till it becomes extinct, and yields to another. But with respect to the symptoms, they are most violent in the beginning of

Sect. 4. the conſtitution, after which they gradually abate, and in the cloſe thereof are as mild as the nature of the diſeaſe, whence they proceed, will give leave: which appears manifeſt in the dyſentery and ſmall-pox of this conſtitution, as we ſhall preſently ſhew more at large. I proceed now to treat particularly of the diſeaſes of this conſtitution, according to the order which they obſerv'd.

CHAP. II.

Of the Cholera Morbus *of the Year* 1669.

When the *cholera morbus* ariſes.

1. THIS diſeaſe, as we before ſaid, was more epidemic in the year 1669, than I ever remember to have known it in any other. It comes almoſt as conſtantly at the cloſe of *ſummer*, and towards the beginning of *autumn*, as ſwallows in the beginning of *ſpring*, and cuckows towards *midſummer*. There is alſo an indiſpoſition cauſed by a ſurfeit, which happens at any time of the year, which with reſpect to its ſymptoms reſembles the *cholera morbus*, and yields to the ſame treatment, and yet it is of a different kind. The *cholera morbus* (*c*) is eaſily known by the following ſigns: (1) im-

(*c*) This diſtemper is defined, "a preternatural inverſion of "the periſtaltic motion, or a convulſive contraction of the ſto- "mach and bowels, occaſioned by an acrimonious and cauſtic "matter of different kinds therein contained, and accompa- "nied with an immoderate diſcharge of bilious matters both "upwards and downwards."

It is ſeated in the whole volume of the ſtomach and inteſtines, but eſpecially in the *duodenum*, and bilious ducts, as appears by the vomitings and ſtools, which are generally mixt with bile. That the *duodenum* is the chief place where ſuch mixture is made, is further manifeſt, partly, from its circumvolutions and windings, and partly, from the flowing of the bile and pancreatic juice from the *ductus cholidochus* into this inteſtine, whence it ſeems well adapted to produce and lodge the acrimonious matter here diſcharged. It differs from a bilious looſeneſs in being conſtantly attended with vomitings, and a greater degree of danger.

This diſtemper may proceed from (1) poiſon, (2) ſtrong emetics, or purgatives, (3) diet, which is apt to ferment, and readily corrupts, and alſo (4) from a violent fit of anger.

It generally proves of ſhort duration, terminating the *third*, or *fourth*, or ſometimes, but very rarely, the *ſeventh* day, beyond which it never laſts, unleſs it turns to ſome other diſeaſe.

For

(1) immoderate vomiting, and a diſcharge of vitiated humours by ſtool, with great difficulty and pain; (2) violent pain and diſtenſion of the *abdomen* and inteſtines; (3) heart-burn, thirſt, quick pulſe, heat and anxiety, and frequently a ſmall and irregular pulſe; (4) great *nauſea*, and ſometimes colliquative ſweats; (5) contraction of the limbs; (6) fainting; (7) coldneſs of the extremities, and other like ſymptoms, which greatly terrify the attendants, and often deſtroy the patient in twenty four hours. There is likewiſe a dry *cholera* (*d*) cauſed by a *flatus*, paſſing upwards and downwards, without retchings or ſtools, which I never ſaw but once, and that was, at the beginning of the preſent *autumn*, when the former kind was very common.

Chap. 2.

Its ſymptoms.

The dry *cholera* extremely rare.

2. Much conſideration and experience have taught me, that to endeavour on the one hand to expel the ſharp humours which feed this diſeaſe by *purgatives*, would be like attempting to extinguiſh fire with oil, as the moſt lenient cathartics would increaſe the diſturbance, and raiſe new tumults. And, on the other hand, to check the firſt effort of the humour in the very beginning, by *opiates* and other *aſtringents*, whilſt I prevented the natural evacuation, and forcibly detained the humour in the body, would doubtleſs deſtroy the patient by an inteſtine commotion, the enemy being

Purgatives and aſtringents bad in the *cholera morbus*

For the moſt part it proves mortal, no diſtemper, except perhaps the *plague* and *peſtilential fevers*, being ſo ſuddenly deſtructive as the *cholera*, eſpecially when it attacks children, aged perſons, or thoſe who have been weakened by a long illneſs. The more corroſive the matter diſcharged is, and the more violent the thirſt and heat, ſo much the greater is the danger; and if black bile mixed with black blood be voided, it denotes certain death, according to *Hippocrates*. See *Hipp. Aph. Lib. IV. Aph.* 22. An exorbitant diſcharge of green humours both upwards and downwards, faintings, a hiccup, convulſions, coldneſs of the extremities, cold ſweats, a ſmall intermitting pulſe, and the continuance of the other ſymptoms after the looſeneſs and vomiting ceaſe, are eſteemed mortal ſigns. But there is hopes of recovery if the vomitings ſtop, ſleep ſucceeds, and the patient appears to be relieved; and alſo if the diſeaſe be prolonged beyond the *ſeventh* day.

(*d*) This is a conſiderable diſtenſion of the ſtomach and bowels by flatulent vapours, which are plentifully diſcharged both upwards and downwards, with extreme anxiety: a remarkable inſtance of which may be found in *Act. Med. Berolin. dec. II. Vol. III. p.* 73.

Sect. 4. pent up in the bowels (*e*). Theſe reaſons therefore led me to keep the middle path, *viz.* partly to evacuate, and

(*e*) The general indications of cure in this diſeaſe are, (1) to correct and ſoften the acrimonious peccant matter, and fit it for expulſion, and, if need be, to expel it by art; (2) to check the violent motions in a proper manner; and (3) to ſtrengthen the weakened nervous parts.

When it is occaſioned by (1) a corroſive poiſon, oils, mucilaginous and unctuous liquors muſt be taken by the mouth, and injected glyſter-wiſe in large quantities; as *oil olive, oil of ſweet almonds, a decoction of the ſhavings of hartſhorn, water-gruel, barley water, and likewiſe milk*, mixt with *abſorbent powders*, which makes it more effectual. (2) When by ſtrong emetics and purgatives, *warm opiates*, as *mithridate*, VENICE or LONDON *treacle*, and the like, fomenting the ſtomach and *abdomen* with ſpirituous and ſtrengthening fomentations, and afterwards embrocating with liniments made of *expreſſed oil of nutmegs, nerve ointment*, &c. will generally effect a cure. (3) When from fermentable and corrupted diet, encourage the diſcharge by *gentle emetics, lenient cathartics, and plentiful dilution with whey, thin water-gruel, the chicken water* adviſed by our author, and the like; and afterwards give ſtrengthening medicines to compleat the cure. (4) When from a violent fit of anger, *emetics* and *cathartics* muſt by no means be exhibited, nor cold water, ſmall-beer, or the like, drank immediately after, for fear of cauſing an inflammation of the ſtomach; but the acrimony and heat of the bile muſt be corrected by proper *abſorbents, mixed with nitre, water gruel, barley water, a decoction of the ſhavings of hartſhorn*, &c. after which it may be carried off *by mild vomits*, ſuch as *Ipecacuanha root*, or *lenient purgatives*, as *rhubarb, manna*, &c.

Cold water is eſteemed an excellent remedy in a *cholera*, and is ſaid to be ſo much more effectual, the warmer the climate, ſeaſon, and conſtitution of the patient be. It mitigates and takes off the violent heat, which ariſes in this diſeaſe from the vehement inteſtine attrition and motion of the ſulphureous parts of the juices, dilutes and blunts the bilious acrimony of thoſe contained in the firſt paſſages, and finally reſtores the tone and ſtrength of the ſolid parts, conſiderably weakened by the violence of the diſtemper.

Dr *Charles Ayton Douglas* recommends the following method of cure.—If the patients be not too much exhauſted, (ſays he) before I am called, I make them drink heartily of warm water three or four times, which they always throw up; this dilutes and ſo blunts the acrimony of the humours, and at the ſame time evacuates them; immediately after I adviſe them to drink plentifully of a decoction of oat-bread, baked without any leaven or yeſt, carefully toaſted as brown as coffee, but not burnt; which decoction ought to be of the colour of weak coffee. And this they do moſt willingly, as they are generally very thirſty, and always affirm that it is moſt grateful to their ſtomachs; and I do not remember that ever any vomited it. I have always uſed oat-bread, but when it cannot

and partly to dilute the humour; and by this method which I found out and experienced many years ago, I have always conquered this diſeaſe. Chap. 2.

How to be treated.

3. Let a chicken be boiled in about three gallons of ſpring-water, ſo that the liquor may ſcarce taſte of the fleſh; and let ſeveral large draughts of it be drank warm, or, for want of it, of poſſet-drink. At the ſame time a large quantity of the ſame is to be given at ſeveral times, ſucceſſively, by way of glyſter, till the whole be taken in and diſcharged by vomiting and ſtool. An ounce of the *ſyrup of lettice, violets, purſlain, or water-lilly*, may now and then be added to the draughts and glyſters; but the chicken water will anſwer the end pretty well alone. The ſtomach in this manner being often loaded with a large quantity of liquor, and its motion, as it were, inverted thereby, and glyſters being frequently thrown in, the ſharp humours are either evacuated, or, their acrimony being blunted, reſtored to their due temper and mixture.

An opiate when to be given.

4. When this buſineſs is over, which requires three or four hours, an opiate compleats the cure. I frequently uſe the following, but any other may be ſubſtituted in its ſtead.

be had, I doubt not but wheat-bread, or meal well toaſted may do.—But when the patient is much exhauſted with violent evacuations, upwards and downwards, the firſt thing I give him is a large draught of the abovementioned decoction; and when the *Nauſea* is pretty well ſettled, I frequently order two thirds of a grain of *opium*, for an ordinary perſon, increaſing or diminiſhing the doſe, according to the age or ſtrength of the patient.—But if the patient be convulſed, and the extreme parts cold, and his pulſe weak, and intermitting, then it is proper to give a ſtrong doſe of *liquid laudanum*, for inſtance, twenty five drops, in an ounce of ſtrong cinnamon water, for an ordinary perſon, becauſe it operates quicker than the *opium*, and afterwards a draught of any wine that is moſt agreeable to the patient, mixed with an equal quantity of the decoction; and they may afterwards take the decoction to quench their thirſt; and now and then a little wine mixed with it, according as they need a cordial. To prevent a relapſe, which the patient is not able to bear, it will be proper to repeat the opiate in a moderate quantity morning and night for ſome days; and care muſt be taken not to overload the ſtomach, or to eat any thing but what is of good nouriſhment, and eaſy to digeſt, and grateful to the ſtomach. See *Medical Eſſays, Vol.* V. *Part* II. 8vo. *p.* 646.

Sect. 4.

An anodyne draught.

Take of cowſlip flower water, an ounce; Aqua mirabilis, *two drams*; *liquid* laudanum, *ſixteen drops*; *mix them together.*

This method ſafer and quicker than the common one.

5. This method of diluting the humours is abundantly ſafer and quicker than the ordinary one of treating this dangerous diſeaſe, either by *evacuants*, or *aſtringents*; for evacuants increaſe the diſturbance and commotions, and aſtringents detain the enemy in the bowels, ſo that, not to mention the trouble occaſioned by prolonging the diſeaſe, there is danger leſt the vitiated humours get into the blood, and cauſe a fever of a bad kind.

When *laudanum* is to be immediately given.

6. But it muſt be carefully noted, that if the phyſician be not called till the vomiting and looſeneſs have continued, for inſtance, ten or twelve hours, and the patient is exhauſted, and the extremities are grown cold, he muſt then, omitting all other remedies, have immediate recourſe to *laudanum*, the laſt refuge in this diſeaſe; which is not only to be given during the urgency of the ſymptoms, but repeated every morning and night after the vomiting and looſeneſs are gone off, till the patient recovers his former ſtrength and health.

7. Tho' this diſeaſe be epidemic, as we remarked above, yet it very rarely laſts longer than the month of *Auguſt*, wherein it began; whence one may take occaſion to conſider the elegant and ſubtile contrivance nature uſes in producing epidemic diſeaſes. For tho' the ſame cauſes entirely remain, which may occaſion this diſtemper in ſeveral perſons towards the end of *September* as well as in *Auguſt*, namely, a ſurfeit of fruit, yet we find the ſame effect does not follow (*f*). For whoever carefully attends to the appearances of a *legitimate* or true *cholera morbus*, of which only we now treat, muſt acknowledge that the diſeaſe occaſionally happening at any other time of the year, tho' proceeding from the ſame cauſe, and accompanied with ſome of the ſame ſymptoms, totally differs from that juſt mentioned; as if there lay concealed ſome peculiar diſpoſition in the air of this particular month, which is able to impregnate the blood, or ferment of the ſtomach,

A ſurfeit totally different from the true *cholera morbus*.

(*f*) In a *cholera morbus* occaſioned by a ſurfeit of fruit in autumn, *Boerhaave* highly extols oil of ſulphur by the bell. See *Prax. Med. Vol. III. p.* 245.

with

with a kind of ſpecific alteration, adapted only to this diſeaſe. Chap. 3.

CHAP. III.

Of the Dyſentery of part of the year 1669, *and of the years* 1670, 1671, 1672.

The riſe and progreſs of the dry gripes.

1. IN the beginning of *Auguſt*, 1669, as before obſerved, the *dry gripes* appeared, and during the courſe of that autumn equalled, or rather exceeded the *dyſentery* which aroſe with them, in reſpect to the numbers they attacked. Sometimes a fever accompanied them, and ſometimes not; but they exactly reſembled the gripes which attended the dyſentery that prevailed at the ſame time; for they were extremely violent, and attacked at intervals, but no natural or mucous ſtools ſucceeded. They prevailed equally with the dyſentery throughout this autumn, but appeared no more epidemically in the following years of this conſtitution. As theſe dry gripes differ little either in their nature, or the method whereby they were eaſily removed, from the dyſentery, I proceed to treat of this laſt diſtemper.

To be treated as the dyſentery.

The *dyſentery* uſually comes in the beginning of *autumn*.

2. It has been already remarked that the *dyſentery* generally comes, as the preſent one did, in the beginning of *autumn*, and goes off for a time upon the approach of winter; but when a ſeries of years are too much diſpoſed to produce it epidemically, it may ſeize a few at any other time, and abundance at the beginning of ſpring, or perhaps earlier, if warm weather immediately ſucceeds a ſevere froſt, terminated by a ſudden thaw. And tho' very few may be attacked with it, yet as this happens at ſo unuſual a time, I am well convinced that the conſtitution eminently favours this diſeaſe. Thus it happened in thoſe years wherein the dyſentery proved very epidemic; for ſometimes, as we obſerved above, it ſeized a few towards the end of winter, or beginning of ſpring (*g*).

3. It

(*g*) The *dyſentery* may be defined, "a convulſive motion of "the inteſtines, cauſed by a cauſtic, ulcerating humour, lodg-"ed in their coats, occaſioning a frequent inclination to ſtool, "and a frequent diſcharge of mucous, bilious matters, tinged

Sect. 4. 3. It ſometimes begins (1) with a chilneſs and ſhaking, immediately ſucceeded (2) by a heat of the whole body, as

Its ſymptoms.

" more or leſs with blood, with vehement gripings, and a ſe-
" veriſh commotion."

It is generally *epidemic*, rarely *ſporadic*, and appears with various degrees of malignity. It ſpares neither age nor ſex, but attacks women as well as men, children and youth, as well as adults and aged perſons, and ſuffers not even ſucking children to eſcape. The plethoric, bilious, and thoſe whoſe ſtomach is very weak, are chiefly ſubject to it, and it affects thoſe more ſeverely who have lived irregularly in point of diet, and eat large quantities eſpecially of unripe and eaſily fermentable fruit.

It differs from a *looſeneſs*, (1) by being attended with more violent gripings, and a diſcharge of bloody, purulent, putrid and extremely fetid matters; whereas what is voided in a looſeneſs is either ſerous, ſlimy, or bilious, but never bloody. From (2) the *cholera morbus*, by its longer continuance, having no vomitings, unleſs in the beginning or ſtate, occaſioned ſometimes by an inflammation of the ſtomach, being epidemic, and catching, and attended with a more painful *teneſmus*. From (3) a *flux of the hemorrhoids*, wherein pure blood is evacuated with advantage to health, by prevailing at a particular time of the year, being uſually accompanied with a fever, and a voiding of blood, very ſeldom pure, but mixed with purulent, frothy, fetid matter, whence ſevere griping, and a very painful *teneſmus*; the evacuation not affording any relief, but on the contrary highly weakening and diſpiriting the patient. From (4) an *hepatic flux*, where what is voided looks like the water wherein raw fleſh has been waſhed, and comes away without pain, by the very different appearance of the diſcharges, the violent gripings attending them, the preſence of a fever, and other bad ſymptoms. From (5) that diſorder, conſiſting in frequent evacuations by ſtool, at firſt mucous, and afterwards tinged with blood, which is *endemic* at *Paris*, and ſeizes almoſt all foreigners, by being much more malignant, and likewiſe catching, accompanied with a fever, and occaſioning a far greater loſs of ſtrength and ſpirits.

The dyſentery is alſo divided into a *malignant* and *kindly* ſpecies. The latter continues longer, proves milder, and is leſs dangerous; but the former appears to be not only of a contagious nature, but attended with mortal ſymptoms, as an ill-conditioned fever, great loſs of ſtrength, extreme thirſt, *&c.* It is further divided into a *red* and *white* kind: in the former the ſtools are tinged with blood, but in the latter they are purulent, mixt with caruncles and the *mucus* of the inteſtines.

Our author not having taken any notice either of the ſeat, or cauſes of this diſeaſe, we ſhall here deliver the ſentiments of *Hoffman* on theſe heads, from whom we have taken moſt of the particulars above ſet down.

Its ſeat may be determined with eaſe, by attending to the part chiefly pained. If therefore (1) a violent pain be perceived near the navel, and a ſtool ſucceeds ſlowly thereupon,

it

as is uſual in fevers, and ſoon after (3) gripes and ſtools follow: it is indeed, frequently, not preceded by a fever, but Chap. 3.

it is certain that the ſmall guts are affected. (2) When the gripings affect the *epigaſtric* region where the *colon* is ſituated, or the *hypogaſtric* region and *hypochondria*, and the *fæces* are immediately diſcharged, it is manifeſt that the ſeat of the diſeaſe is in the great guts. Laſtly (3) where there is a continual inclination to go to ſtool, or a ſlimy and acrimonious *mucus* evacuated in a ſmall quantity, it ſeems probable that there is an ulcer of the *rectum*.

With reſpect to the *procatartic*, or cauſes productive of the noxious humours occaſioning a dyſentery, they are chiefly of three kinds. For this diſeaſe may be cauſed (1) by the ſeaſon. For inſtance, when the foregoing ſummer has been exceeding hot and dry, it ariſes towards the cloſe thereof, and the beginning of *autumn*, namely in *Auguſt*, or *September*, eſpecially if the violent heat of the day be ſucceeded by very cold nights, with *north* winds. For the blood having been remarkably thinned, and copious ſweats occaſioned by the preceding long continued heat and dryneſs of the air, the ſoft and fluid parts of the juices are thus diſſipated, the remainder rendered acrid, impure and ſulphureous, and the body debilitated; whence it follows that if perſons, whoſe juices are thus depraved and vitiated, happen to be conſiderably expoſed to the cold air in the evening, by being too thinly clothed, ſitting long, or ſleeping on the ground, *&c.* it cauſes a ſtoppage of the pores, and prevents the further exhalation of the yet fine ſulphureous and impure parts of the fluids, which, uniting with the vapid lymph, degenerate into a viſcous and very acrid matter, which by means of the febrile motion is brought to the inteſtines, the great ſtrainer of ſuch foul matters, and produces a dyſentery. In this manner the field dyſentery is generated, and may ariſe without the leaſt concurrence of any malignant *effluvia*. (2) By exhalations and vapours of a contagious nature, which occaſion an epidemic dyſentery, of a more or leſs malignant kind. Such vapours are generated either (1) in the air itſelf from ſome malignant *effluvia*, exhaled from the earth, and a peculiar diſpoſition of the winds, and are received in by breathing; or (2) they may be taken in with the aliment, eſpecially greens and fruits, covered either with a poiſonous coat, or the malignant eggs of inſects, that float in great abundance in the air, at this time, and ſo mixed with the blood and juices. And it is worth notice that in ſuch a conſtitution of the air, the poiſon received lies concealed and unactive in the body for a time, and only waits for an occaſional cauſe to put it into action. Hence a dyſentery has frequently been obſerved to happen at this time, from a very gentle irritation of the inteſtines by a mild purgative, or otherwiſe. The origin and cauſe of this infection, or contagion, may likewiſe be owing to the malignant *effluvia* exhaling from dyſenteric bodies by inſenſible perſpiration, or from their excrements, milk, or ſweat. Dyſenteries of a bad kind uſually prevail, when the air appears to contain abundance of flies, caterpillars, ſpiders, and

Sect. 4. but the gripes attack firſt, and ſtools ſoon ſucceed ; (4) however intolerable gripings, and a painful deſcent, as it were, of all the bowels always accompany the ſtools, which are very frequent ; and (5) all mucous, not excrementitious, unleſs that ſometimes an excrementitious one intervenes without any conſiderable pain ; (6) the mucous ſtools are generally ſtreaked with blood, but ſometimes not the leaſt blood is mixed with them, throughout the whole courſe of the diſeaſe ; nevertheleſs if they be frequent, mucous, and accompanied with gripings, the diſtemper may as juſtly be entitled a dyſentery, as if blood was diſcharged along with them (*b*). (7) Further, if the patient be in the vigour of life, or has been heated by cardiacs, a fever ariſes, and the tongue is covered with a thick white *mucus*, and if he has been very much heated it is black and dry ; great loſs of ſtrength, and lowneſs of ſpirits, and all the ſigns of an ill-conditioned fever are joined with it. (8) This diſeaſe occaſions extreme pain and ſickneſs, and greatly endangers life, if unſkilfully treated ; for when the ſpirits are much exhauſted, and the vital heat diminiſhed, by frequent ſtools, before the matter can be expelled the blood, a coldneſs of the extremities enſues, and there is danger of death even within the periods of acute diſeaſes. But if the patient eſcapes for this time, ſeveral ſymptoms of a different kind ſucceed ; for inſtance, ſometimes in the progreſs of the diſeaſe, inſtead of thoſe ſanguineous filaments which are uſually mixed with the ſtools in the beginning, a large quantity of pure blood, unmixed with *mucus*, is voided at every ſtool, which, as it manifeſts an eroſion of ſome of the larger veſſels of the inteſtines, threatens death. (9) Sometimes alſo the inteſtines are affected with an incurable gangrene, cauſed by the violent inflammation ariſing from the plentiful afflux of the hot and ſharp matter to

A hot regimen and cardiacs detrimental.

and other inſects. Laſtly (3) this diſeaſe may proceed from eating fruit very freely, eſpecially if it be unripe, or drinking fermentable liquors upon it, particularly, new wine, beer, cyder, and the like. The moſt noxious fruits are ſweet cherries, peaches and plumbs, eſpecially the large yellow plumb.

(*b*) This ſhould ſeem to be what *Hoffman* terms the *white dyſentery*, wherein the ſtools are purulent, mixt with caruncles and *mucus* abraded from the coats of the inteſtines. See *Hoff. Med. Syſtemat. Tom.* IV. *Par.* III. *p.* 528.

the

the affected parts (*i*). (10) Moreover, at the decline of the diſeaſe, *Aphthæ* frequently affect the internal parts of the mouth, eſpecially when the patient has been kept very hot for a long time, and the evacuation of the peccant matter check'd by aſtringents, the fuel of the diſeaſe not having been firſt carried off by cathartics; theſe *Aphthæ* generally foreſhew imminent death. Chap. 2.

4. But if the patient ſurvive the foregoing ſymptoms, and the diſeaſe prove laſting, the inteſtines at length ſeem to be affected ſucceſſively downwards, till it be driven to the *rectum*, and ends in a *teneſmus* (*k*); upon which the natural ſtools, otherwiſe than in a dyſentery, occaſion great pain in the bowels, the *fæces* in their paſſage thro' them abrading the ſmall guts; whereas the

This diſeaſe ſometimes ends in a *teneſmus*.

(*i*) If the pain and thirſt ceaſe at once, the excrements be voided involuntarily, and have a fetid cadaverous ſmell, the pulſe be ſmall, and convulſions ſucceed, the inteſtines are judged to be affected with an incurable gangrene. A *delirium*, *aphthæ*, inflammation of the throat, a palſy of the whole *œſophagus*, coldneſs of the extremities, great anxiety, convulſions, and an hiccup are eſteemed mortal ſigns in this diſeaſe. It is dangerous in women in child-bed, and oftener deſtroys aged, and very young perſons, than the middle-aged. When it attacks cachectic, ſcorbutic, conſumptive, or weak conſtitutions, and thoſe who have ſuffered long under ſome diſorder of mind, the caſe is generally deſperate; and it threatens danger when the patient is troubled with worms. When it is accompanied with vomiting, and an hiccup ſucceeds, an inflammation of the ſtomach is to be apprehended. When the excrements are green, or black, and very fetid, and mixed with caruncles, the danger is imminent; for theſe ſigns denote an ulcer of the inteſtines. It is alſo an extremely bad ſign if the glyſters come away immediately after being injected, or the *anus* be ſo cloſe ſhut that nothing can be thrown in; the former denoting a paralytic diſorder of the inteſtines, eſpecially of the *rectum*, and the latter a vehement ſpaſmodic contraction of the ſame. It is proper to know that this diſeaſe ſometimes proves mortal in a ſhort time, namely in *ſeven* or *eight* days, particularly if a malignant fever prevails; but ſometimes it runs on to the *fortieth* day, and beyond it, and when it has continued a long time either deſtroys the patient, or tho' it goes off, leaves ſome troubleſome diſorder behind it, often terminating in a *dropſy*, *lientery*, the COELIACA PASSIO, an *incurable hectic*, or a *conſumption*.

(*k*) The *teneſmus* here ſhould ſeem to ariſe from the extreme ſenſibility, and conſequent mobility, of the part affected, occaſioned by its continual irritation from the acrimonious humours lodged therein, which it is ſo much the more ſenſibly affected with, by its having loſt much of the ſoft *mucus* in the courſe of the diſeaſe, which ſerves to defend it from ſuch irritation.

mucous

Sect. 4.

mucous ſtools only offend the *rectum* during the time that the matter is made, and diſcharged. But tho' this diſeaſe often proves mortal in grown perſons, and eſpecially in the aged, it is nevertheleſs very gentle in children, who have it ſometimes for ſome months without any inconvenience, provided the cure of it be left to nature.

Is gentle in children tho' it often deſtroys adults.

5. What ſimilitude there is between the dyſentery here deſcribed, and the *endemic* dyſentery of *Ireland*, I know not, having hitherto had no account of the latter. Neither have I diſcovered how far this dyſentery reſembles thoſe happening in other years here in *England*. For poſſibly there may be as many ſorts of dyſenteries, as there are kinds of ſmall-pox, and other epidemics peculiar to different conſtitutions, and which may therefore require a different method of cure in ſome particulars. Nor ſhould this procedure of nature ſo much raiſe our wonder, ſince it is univerſally acknowledged, that the further we penetrate into any of her works the clearer proofs we have of the exceeding variety, and almoſt divine contrivance of her operations, which far ſurpaſs our comprehenſion. So that whoever has undertaken to fathom theſe matters, and ſearch into the multifarious operations of nature, will find himſelf diſappointed in his expectation, and not ſucceed in the attempt; and beſides, if he be a judicious perſon, he will expect to be cenſured for making the moſt uſeful diſcoveries, for no other reaſon but becauſe he was the firſt inventor.

There may perhaps be various kinds of dyſenteries

6. It muſt be further obſerved, that all epidemics at their firſt appearance, as far as can be judg'd from their ſymptoms, ſeem to be of a more ſpirituous and ſubtile nature, than when they become older; and that the more they decline, the more groſs and humoural they daily grow; for whatever kind of particles thoſe are, which, being intimately mixed with the air, are eſteemed to produce an epidemic conſtitution, it is reaſonable to conclude that they are poſſeſſed of a greater power of acting at their firſt appearance, than when their energy is weakened. Thus in the infancy of the plague ſcarce a day paſſed, but ſome of thoſe who were ſeized with it died ſuddenly in the ſtreets, without having had any previous ſickneſs; whereas after it had continued for ſome time, it deſtroyed none, unleſs a fever and other ſymptoms had preceded; whence it clearly follows

All epidemics moſt ſubtile and ſpirituous at their riſe.

Exemplified in the *plague*,

lows that this diſeaſe, tho' it then took off fewer perſons, was more violent and acute in the beginning than afterwards, when its influence was more extenſive. Chap. 3.

and this *dyſentery.*

7. In the like manner in the dyſentery under conſideration, all the ſymptoms were moſt ſevere in the beginning, tho', with reſpect to the numbers affected thereby, it increaſed daily till it came to its height, when conſequently more perſons died than in the beginning: yet the ſymptoms were more violent then, than in the height, and much more ſo than in the decline thereof, and, all circumſtances being alike, abundance more periſhed. To this may be added, that the longer it continued, the more humoural it ſeemed to be; for inſtance, the firſt *autumn* it attacked, ſeveral had no ſtools at all; but with reſpect to the ſevereneſs of the gripings, the violence of the fever, ſudden decay of ſtrength, and other ſymptoms, it much exceeded the dyſenteries of the following years. And further, the dyſentery accompanied with ſtools, which appeared firſt, ſeemed to be of a more ſpirituous and ſubtile nature than thoſe that ſucceeded; for in the firſt dyſentery the provocations to ſtool, and ſtraining, were greater and more frequent, and the ſtools, eſpecially the natural ones, leſs both in point of quantity and frequency. But generally as the diſeaſe proceeded on its courſe, the gripings abated, and the ſtools became more natural, and, at length, the epidemic conſtitution declining, the gripes were ſcarce felt, and the excrementitious or natural ſtools exceeded the mucous ones in number.

The curative indications.

8. To proceed at length to the curative indications: after having attentively conſidered the various ſymptoms attending this diſeaſe, I diſcovered it to be a *fever* of its own kind, turned inwards upon the inteſtines; by means of which the hot and ſharp humours, that were contained in, and agitated the blood, were thrown off by the meſeraic arteries upon theſe parts, whence blood was diſcharged by ſtool, the mouths of the veſſels being opened by the impulſe of the blood and humours flowing thereto. And by the violent and frequent efforts of the inteſtines to diſcharge the ſharp humours that continually vellicate them, the *mucus*, wherewith their inſide is naturally covered, is caſt out more or leſs copiouſly at every ſtool. The indications of cure therefore ſeem to offer themſelves plainly; nor indeed have I judged

Sect. 4. judged that I had any thing more to do, than (1) to make an immediate revulſion of theſe ſharp humours by bleeding, and afterwards to cool the remainder; and (2) to evacuate them by purgatives (*l*).

The method of cure.

9. I therefore uſed the following method: upon being called in I immediately directed bleeding in the arm (*m*), and gave an opiate the ſame evening, and the next morning my uſual gentle purging potion.

(*l*) There is ſcarce a diſeaſe which requires more ſkill in order to its rational cure than the dyſentery. In general the indications of cure are; (1) to correct the noxious, acrid, peccant matter, of what kind ſoever it be, and expel it by the proper emunctories; (2) to eaſe the gripings, and quiet the convulſive motions of the inteſtines; and laſtly (3) to exhibit proper remedies to heal the inteſtines, if ulcerated, or ſtrengthen them, if too much weakened. The (1) is anſwered by *mucilaginous, ſmooth, and oily medicines*, taken internally, and injected by way of glyſter, *gentle emetics* repeated as there is occaſion, eſpecially of *Ipecacuanha* root, which is eſteemed a ſpecific here in the beginning, and *lenient purgatives*. mixed with *abſorbents*. In caſe of malignancy, a *breathing ſweat* is to be promoted, and *proper cordials* exhibited. With reſpect to *Ipecacuanha*, it ſhould be obſerved, that it proves moſt ſerviceable in robuſt and moiſt conſtitutions, where the firſt paſſages and bowels abound with foul humours, or the infection is newly received, whence a *nauſea*, retchings, anxiety, *&c.* are occaſioned. But if it be given after the diſeaſe has continued ſome time, and the patient has had frequent mucous as well as bloody ſtools, it will indeed in ſome meaſure check theſe evacuations, but increaſes the anxiety, ſo as often to render it neceſſary to renew the flux by means of emollient glyſters. It is alſo hurtful if the liver be injured, or any of the *viſcera* affected with an inflammation, a *ſcirrhus*, or cancer. With reſpect to *laxatives*, ſuch as are ſweet and apt to ferment are improper; as a *decoction of prunes*, *a ſolution of manna*, *an infuſion of ſena*, *and all laxative ſyrups*. *Violent purgatives* and *mercurials* are found to exaſperate the ſymptoms. (2) The ſecond intention requires *opiates and ſubaſtringents*, and the application of *anodyne fomentations and liniments* to the ſtomach and *abdomen*. (3) The third demands either *detergents and balſamics*, or *ſtrengthening remedies*, according to the nature of the caſe.

(*m*) Much experience has ſhewn that bleeding is abſolutely neceſſary in the beginning, if the patient be plethoric, has been accuſtomed to drink wine freely, or the diſeaſe be accompanied with a continued fever. For it is a groundleſs apprehenſion that bleeding leſſens the ſtrength, ſince not only many in this diſeaſe die of an inflammation of the inteſtines, but alſo plethoric perſons, if attacked with continued fevers, only periſh from an over-fulneſs of blood, which readily occaſions obſtructions, a mortification and gangrene; whence bleeding muſt certainly be the propereſt remedy to prevent theſe dangerous ſymptoms.

Chap. 3.

A purging draught.

Take of tamarinds, half an ounce; the leaves of ſena, two drams; rhubarb, one dram and a half; boil them together in enough water to leave three ounces of ſtrained liquor, in which diſſolve manna and ſolutive ſyrup of roſes, of each, an ounce: mix them together for a purging potion, to be taken in the morning early.

I commonly prefer this draught to an electuary made with a ſmall quantity of *rhubarb*; for tho' this root be exhibited to evacuate choler and acrimonious humours, yet unleſs a proper quantity of *manna* or *ſolutive ſyrup of roſes* be mixed with it to quicken its operation, it avails little in curing a dyſentery. And becauſe it is certain that the gentleſt purgatives do ſometimes increaſe the gripings, and occaſion a general depreſſion and diſorder of the ſpirits, by the adventitious commotion they raiſe in the blood and humours during their operation, I therefore commonly give an opiate earlier than is uſual after purging, *viz.* at any hour in the afternoon, provided it ſeems to have done working, in order to quiet the diſturbance I have raiſed. I repeat the purgative twice more, interpoſing a day between each potion, and exhibit an opiate after every purge, at the time abovementioned; and direct it to be repeated morning and night on the intermediate days, in order to diminiſh the violence of the ſymptoms, and obtain a reſpite whilſt I am employed in evacuating the peccant humour. The opiate I chiefly uſed was liquid *laudanum*, in the quantity of ſixteen or eighteen drops in any cordial water for a doſe.

Cardiacs when to be given.

10. After bleeding and purging once I allowed ſome mild cardiac to be taken between whiles, throughout the courſe of the diſeaſe, as *plague water*, *compound ſcordium water*, and the like, *e. g.*

A cordial julap.

Take of the diſtilled waters of black cherries and ſtrawberries, of each, three ounces; plague water, compound ſcordium water, and ſmall cinnamon water, of each an ounce; prepared pearl, one dram and half; fine ſugar enough to ſweeten it, and half a dram of damaſk roſewater to give it an agreeable taſte: mix all together for a julap, of which let the patient take four or five ſpoonfuls, when faint, or at pleaſure.

But I uſed theſe chiefly in aged and phlegmatic perſons, in order to raiſe their ſpirits in ſome meaſure, which are much

Sect. 4. much depreſſed in this diſeaſe by the violence of the ſtools. Their drink was *milk boiled with thrice its quantity of water*, or *the white decoction*, as it is called, made of *burnt hartſhorn, and the crumb of white bread, of each two ounces, boiled in three pints of water to two, and afterwards ſweetened with a ſufficient quantity of fine ſugar*; and ſometimes *poſſet drink*, or, where the loſs of ſpirits required it, they drank cold for their common drink a liquor made by boiling *half a pint of canary, and a quart of ſpring water together*. Their diet was ſometimes panada, and ſometimes broth made of lean mutton (*n*). I kept the aged more in bed, and allowed them a freer uſe of any cordial water they had been accuſtomed to, than was proper for children, or young perſons. This method exceeded all thoſe I had hitherto experienced in conquering this diſeaſe, which generally yielded to the third purge.

The proper diet and liquors

How to be treated when it does not yield to theſe means.

11. But if it proved ſo obſtinate as not to give way to this treatment, I gave the former opiate every morning and evening, till it went quite off; and the more effectually to conquer it, I have ventured to give a larger doſe of *laudanum*, than that above ſpecified, *viz.* twenty five drops every eight hours, if the former doſe proved too weak to ſtop the flux (*o*). I likewiſe ordered a glyſter made of *half a pint of milk, and an ounce and half of* Venice *treacle*, to be injected every day, which is indeed an admirable remedy in all kinds of looſeneſſes. Nor indeed have I hitherto found the leaſt inconvenience from ſo frequent a repetition of opiates, (whatever miſchief unexperienced perſons groundleſsly apprehend) tho' I have known ſeveral who have taken them every day, for ſome weeks running, when the diſeaſe prov'd

(*n*) Beer is prejudicial here; every thing ſhould be drank warm, and, towards the concluſion of the diſeaſe, a glaſs of wine by itſelf, or mixed with water, as the ſtomach will bear it, is proper both to raiſe the ſpirits, and ſtrengthen the ſtomach and bowels. The diet may be nouriſhing broths acidulated with lemon juice, ſago, rice-gruel, or milk, mealy ſubſtances, ſalop, and the like.

(*o*) When the ſtrength is much exhauſted in a dyſentery, or looſeneſs, by the frequent diſcharges accompanying theſe diſtempers, the patient is cachectic and conſumptive, a hectic heat, ſuffocation, grief, and wandering pains in the limbs ſucceed, the evacuation is to be check'd, ſtrengthening glyſters often injected, ſtrengthening topics applied to the ſtomach and *abdomen*, and proper internals exhibited at the ſame time to ſtrengthen all the parts.

inveterate.

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inveterate. But it muſt be noted here, that when the flux amounts only to a ſimple looſeneſs, omitting bleeding and ſtrong purging, it will ſuffice to give *half a dram of rhubarb*, more or leſs in proportion to the ſtrength of the patient, every morning, *made into a bolus, with a ſufficient quantity of diaſcordium, adding to it two drops of oil of cinnamon*; and exhibiting an opiate the following evening, *e. g.*

The cure of a looſeneſs.

Take of ſmall cinnamon water, one ounce; *liquid* laudanum *fourteen drops: mix them together.*

A paregoric draught

In the mean time uſe the diet above ſpecified in the cure of the dyſentery, and inject the glyſters there commended every day, if there is occaſion.—But this by way of digreſſion.

12. Now to evince the excellence of the method here delivered by a ſingle inſtance, for I will not trouble the reader unneceſſarily with many: The rev. Mr *Belke*, chaplain to the earl of St *Albans*, being ſeized with a violent dyſentery, during this conſtitution, ſent for me to attend him, and was recovered by this method.

An inſtance of the dyſentery cured by this method.

13. Children affected with this diſeaſe are to be treated in the ſame manner, but the quantity of blood to be taken away, and the doſes both of the purgative and opiate, muſt be diminiſhed in proportion to their age, ſo that, for inſtance, two drops of liquid *laudanum* is a ſufficient doſe for a child of a year old.

Children how to be treated in this diſeaſe

14. The liquid *laudanum*, which I conſtantly uſe, as above intimated, is prepared in the following ſimple manner.

Our author's liquid laudanum deſcribed.

Take of Spaniſh *wine, one pint*; *opium, two ounces*; *ſaffron, one ounce*; *cinnamon and cloves, reduced to powder, of each, one dram: infuſe them together in a bath-heat for two or three days, till the tincture becomes of a due conſiſtence, and after ſtraining it off ſet it by for uſe* (*p*).

I do

(*p*) It is ſurprizing, that none of the pharmaceutical writers take any notice of the defects of *Sydenham*'s liquid laudanum; yet it is certain that, after it has been kept for ſome time, about one fourth part of the opium contained in it is loſt in a groſs ſediment. This loſs is attended with great inconvenience; for during the precipitation, the laudanum is growing always weaker, ſo that newly prepared laudanum is, perhaps, a fourth part ſtronger than the ſame laudanum when it has ſtood for any time. To remedy this, brandy has been employed in ſome ſhops inſtead of wine; but the laudanum, thus prepared, loſes much

Sect. 4. I do not indeed judge that this preparation is to be preferred to the ſolid *laudanum* of the ſhops on account of its virtues, but I gave it the preference for its more convenient form, and the greater certainty of doſing it, as it may be dropt into wine, a diſtilled water, or any other liquor. And here I cannot forbear mentioning with gratitude the goodneſs of the Supreme Being, who has ſupplied afflicted mankind with opiates for their relief; no other remedy being equally powerful to overcome a great number of diſeaſes, or to eradicate them effectually. And notwithſtanding there are perſons who endeavour to perſuade the credulous, that almoſt all the virtues of opiates in general, and of opium in particular, chiefly depend on their artful preparation of them, yet whoever puts it to the teſt of experience, and uſes the ſimple juice, as frequently and as cautiouſly as any of its preparations, will certainly find very little difference between them, and be convinced that the wonderful effects of opium are owing to the native goodneſs and excellency of the plant that affords it, and not to the dexterity of the artiſt. Moreover, this medicine is ſo neceſſary an inſtrument in the hands of a ſkilful perſon, that the art of phyſic would be defective and imperfect without it; and whoever is thoroughly acquainted with its virtues, and the manner of uſing it, will perform greater

Its peculiar uſefulneſs.

Opium as effectual as any of its preparations.

the ſame proportion of opium, in time, as the other, which forms in a cruſt towards its ſurface all round the glaſs. By mixing wine and brandy in equal parts, as here directed, both inconveniencies are prevented, the tincture parting with ſo little opium either way, as to keep always an equal ſtrength: it would, however, be convenient to increaſe the quantity of the menſtruum, that the doſe might be more eaſily aſcertained, according to the obſervation in *Pharm. Reform.* p. 121. The college have very juſtly thrown out the trifling quantity of the two ſpices, which could have no other effect than to abſorb ſome of the ſcanty menſtruum.—Several tinctures of opium may be ſeen in *Pract. Chem.* (*p.* 342. *& ſeq.*) one in particular (*p.* 345.) not liable to objections uſually form'd againſt moſt of the preparations of this kind, with regard to the uncertainty of the doſe; for in that, it is ſo contrived as to be determined by weight.

Lewis's Edinb. Diſpenſatory, p. 136.

——To confeſs the truth (as one ſays) it would be no misfortune to practice if all the tinctures of opium and laudanums were omitted; for crude opium, without any previous preparation, anſwers all intentions much better, and the doſe of this is more eaſily aſcertained. *Boerhaave* aſſerts, that opium diſſolved in water is the beſt, the next is that diſſolved in wine, and the next in ſpirit of wine, but always the worſe, the higher the ſpirit.

things

things than might reaſonably be expected from the uſe of any ſingle medicine. For it muſt certainly argue unſkilfulneſs, and a very ſlender knowledge of its virtues, to underſtand only to apply it in order to procure ſleep, eaſe pain, and check a looſeneſs, ſince it may be ſuited to ſeveral other purpoſes, and is indeed a moſt excellent cardiac, not to ſay the only one hitherto diſcovered (*q*). Chap. 3. An excellent cordial.

15. The dyſentery required in general to be treated in this manner. But it muſt be obſerved that this dyſentery was of a more ſpirituous and ſubtile nature the firſt year it aroſe, than that of the ſubſequent years, and therefore yielded leſs readily to purgatives, than to thoſe medicines that diluted and cooled the blood, as well as the ſharp humours ſeparated from it into the inteſtinal duct. And therefore during the firſt *autumn* wherein the dry gripes and dyſentery prevailed, I always uſed the following method with ſucceſs for both, till colder weather ſucceeded, when I found it leſs effectual, even in the ſame year; and in the following years, when the diſeaſe had loſt much of its ſubtilty, and proved more humoural, it availed not at all. The dyſentery in the beginning of this conſtitution, how beſt treated.

16. I proceeded in this manner: if the patient was young and feveriſh, I directed bleeding in the arm, and an hour or two after a large quantity of liquor to be taken, by way of diluting, according to the method I practiſed in the *cholera morbus*, except that here, inſtead of chicken water, or poſſet drink, I ſubſtituted whey to be drank cold in the ſame quantity as in that diſeaſe, but ordered the glyſters to be injected warm, without the addition of ſugar, or any other ingredient. I always found the gripes and bloody ſtools go off upon the diſcharge of the fourth glyſter. This buſineſs being over, and all the whey evacuated, which if the patient be expeditious takes up only two or three hours, he was immediately put to bed, where he ſoon fell into a ſpontaneous ſweat (occaſioned by the mixture of the whey with the blood) which I ordered to be continued for twenty four hours, but not at all provoked by medicine; allowing him nothing more than warm milk during this time, which he likewiſe uſed only for three or The method ſpecified.

(*q*) Whether it be the beſt, or the only cardiac hitherto diſcovered may well be queſtioned; but certain it is that ſurprizing good has been done in hyſteric caſes, by drops made of compound ſpirit of lavender, tincture of caſtor, and our author's liquid laudanum, now called by the college, *Thebaic tincture*.—

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four days after he left his bed. If a relapſe happens, either from riſing too ſoon, or leaving off the milk diet too ſoon, the ſame proceſs muſt be repeated. Now if this method be certain and ſpeedy, no judicious perſon will reject it, becauſe it does not come recommended with a pompous multiplicity of remedies.

Cured by the ſame method in *Africa*.

17. That a fever, attended with ſuch ſymptoms, as we have enumerated above, happens in thoſe countries, and at thoſe times, wherein the dyſentery prevails epidemically, and that the method of cure here delivered is agreeable thereto, is ſtill further confirmed by the teſtimony of Dr *Butler*, who accompanied his excellency *Henry Howard* ambaſſador from his *Britannic* majeſty to the emperor of *Morocco*, in *Africa*. This gentleman aſſured me that the dyſentery raged at that time epidemically in that kingdom, as it always does; and that the fever accompanying it reſembled the fever above deſcribed, which he treated according to our method, with conſtant ſucceſs, both at *Tangiers* and other places, whether the patients were *Moors* or *Engliſhmen*. Now neither of us was obliged to the other for this method, but being at ſo vaſt a diſtance we both caſually fell upon the ſame. And he alſo informed me that the method of diluting plentifully in the dyſentery ſucceeded admirably in thoſe parts; and indeed I conceive it reaſonable that this method ſhould be attended with greater ſucceſs in that hot climate than in *England*.

An inſtance of its uſefulneſs.

18. In the firſt autumn wherein this conſtitution prevailed, Dr *Cox* being ſeized with a very acute dyſentery, by my advice, followed the abovementioned method, whereby he was ſafely and expeditiouſly cured. For after the diſcharge of the fourth glyſter, at which time I happened to be with him, the gripes and bloody ſtools vaniſhed, and there was occaſion for nothing further to complete the cure, except keeping his bed for the time above ſpecified, and uſing a milk diet. And this gentleman afterwards recovered ſeveral by the ſame method at the cloſe of autumn; but the following year, making trial of it again, he found it fail him.

How to be treated when it proves laſting.

19. We have already taken notice that when this diſeaſe runs on to a great length, it often affects all the inteſtines gradually downwards, till at length it fixes in the *rectum*, with a continual inclination to go to ſtool, whereby only a *mucus* tinged with blood is diſcharged.

In

In this caſe I conceive it would be uſeleſs to attempt the cure, either (1) by any of the abovementioned methods; (2) by *detergent*, *agglutinant*, or *aſtringent* glyſters, which are ordinarily injected according to the different ſtates of the ſuppoſed ulcer; or (3) by *fomentations*, *baths*, *fumigations*, and *ſuppoſitories*, ſuited to the ſame purpoſes. For it is apparent that this diſorder does not proceed from an ulcer of the *rectum*, but rather from this, that in proportion as the inteſtines recover their tone, they depoſite the remains of the morbific matter in this gut, which being continually irritated thereby, diſcharges part of the mucous matter at every ſtool wherewith the inſide of the inteſtines is naturally covered. For this reaſon the part affected muſt be ſtrengthened to expel the ſmall remains of the morbific matter, as the other inteſtines have already done. And this purpoſe is only anſwered by ſuch medicines as ſtrengthen the body in general; for the application of any kind of topic to the part affected, being incommodious, will rather debilitate than ſtrengthen it (*r*). The diſeaſe therefore muſt be borne till the ſtrength can be recovered by a reſtorative diet, and the free uſe of ſome particularly grateful cordial liquor; and then the teneſmus will go off ſpontaneouſly in the ſame degree as the ſtrength returns. Chap. 3. Topics why not to be applied.

20. It ſometimes happens, tho' very ſeldom, that a dyſentery ill treated in the beginning afflicts a particular perſon for ſeveral years, the whole maſs of blood having obtained a kind of dyſenteric diſpoſition, whence the bowels are continually ſupplied with hot and acrimonious humours, whilſt the patient in the mean time continues pretty capable of following his buſineſs. I met with an inſtance of this lately in a woman, who was perpetually afflicted with this diſeaſe, during the three laſt years of this conſtitution: and as ſhe had tried abundance of medicines before applying to me, omitting other remedies, I only directed bleeding, and was encouraged to repeat it frequently, at conſiderable intervals, as well from the colour of the blood, which reſembled that of It ſometimes continues for ſeveral years.

(*r*) The *teneſmus* is an exceeding troubleſome and painful ſymptom, but may be greatly relieved by fomenting the *anus* with a *decoction of flowers of elder and camomile in milk*, applying the *mucilage of fleabane ſeed or quince ſeed, a mixture of oil of almonds, yolk of egg, and ſaffron* thereto; or receiving the warm vapour of an *emollient decoction* of the *leaves of marſh mallows, flowers of elder, fenugreek ſeed*, &c. *in milk*.

Sect. 4. pleuritics, as from the great relief the patient obtained by every bleeding; by which means ſhe at length recovered her former health.

When not epidemic yields to *laudanum* only.

21. Before I finiſh, this particular is to be remarked, *viz.* that tho' in thoſe years, wherein the dyſentery rag'd ſo epidemically, the abovementioned evacuations were abſolutely neceſſary to be made before having recourſe to *laudanum*, yet in any conſtitution, which has a leſs tendency to this diſeaſe, they may ſafely be omitted, and the cure completed by the ſhorter method, namely by exhibiting *laudanum* alone, in the manner already delivered.—And let this ſuffice for the dyſentery (*s*).

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(*s*) The extract of logwood given in the quantity of two ſcruples or a dram for a doſe, and frequently repeated, or a ſtrong decoction of the ſame in a proper doſe, is a noble remedy in this obſtinate diſeaſe, for it has this peculiar good property, that it is aſtringent, yet not inflammatory; and of courſe may be very advantageouſly uſed when the diſtemper is accompanied with inflammation; in which caſe, however, previous evacuations are more particularly neceſſary, and cannot ſafely be omitted.

The judicious *Heiſter* gives us ſome cautions and obſervations, relating to this diſtemper, which I have tranſlated, and added here to ſupply what is wanting in our author concerning it.

I. This diſorder is never without danger, and therefore never to be lightly regarded, as many do, eſpecially at firſt, eſteeming it a ſlight diſtemper, and ſo neglecting it, or rather increaſing it by an improper regimen.

II. It does not eaſily yield, and nature alone contributes little to its cure; but the ſuperiority of art, and the power of the phyſician over nature eminently appears herein, becauſe, by evacuating and correcting the noxious and acrid matter in time, as the cauſe of the diſeaſe, he for the moſt part happily cures it.

III. All that die of this diſeaſe periſh by a mortification of the bowels; which therefore muſt by all means be prevented.

IV. Aſtringents, eſpecially earthy and chalybeate ſubſtances, *Pontac* wine, and other things of the like nature do hurt in the beginning, and ought, for this reaſon, to be avoided; for by retaining the vitiated humours of the bowels, they occaſion inflammations, pains and ulcers thereof, and likewiſe fevers, aphthæ, and other diſorders, and even death. But towards the end they may be conveniently given to ſtrengthen the parts; eſpecially ſalop, *Indian* bark, (by ſome called bark of *Eleutheria*) and *Japan* earth, which are the beſt and ſafeſt ſtrengtheners in this diſeaſe.

V. On the contrary, diluting liquids drank plentifully and warm are often ſo very beneficial in the beginning of the diſtemper, that ſeveral have recovered with little other aſſiſtance, along with a proper regimen.——Such are milk and water, whey,

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CHAP. IV.

Of the continued Fever of part of the Year 1669, *and the Years* 1670, 1671, 1672.

Origin of the fever of this conſtitution.

1. AT the ſame time the *dyſentery* raged a *fever* aroſe, which much reſembled, and often accompanied this diſeaſe. It not only attacked ſuch as were afflicted with the dyſentery, but thoſe likewiſe who remained wholly free from it, unleſs that ſometimes, tho' very rarely, the patient had ſlight gripings, ſometimes with, and at others without a looſeneſs; for it always had the ſame apparent cauſes with the dyſentery, and was attended alſo with the ſame ſymptoms as the fevers of thoſe who had the dyſentery; ſo that if we except the evacuation by ſtool in the dyſentery, and the ſymptoms thereon neceſſarily depending, this fever ſhould ſeem to be wholly of the ſame nature with that diſeaſe. And from henceforward, through the courſe of this conſtitution, it underwent the ſame change of ſymptoms, with reſpect to its increaſe, ſtate, and declenſion, as generally happened in the dyſentery. I call it, therefore, the *dyſenteric fever*.

Its ſymptoms.

2. This fever, as we have ſaid, ſometimes began (1) with mild gripings, eſpecially in the firſt years of its appearance, or they came on afterwards, but frequently none at all attended; (2) the ſweats, which, as

whey, butter-milk, barley-water, with gum arabick, and the like.

VI. All ſalts are hurtful in excoriations of the bowels, and all kinds of minerals are of little uſe; but vegetables, and ſome productions of the animal kind are preferable here.

VII. All violent purgatives and aloetics I know from my own experience do no ſervice.

VIII. Reſinous gums, *viz.* maſtich, olibanum, or balſamics, as *Peruvian* balſam, turpentine, &c. which have formerly been recommended by ſeveral phyſicians to ſtop the flux, and ſudorifics, eſpecially of the heating kind, do no great good.

IX. Toaſted rhubarb, ſo much commended by not a few in this diſeaſe, proves leſs beneficial than its powder and tincture; its virtues being rather leſſened than increaſed by this treatment of it.

X. The effect of opiates muſt be diligently obſerved, and according as they do good, or the contrary, be adminiſtered, or omitted.

Sect. 4. we obſerved above, were very copious in the fever of the preceding conſtitution, were unfrequent and moderate in this; but (3) the pain in the head was more violent here; (4) the tongue, tho' it was white and moiſt as in the other fever, was covered beſide with a thick fur; (5) this fever ſeldom went off by a ſpitting, as the other uſually did; (6) it was more ſubject to generate *Aphthæ* in the declenſion, than either the former, or any other fever I had hitherto met with: for both this and the fever that ſucceeded the dyſentery, in the decline, generally depoſited a vitiated and acrid matter in the mouth and throat, whence this ſymptom aroſe in ſuch as had been much exhauſted by the inveteracy of the diſeaſe, and further debilitated by an over-hot regimen. In the ſame manner alſo were thoſe *Aphthæ* generated, which happened at any time in ſtubborn dyſenteries, joined with a fever; eſpecially if, beſides uſing an hot regimen, the diſcharge by ſtools had been ſtopped by aſtringents, before the cauſe or fuel of the diſeaſe was expelled the veins by bleeding and purging.

3. Theſe were the moſt certain ſigns of this fever, for the other ſymptoms varied every year, according to the manifeſt qualities of the air at certain times, and alſo according to the progreſs and different ſtates of the dyſentery. But that theſe particulars may be better underſtood, ſince by this contrivance eſpecially nature manifeſts her ſuperior power in the production of epidemic diſeaſes, we ſhall make a cloſer ſcrutiny into this matter. It ſhould therefore be obſerved that, tho' the manifeſt qualities of the air may not make ſo ſtrong an impreſſion upon a particular conſtitution, as to be the productive cauſes of the epidemic diſeaſes which are properly referred thereto, as theſe ariſe from ſome latent and inexplicable diſpoſition thereof, yet they have a power over them for a time, and hence epidemics are admitted or excluded, as the manifeſt qualities of the air favour or oppoſe them. But the univerſal conſtitution remains preciſely the ſame, whether theſe promote, or in ſome meaſure retard it.

Epidemics how affected by the manifeſt qualities of the air.

4. Hence alſo it is that when various epidemics happen in the ſame conſtitution, ſome particular diſeaſe ſhews itſelf chiefly in the ſeaſon aſſigned it by the ſenſible qualities of the air; and at length yields to ſome other epidemic, which the different qualities of the ſubſequent

ſequent ſeaſon occaſion. Hence it happens that the ſtationary fever, belonging to the epidemic of that year, of whatever kind it be, rages moſt violently in *July*, at the beginning whereof it attacks abundance of perſons at once, but upon the approach of *autumn* abates conſiderably, and yields to the then reigning grand epidemic, which gives its name to the year; as every year ſufficiently ſhews. For the body being heated by the preceding ſummer, the fevers, which are peculiar to the general conſtitution, eaſily attack at that time, but upon the coming in of *autumn* the grand epidemic again prevails, and theſe go off entirely. Chap. 4.

5. But as the fevers ariſing in this month ſhould be referred to the ſenſible qualities of the air, ſo alſo the various ſymptoms, which are quite foreign to their nature, in as much as they depend upon ſuch a general conſtitution, are derived from the manifeſt qualities of the air happening in the ſame month. Hence it is, that in thoſe years wherein theſe fevers ſeize abundance of perſons in this month, they are attended with a variety of new ſymptoms, beſides thoſe which are peculiar to them as they proceed from the general conſtitution; and yet they ſtill continue the ſame, tho' by the unſkilful they are eſteemed every year as new fevers, on account of the diverſity of their concomitants. But theſe more peculiar ſymptoms continue only a few weeks, and the remaining part of the year only the proper ſymptoms appear, which accompany them as *ſtationary* fevers of ſuch a particular conſtitution.

Inſtanced in the dyſenteric fever.

6. This clearly appeared in other fevers, but chiefly in the dyſenteric fever of *July* 1671, and 1672; the former of which at the decline was conſtantly attended with extreme ſickneſs, a vomiting of green choler, and a great tendency to a looſeneſs; and the latter with a pain in the muſcular parts of the body, eſpecially in the limbs, reſembling a rheumatiſm, and alſo an inflammation of the throat, but milder than in a quinſey: yet both theſe met in the ſame ſpecific fever, and both required the ſame treatment, for they differed only with reſpect to the ſenſible qualities of the air that prevailed at the time when theſe ſymptoms aroſe. But the ſudden and unexpected riſe of theſe fevers about the beginning of this month, and the new appearance of their peculiar ſymptoms for a time, tho' they neither

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ther differed in kind, nor in the method of cure required, from the fever that run thro' the whole year: theſe particulars, I ſay, clearly ſhew how difficult it is univerſally to aſcertain the ſpecies of a fever from its concomitant ſigns; tho' it may be ſufficiently known by carefully attending to other diſeaſes ariſing in the ſame year, and alſo to the peculiar ſymptoms of the fever, ſo far as they depend upon a particular kind of evacuation. A conſideration likewiſe of the method or medicines to which it readily yields, greatly conduces towards diſcovering the ſpecies of the fever.

The ſpecies of a fever how beſt diſcoverable.

7. As to the other differences of the concomitant ſymptoms of *ſtationary* fevers, they only regard the different times of the conſtitution; and upon this account are either violent or moderate as the ſymptoms of other epidemics, to which they belong, are either increaſed or mitigated.

8. But to reſume our ſubject: this fever, which, as we have already obſerved, begun with the dyſentery, prevailed equally with it, except that it went off for a little time, whilſt the other epidemics of theſe years prevailed; yet it continued throughout this conſtitution, ſometimes attacking more, and at others fewer perſons.

The cure of the fever of this conſtitution.

9. With reſpect to the cure of this fever; having obſerved, as we ſaid before, that the ſymptoms of that fever which affected abundance of thoſe who had the dyſentery, were manifeſtly the ſame with thoſe which accompanied the ſolitary fevers of the current year, I judged it proper to attempt the cure by imitating in ſome meaſure the evacuation, which nature commonly uſes in order to expel the ſharp and corroſive matter, occaſioning both the dyſentery and the fever ſucceeding thereupon. And therefore I endeavoured to cure this fever by the ſame method, both as to bleeding and repeated purging, which we have deduced more at large in treating of the cure of the dyſentery; only I found that opiates, exhibited on the intermediate days, not only did no ſervice, but proved detrimental, by detaining the matter which ought to have been diſcharged by purging, which happened otherwiſe in the dyſentery. On the firſt days of the illneſs the patient lived on water-gruel, barley-broth, panada and the like for diet, and drank warm ſmall-beer for his common drink; but

but after purging once or twice, it was needleſs to forbid chicken and the like food of eaſy digeſtion; as this method of cure by purging indulges the uſe of thoſe things, which cannot be allowed if a different one be practiſed. The third purge, interpoſing a day between each, generally terminated the diſeaſe, but ſometimes further purging was required. When the patient continued weak after the fever was gone off, and recovered ſlowly, which often happened in hyſteric women, I endeavoured to ſtrengthen them, and repair the loſs of ſpirits by giving a ſmall doſe of *laudanum*; but I ſeldom repeated this medicine, and never preſcribed it till two or three days after the laſt purge. But nothing proved ſo effectual to recover the ſtrength, and chear the ſpirits, as the free uſe of the air immediately after the fever vaniſhed. Chap. 4.

10. I received the firſt hint of this method of practice from the following caſe. In the beginning of this conſtitution, whilſt I was ſolicitouſly endeavouring to diſcover the nature of this new fever, I was called to a young woman who was ſeized therewith, and had alſo a very violent pain in the fore-part of the head, and the other ſymptoms, which, as we ſaid, accompanied the dyſenteric fever. Upon enquiring in what manner, and when the fever firſt ſeized her, ſhe told me that ſhe had had the epidemic dyſentery a fortnight before, which prevailed very generally at that time, and that as ſoon as it went off, either ſpontaneouſly, or by the uſe of medicine, this fever with the pain in the head ſucceeded. Hence I conceived it would be proper, for both, to ſubſtitute another ſimilar evacuation in place of the dyſentery, upon the ſtoppage of which the fever aroſe; and accordingly procured it by the method above recommended, to which indeed the fevers of this conſtitution readily yielded. For I was ever of opinion that ſucceſs alone is not a ſufficient proof of the excellency of a method of cure in acute diſeaſes; ſince ſome are recovered by the imprudent procedure of unſkilful women, but that there was further required, that the diſtemper ſhould be eaſily conquered, and yield, as it were, conformably to its own nature *(t)*.—But this by the way. Whence derived.

11. In

(t) General ſucceſs in the cure of a particular diſtemper is no mean proof of the judgment of the practitioner, and the excellency

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11. In 1672, at the beginning of *June*, I was ſent for by the earl of *Saliſbury*, who had this fever, accompanied with gripings and coſtiveneſs; and he was recovered by the method propoſed, which was the only one I had occaſion for whilſt this fever continued.

A *ſtupor* in this fever how caus'd

12. In young perſons, and ſometimes in thoſe who were a little more advanced in years, this fever at times ſeized the head, ſo that they became delirious, yet without raving, as thoſe who grow light-headed in other fevers do; but were affected with a kind of *ſtupor*, nearly reſembling a *carus*. This ſymptom chiefly happened in ſuch as unadviſedly exerted their utmoſt endeavours to promote ſweat at the beginning of the diſeaſe. I was not ſo happy at that time as to be able to relieve ſuch as were attacked with this ſymptom, tho' I left no method untried, and had recourſe to all the medicines hitherto noted for this purpoſe (*u*).--And let theſe particulars ſuffice for the fever of this conſtitution.

CHAP. V.

Of the Meaſles of 1670.

The riſe and progreſs of the meaſles of this conſtitution.

1. IN the beginning of *January*, 1670, the *meaſles* appeared as is uſual, and increaſed daily till the approach of the vernal *equinox*, when it came to its height; after which it abated in the ſame gradual manner, and went quite off in *July* following. I intend to

celliency of the method employed; the eaſier indeed the method is, the more eminently does the ſkill of the phyſician appear, and the more univerſally beneficial it is likely to prove.

(*u*) It were to be wiſhed our author had particularly ſpecified the method and medicines, which were unſucceſsfully uſed to conquer this ſymptom; the failure of great men being not leſs inſtructive, in general, than their ſucceſs, as it affords ſeveral uſeful intimations how to proceed in the like caſes with greater ſafety and certainty. As the practice of bliſtering was not then eſtabliſhed, and it appears from the forms of medicines directed by our author, that he rarely adminiſtered thoſe of the warm, and volatile kind, it is highly probable that both theſe helps were either entirely omitted, or not uſed ſo freely as the caſe ſhould ſeem to require. In the preſent practice very ill-conditioned *ſtupors* are frequently removed by bliſtering freely, and exhibiting warm nervous medicines often in a moderate quantity; ſuch as the *volatile ſalt of harts-horn and amber*, *caſtor*, *the aromatic ſpecies*, *camphire*, *ſaffron*, Virginian *ſnake-root*, *compound ſpirit of lavender*, *volatile aromatic ſpirit*, &c.

deliver

deliver an accurate hiſtory of this ſort, ſo far as I was then enabled to obſerve it, becauſe it ſeemed to be the moſt perfect in its kind of all thoſe I have hitherto met with. Chap. 5.

2. This diſeaſe ariſes and terminates at the times above ſpecified. It chiefly attacks children, and eſpecially all thoſe who live under the ſame roof. (1) It comes on with a chilneſs and ſhivering, and an inequality of heat and cold, which ſucceeded alternately, during the firſt day; (2) the ſecond day theſe terminate in a perfect fever, attended with (3) vehement ſickneſs, (4) thirſt, (5) loſs of appetite, (6) the tongue white, but not dry, (7) a ſlight cough, (8) heavineſs of the head and eyes, with continual drowſineſs; (9) an humour alſo generally diſtils from the noſe and eyes, and this effuſion of tears is a moſt certain ſign of the approach of the meaſles; whereto muſt be added, as a no leſs certain ſign (10) that tho' this diſeaſe moſtly ſhews itſelf in the face, by a kind of eruptions, yet, inſtead of theſe, large red ſpots, not riſing above the ſurface of the ſkin, rather appear in the breaſt; (11) the patient ſneezes as if he had taken cold, (12) the eyelids ſwell a little before the eruption, (13) he vomits, (14) but is more frequently affected with a looſeneſs, attended with greeniſh ſtools: but this happens chiefly in children, during dentition, who are alſo more fretful in this diſtemper than ordinary. The ſymptoms uſually grow more violent till the *fourth* day, at which time generally little red ſpots, like flea-bites, begin to appear in the forehead and other parts of the face, which, being increaſed in number and bigneſs, run together, and form large red ſpots in the face, of different figures; but ſometimes the eruption is deferred till the *fifth* day. Theſe red ſpots are compoſed of ſmall red pimples, ſeated near each other, and riſing a little higher than the ſurface of the ſkin, ſo that they may be felt upon preſſing them lightly with the finger, tho' they can ſcarce be ſeen. From the face, where only they firſt appear, theſe ſpots extend by degrees to the breaſt, belly, thighs and legs; but they affect the trunk and limbs with a redneſs only, without perceptibly riſing above the ſkin.

Its ſymptoms enumerated.

They grow more violent till the fourth day.

3. The ſymptoms do not abate here upon the eruption, as in the ſmall-pox; yet I never found the vomiting continue afterwards, but the cough and fever grow more

And do not abate upon the eruption.

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The diſeaſe uſually terminates on the eighth day.

4. The meaſles therefore generally diſappears on the *eighth* day (*x*), when the vulgar, deceived by the term of the duration of the ſmall-pox, affirm, that the eruptions are ſtruck in; tho' in reality they have run thro' the courſe aſſigned them by nature, and they ſuſpect that the ſymptoms which ſucceed upon their going off, are occaſioned by their ſtriking in too ſoon. For it is obſervable that the fever and difficulty of breathing increaſe at this time, and the cough becomes more troubleſome, ſo that the patient can get no reſt in the day, and very little in the night. Children chiefly are ſubject to this bad ſymptom, which comes on at the declenſion of the diſeaſe, eſpecially if an heating regimen, or hot medicines have been uſed to promote the eruption; whence ariſes a peripneumony, which deſtroys greater numbers than the ſmall-pox or any of its concomitant ſymptoms; yet notwithſtanding, if this diſeaſe be ſkilfully treated it is no ways dangerous. Theſe bad ſymptoms are likewiſe often followed by a looſeneſs, which either immediately ſucceeds the diſeaſe, or continues ſe-

(*x*) Here we are told that the meaſles generally diſappears on the *eighth* day, and juſt above that the eruptions diſappear entirely on the *ninth* day, which may ſeem contradictory aſſertions; but the truth is that the eruptions vaniſh in *four* or *ſix* days from their firſt appearance in moſt ſubjects, unleſs the diſeaſe happens to be of a very malignant kind. Thoſe who die in the meaſles ordinarily periſh on the *ninth* day by a ſuffocation. The dangerous ſymptoms in this diſtemper are great loſs of ſtrength, coldneſs of the extremities, reſtleſſneſs, violent vomiting, a continual cough and looſeneſs, difficult deglutition, a *delirium*, convulſions, and profuſe ſweats, eſpecially in perſons advancing in years.

veral

veral weeks after the diſeaſe and all its ſymptoms are gone off, with great danger to the patient, by reaſon of the continual waſte of ſpirits hence ariſing. And ſometimes alſo, after uſing an exceeding hot regimen, the eruptions turn livid, and then black; but this happens only in grown perſons, who are irrecoverably loſt upon the firſt appearance of the blackneſs, unleſs they be immediately relieved by bleeding and a cooler regimen. Chap. 5.

5. As the meaſles in its nature nearly reſembles the ſmall-pox, ſo does it likewiſe agree pretty much therewith in the method of cure which it requires: hot medicines and a hot regimen are very dangerous; tho' they are frequently uſed by unskilful nurſes to drive the diſeaſe from the heart. The following method ſucceeded beſt with me. I confined the patient to his bed for only two or three days after the eruption, that the blood might gently breathe out the inflam'd and noxious particles, that are eaſily ſeparable, through the pores, in a manner ſuitable to the nature of the diſeaſe; and allowed no more clothes nor a larger fire, than he accuſtomed himſelf to when in health. I forbad all fleſh meats, and permitted water-gruel, barley-broth, and the like, and ſometimes a roaſt apple, for diet, and for drink either ſmall-beer, or milk boiled with thrice its quantity of water. To relieve the cough, which almoſt always attends this diſeaſe, I ordered a draught of ſome *pectoral decoction* to be taken between whiles, with a proper *linctus*. But I chiefly obſerved to give *diacodium* every night, the diſtemper throughout, *e. g.*

Requires nearly the ſame method of cure with the ſmall-pox.

The method deſcribed.

Take of the pectoral decoction, a pint and half; ſyrup of violets and maiden-hair, each an ounce and half; mix them together for an apozem, to be taken in the quantity of three or four ounces, three or four times a day. A pectoral apozem.

Take of oil of ſweet almonds, two ounces; ſyrup of violets and maiden-hair, each an ounce; fine ſugar enough to make them into a linctus, to be taken often in a ſmall quantity, eſpecially when the cough is troubleſome. A pectoral linctus.

Take of black-cherry water, three ounces; ſyrup of white poppies, an ounce; mix them together for a draught, to be taken every night. A quieting draught.

In children the doſe of the pectorals and opiate muſt be diminiſhed in proportion to their age (*y*). 6. This

(*y*) With reſpect to the method of cure, it may not be amiſs to give a few further directions taken from *Hoffman*. If

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Its excellence.

6. This method ſeldom fails of curing, beſides being preventive of every other ſymptom, which is not the neceſſary and unavoidable attendant of the diſeaſe: the cough is the moſt troubleſome one, which however is nothing dangerous till the diſeaſe be gone off; after which, if it ſhould continue a week or a fortnight, it may be eaſily cured by the uſe of the open air, along with proper pectorals; and indeed it generally abates by degrees ſpontaneouſly, and at length ceaſes (z).

7. But

If the firſt paſſages be over-charged with indigeſted matters, a *gentle emetic* is proper. If the children have worms, a *proper purge* is requiſite in the beginning. *Bleeding* is neceſſary in grown perſons, if there be a fulneſs of blood.

Heating medicines and a *hot regimen* render the morbid matter more ill-conditioned and ſubtile, increaſe the heat and anxiety, and exhauſt the ſtrength: and nitrous and over-cooling medicines, eſpecially in children, retard the eruption, and the matter being retained in the habit diſpoſes to a mortification.

When the meaſles attacks hyſteric women, or happens at the time of the menſtrual diſcharge, it is often accompanied with difficulty of breathing, a contraction of the *œſophagus*, great anxiety, *&c.* whence the eruption is retarded. In this caſe the eruption is not to be promoted by warm medicines: but we are rather to have recourſe to ſuch as remedy the ſpaſms, as glyſters made of *carminatives and anodynes, mild diaphoretics, mixt with a ſmall proportion of caſtor and nitre*; and ſometimes *bleeding* is to be uſed.

The cough, which is the moſt troubleſome ſymptom, is beſt relieved by freſh drawn *oil of ſweet almonds*, mixt with *ſyrup of maiden-hair* or *marſh mallows*, given frequently in the quantity of half a ſpoonful in water gruel.

The looſeneſs is neither to be much encouraged, nor haſtily checked; as it often proves rather beneficial than detrimental, by terminating the diſeaſe, and carrying off abundance of impurities: *ſmoothing glyſters*, to ſoften the acrimonious humours lodged in the inteſtines, are ſafeſt here.

In hæmorrhages happening in this diſeaſe powerful *aſtringents* and *opiates* are bad. The following mixture hath been often uſed with ſucceſs.

Take of black cherry water, ſix ounces; treacle water, three drams; diaphoretic antimony, and diaſcordium, of each, half a dram; ſpirit of vitriol, twenty drops; ſyrup of red poppies, two drams; mix them together.—Give two or three ſpoonfuls every three hours.

(z) Here is no mention made of purging after the diſeaſe is gone off, the omiſſion whereof notwithſtanding has been frequently found to occaſion very dangerous and ſtubborn diſorders; as internal abſceſſes, malignant ulcers, *caries* of the bones, a conſumption, dropſy, blindneſs, *&c.* Let it be remembered therefore that purging is almoſt equally neceſſary after this diſtemper, as after the ſmall-pox.

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The miſchief enſuing from a hot regimen and cardiacs after the diſeaſe is gone off, how remedied.

7. But if, by uſing cardiacs and too hot a regimen after the departure of the diſeaſe, the patient's life be endangered (which is a very common thing) by the violent fever, difficulty of breathing, and other ſymptoms that uſually afflict ſuch as have a peripneumony, I have with great ſucceſs ordered even the tendereſt infants to be blooded in the arm, in ſuch quantity as their age and ſtrength indicated. And ſometimes alſo, when the diſeaſe has been urgent, I have not feared to repeat the operation. And in reality, by bleeding, I have ſnatched abundance of children from imminent death. This diſorder attacks children upon the departure of the meaſles, and proves ſo fatal, that it may juſtly be

As this peſtilential diſeaſe is of kin to the ſmall-pox, (ſays Dr *Mead*) it requires a management not very different from the ſame which we have recommended in that diſtemper. Blood muſt be taken away in the beginning, according to the age and ſtrength of the patient. It is beſt, if poſſible, to do this before the eruption of the puſtules; but, if they are already come out, it muſt, however, be taken away. For the greateſt danger is an inflammation of the lungs, which cannot be prevented too ſoon. Therefore in the height of the fever alſo, although bleeding was not neglected in the beginning, yet it is ſometimes neceſſary to repeat it. And in the laſt place, at the end of the diſeaſe, when the ſkin is now growing dry, and the ſcales falling off, it will be a great error not to open a vein again; that by this means a flux of humours upon the breaſt and inteſtines, and the ſymptoms of a hectic fever and conſumption may be happily prevented.

The diet ought to be the ſame as is preſcribed in the ſmall-pox; taking particular care that the body be kept lax rather than bound up, through the whole courſe of the diſtemper.

As to remedies; to thoſe cooling ones which are directed in the other diſeaſe, muſt be added ſuch as abate the cough, and help expectoration; particularly an *oily linctus*, and the *pectoral infuſion*, of which, with the addition of a little *nitre*, the patient may drink frequently.

Dr *Sydenham* gave *diacodion*, even on the firſt days of the illneſs, but I think he was not cautious enough in this point; for all medicines of this kind thicken the humours, ſtreighten the breath, and retard the eruption of the puſtules. Therefore, during the increaſe of the diſtemper, they are to be uſed very ſparingly; but at the latter end they are of great ſervice: in as much as there is then a neceſſity to quiet the cough, which, from the ſharp defluxion upon the lungs, threatens a hectic fever and conſumption. But in the mean time, gentle purges are to be given at due intervals. *Milk*, eſpecially that of *aſſes*, muſt be drank. Change of air is alſo neceſſary: and laſtly, exerciſe, ſuitable to the ſtrength of the patient, is to be daily enjoined. *Stack's tranſlation of the Doctor's diſcourſe on the Small-pox*, p. 102. *& ſeq.*

Sect. 4. eſteemed one of the principal miniſters of death, deſtroying greater numbers than the ſmall-pox: nor have I hitherto diſcovered any other certain method of conquering it. Bleeding alſo cures the looſeneſs, which, as we ſaid, ſucceeds the meaſles (*a*); for as it ariſes from the *effluvia* of the inflamed blood, flowing into the inteſtines (as is likewiſe uſual in the pleuriſy, peripneumony, and other diſeaſes cauſed by inflammation) and irritating them to diſcharge their contents, this remedy alone will relieve; as it makes a revulſion of thoſe ſharp humours, and likewiſe reduces the blood to a due temper (*b*).

Bleeding as ſafe in children as in adults.

8. Nor need any one be ſurprized at my bleeding young children, ſince, as far as I have hitherto been able to obſerve, it may be as ſafely performed in them as in grown perſons. And indeed it is ſo neceſſary in the peripneumonic fever abovementioned, and in ſome other diſorders to which children are ſubject, that there is no curing them without it. For inſtance, how are children to be relieved without bleeding during dentition, in the convulſions happening to them in the ninth or tenth month, accompanied with a ſwelling and pain in the gums, whence the nerves are compreſſed and irrita-

(*a*) See above, *Par.* 4.

(*b*) Gentle purging with *rhubarb* ſhould ſeem adviſeable here; and joined with moderate exerciſe, aſſes milk, and the uſe of the open air, will probably effect a cure. *Bleeding* may occaſionally be proper, but cannot be ſaid to make a revulſion of ſharp humours, which in this caſe purging ſeems beſt adapted to remove.

I have often wondered (ſays the ſame excellent writer) why that ſagacious and experienced phyſician *(Sydenham)* whom I have ſo often mentioned with praiſe, did not preſcribe bleeding in the very beginning of the diſeaſe; but neglected this material part of the cure ſo far, that he only ordered it at the end, when a hot regimen, and too warm medicines, had brought upon the patient a cough and ſhortneſs of breath. Eſpecially ſince he himſelf takes notice, that the looſeneſs which often follows this fever, and *which*, he ſays, *ariſes from the effluvia of the inflamed blood, flowing into the inteſtines*, is only to be cured by blood-letting. But this great man deſerves pardon upon this account, that in thoſe times phyſicians never attempted to take away blood in thoſe fevers which were attended with any eruptions, particularly in children, who are the moſt liable to this kind of illneſs. Their reaſon was, leſt that emptying of the veſſels ſhould hinder the coming out of what was to be diſcharged by the ſkin. But daily experience ſhews, that this fear is vain, and that the event is quite contrary to what they imagined. *Stack's tranſlation of the Doctor's diſcourſe on the Small-pox*, p. 100. *& ſeq.*

ted,

ted, and the fits alſo proceed? In this caſe bleeding only is vaſtly preferable to all the celebrated ſpecifics yet known; ſome of which prove detrimental by their adventitious heat, and whilſt they are ſuppoſed to cure the diſorder by ſome occult quality, increaſe it by their manifeſt heat, and deſtroy the patient. Not to mention at preſent the great relief which bleeding affords in the *hooping-cough* in children, in which it far exceeds all kinds of pectorals. Chap. 6.

9. What has been ſaid of the cure of thoſe diſorders which immediately ſucceed the meaſles, may ſometimes alſo hold good when the diſeaſe is at the height, provided the ſymptoms be occaſioned by an artificial heat; if I may be allowed to uſe the expreſſion. In 1670 I attended a maid-ſervant of lady *Anne Barington*, who had the meaſles, joined with a fever, difficulty of breathing, purple ſpots over the whole body, and many other dangerous ſymptoms, all which I aſcribed to the hot regimen and medicines which had been too freely uſed. I directed bleeding in the arm, and preſcribed a cooling pectoral ptiſan to be taken often, by means of which, and a more cooling regimen, the purple ſpots and all the other ſymptoms went off by degrees. A caſe related, wherein it did ſervice.

10. This diſeaſe as abovementioned (*c*), began in *January*, and increaſed daily till the approach of the vernal equinox, after which it decreaſed gradually, and totally diſappeared in *July* following, without returning again during the courſe of years wherein this conſtitution prevailed, except that in the following ſpring it appeared in a very few places.—And let this ſuffice for the meaſles.

CHAP. VI.

Of the anomalous or irregular Small-pox of the Years 1670, 1671, *and* 1672.

1. THE *meaſles*, as we ſaid before (*d*), introduced a different ſort of *ſmall pox* from that of the preceding conſtitution. It aroſe much about the ſame time as the meaſles did, namely in the beginning of *January*, 1670; and tho' it was not ſo epidemic, it notwithſtanding The riſe and progreſs of a new kind of *ſmall-pox*.

(*c*) See above, *Par.* 1.
(*d*) See above, *Chap. I. Par.* 4.

Sect. 4. ſtanding accompanied that diſeaſe whilſt it prevailed, and continued after it went off, as long as this conſtitution laſted. Nevertheleſs it yielded to the dyſentery which raged in autumn; a ſeaſon peculiarly diſpoſed to favour it. But in the winter this kind of ſmall-pox returned again, the dyſentery being overcome by the cold, which is an enemy to it. In this order did theſe diſtempers ſucceed each other thro' the whole term of years of this conſtitution, except that in the laſt *autumn* it prevailed, namely in 1672, the conſtitution being then in its decline, and ſlowly promoting the dyſentery, which at that time was alſo declining. The ſmall-pox, contrary to cuſtom, raged alſo at the ſame time, and prevailed ſo equally with the dyſentery, that it was not eaſy to aſcertain which of the two diſeaſes attacked greater numbers, but, as far as I could conjecture, the dyſentery ſhould ſeem to have been chiefly prevalent. Moreover this ſort of ſmall-pox alſo, like other epidemics, was very violent in the beginning, and increaſed daily till it came to the height, after which it decreaſed by degrees, both with reſpect to the violence of the ſymptoms, and the numbers attacked thereby.

2. But to ſet down its particular ſigns. I was much ſurprized upon the riſe of this ſmall-pox, when I found that it differed in ſeveral conſiderable ſymptoms from the kind produced by the preceding conſtitution, which I had formerly obſerved with particular attention. At preſent I ſhall only treat of the ſymptoms that differ from thoſe of the other kinds, without taking notice of thoſe it had in common with that ſort of ſmall-pox ſo fully deſcribed in the foregoing ſheets.

The ſigns of the diſtinct kind.

3. The diſtinct kind of this ſmall-pox differed from the common diſtinct one of the preceding conſtitution, only in the following ſymptoms. (1) The eruptions generally came out on the *third* day, which indeed is uſual in the confluent ſort, whereas in the diſtinct kind of the former conſtitution they appeared not before the *fourth* day; (2) they did not grow ſo big in the courſe of the diſeaſe, as thoſe of that kind, but (3) were more inflamed, and in the declenſion, after their ſuppuration, frequently looked black; (4) ſometimes, but very rarely, a ſpitting happened, as in the confluent kind, tho' the eruptions were very few: whence it appears that the ſmall-pox of this conſtitution greatly reſembled the confluent

confluent kind, and was attended with a more violent inflammation than is usual in the distinct. Chap. 6.

The signs of the confluent kind

4. But the confluent sort of this constitution differed from those I had observed in other years in several particulars, which I shall here enumerate. (1) The eruptions sometimes appeared on the *second* day, at others on the *third*, in form of an uniform reddish swelling, covering the whole face, and thicker than an *erysipelas*, nor could any spaces be easily perceived between the eruptions; (2) the rest of the body appeared to be overspread with an almost infinite number of red, inflamed pustules, joined together in one; (3) in the intermediate spaces whereof, especially in the thighs, little bladders arose, like those occasioned by burns, full of a limpid *serum*, which ran plentifully from them, upon the bursting of the skin; the flesh underneath appearing black, and as if it were gangren'd. But this dreadful symptom happened very rarely, and only in the first month wherein this kind prevailed.

5. Amongst the rest who were thus grievously affected at this time I was sent for, in the beginning of *January* 1670, by Mr *Collins*, a brewer in St *Giles*'s parish, to his son, an infant, who had bladders on his thighs as large as a walnut, and full of a transparent *serum*, which afterwards bursting, the flesh underneath appeared as it were quite mortified, and he died soon after; as did all those I had seen attacked with this dreadful symptom.

6. (4) About the *eleventh* day a white shining pellicle extended itself over the reddish swelling in several parts of the face, and by degrees over the whole; (5) soon after it discharged a shining crusty matter, not indeed of a yellow or brown colour (both which were observable in the other kind of small-pox) but of a deep red, like congealed blood, which, as the pustules ripened, grew every day blacker, till at length the whole face appeared as black as soot: (6) and whereas in the other kind of confluent small-pox the patient was in the most danger on the *eleventh* day, which put an end to the lives of the greatest part of those that died; in this sort, unless an extreme hot regimen destroyed him in a shorter time, he generally lived till the *fourteenth*, and sometimes to the *seventeenth* day, after which the danger was over. (7) But it must be noted, that those who had the fatal bladders with the mortification, which happened to some

Sect. 4. in the firſt month wherein this kind aroſe, as above related, died in few days after the eruption.

7. (8) The fever, and all the other ſymptoms, which either preceded or accompanied this ſort of the ſmall-pox, were more violent than in the foregoing kind, and it had manifeſt ſigns of greater inflammation; (9) the patient was more ſubject to a ſpitting; (10) the puſtules were conſiderably more inflamed, and much ſmaller, ſo that it was difficult upon their firſt appearance to diſtinguiſh them from an *eryſipelas*, or the *meaſles*, unleſs that the latter certainly manifeſted itſelf by the day of the eruption, and other ſymptoms, above enumerated in the hiſtory of that diſeaſe; (11) the ſcales remained a long time after the eruptions vaniſhed, and left more unſeemly ſcars behind them. It is well worth noting, that throughout the whole courſe of years which this conſtitution laſted, wherein the dyſentery raged ſo epidemically, the ſmall-pox, when exaſperated by an immoderate hot regimen, ſometimes terminated in a dyſentery; as I more than once obſerved.

The *ſmall-pox* became more gentle in the third year.

8. But it is proper to obſerve that this ſmall-pox was not attended with ſuch fatal ſymptoms during the whole time of its continuance, for, after having prevailed two years, it began to grow milder in the third year, namely in 1672, and the eruptions, having loſt their blackneſs, grew by degrees yellow, like a honey-comb, which is peculiar to the regular ſmall-pox, during the ſuppuration of the puſtules, ſo that in the laſt year of this conſtitution it proved very mild and gentle, conſidering its kind. Nevertheleſs it is manifeſtly to be referred to a quite different kind, on account (1) of the remarkable ſmallneſs of the puſtules, (2) the tendency to a ſalivation, and (3) other concomitant ſymptoms.

9. Tho' our ignorance of the cauſes of every ſpecific difference be ſuch, as makes it impoſſible for us to comprehend wherein this ſmall-pox differs from thoſe produced by the other conſtitution; yet, to me, it plainly appears, from the ſeveral concomitants, that this ſort was attended with greater inflammation than the other, and therefore that the whole of the cure conſiſts in giving a greater check to the violent ebullition of the blood. And this is chiefly effected by a temperate regimen, after exhibiting opiates as above directed; *e. g.* allowing the free uſe of ſome liquor that is not heating,

The method of cure.

but

but will rather immediately abate the violent heat, which fatigues and parches the patient more in this than in any other diſeaſe, eſpecially during the ſuppuration of the puſtules. The *white decoction* made of *bread and a little burnt hartſhorn, boiled in a large proportion of water, and ſweetened with ſugar* is beneficial here; but *milk boiled with thrice its quantity of water* is generally a more grateful liquor, and better anſwers the end of cooling; drinking plentifully is not only proper to diminiſh the extreme heat, which chiefly prevails during the *ſecondary fever*, but alſo promotes the ſalivation, and keeps it up longer than it could be continued, if the patient were over-heated. And, further, I have often obſerved that cooling liquors, drank plentifully, have ſucceeded ſo well, that by means thereof the ſmall-pox, which appeared at the beginning with the worſt ſigns of the confluent kind, hath in the courſe of the diſeaſe been rendered diſtinct; and the eruptions, which, as they ripened, would otherwiſe have firſt diſcharged a red, and ſoon after a black matter, have looked very yellow, and, inſtead of being inflamed and very ſmall, proved of a mild and good kind.

Chap. 6.

Advantages of drinking cooling liquors plentifully

10. Nor does the menſtrual diſcharge, which frequently happens to women in this diſeaſe, at all forbid, but rather encourage the free uſe of theſe liquors, eſpecially if it comes at an unuſual time. For all the danger here is leſt the blood, being too much attenuated by the exceſſive heat of the diſeaſe, ſhould break thro' the veſſels wherever it can find a paſſage, eſpecially when unſkilful nurſes add oil to the flame, by uſing a hot regimen, and a decoction of *hartſhorn*, with *flowers of marigold*, &c. Now whatever greatly dilutes and cools the blood, inaſmuch as it checks this flux, does neceſſarily, tho' not immediately, tend to preſerve the eruptions, and the ſwelling of the face and hands in their due ſtate; whereas contrariwiſe heating remedies, notwithſtanding they may ſeem better ſuited to this purpoſe, yet, as they promote this diſcharge, they fall far ſhort of anſwering the end. And I doubt not but abundance of women have periſhed by the miſtake of ſuch as had the care of them, who apprehending the ſinking of the eruptions from this diſcharge, have endeavoured to prevent it by a hot regimen and cardiacs, by which means the patient hath been cer-

Sect. 4. tainly deſtroyed; tho' at the ſame time they ſolicitouſly endeavoured to ſtop the hæmorrhage, and keep the eruptions and ſwelling at the proper height, by mixing different aſtringents with the cardiacs.

Exemplified in a caſe where the menſtrual diſcharge happened during the ſmall-pox.

11. I lately attended a lady, who had this dangerous black ſmall-pox, and tho' I forbid every thing at the beginning that might agitate the blood, yet as ſhe was of a very ſanguine complexion, in the flower of her age, and of a lively diſpoſition, and the weather at the ſame time very warm, ſhe was ſuddenly ſeized, on the third day after the eruption, with ſo copious a menſtrual diſcharge, at an unuſual time, that the women about her ſuſpected ſhe had miſcarried. Tho' this ſymptom was very urgent for ſeveral days, yet I did not therefore judge that the uſe of the milk and water was to be diſcontinued, but rather eſteemed it more neceſſary, and to be drank plentifully now, and likewiſe thro' the whole courſe of the diſeaſe, particularly upon the coming on of the *ſuppuratory fever*. At this time Dr *Millington*, formerly my fellow collegiate, and now my intimate friend, was joined with me, who obſerving that every thing went on very well, according to the nature of the diſeaſe, readily conſented that our patient ſhould perſiſt in drinking freely of the liquor above-mentioned, which ſhe often declared was particularly grateful to her, promoting the ſpitting, and both cooled and refreſhed her. But when the face began to harden, and to be cruſted over, we apprehended our patient would be injured by the putrid vapours proceeding from the purulent matter of the eruptions, which had a very fetid ſmell in this worſt kind of ſmall-pox, and therefore directed a few ſpoonfuls of *mulled ſack*, to be taken once a day, or as often as ſhe perceived any ſickneſs at her ſtomach. And by the uſe of theſe few things, along with a *quieting draught* every night, ſhe recovered, without having been ſeized with a *delirium*, or any other very dangerous ſymptom, except the hæmorrhage abovementioned. The face and hands ſwelled ſufficiently, the eruptions were as large as this ſort of ſmall-pox would permit, and the ſalivation was eaſy and copious to the end; and, laſtly, tho' the eruptions in the face ſeem'd blackiſh, whilſt they ripened, yet they were yellow in moſt other parts.

Where unneceſſary.

12. But how much ſoever the kind of ſmall-pox, peculiar to this conſtitution, exceeded thoſe of other con-

conſtitutions in point of heat and inflammation, yet when the eruptions were diſtinct, or few, experience ſhew'd it to be needleſs to drink ſo copiouſly of the above-mentioned liquors. But it ſufficed if the patient drank ſmall-beer enough to quench his thirſt, and ſupp'd water-gruel, and panada, and ſometimes eat a roaſt apple, and (if he exceeded *fourteen*) took a doſe of *ſyrup of white poppies*, when ſick, or delirious for want of reſt; and I did nothing more when the puſtules were few, except keeping the patient in bed. By this method alone my ſon *William* was, by the bleſſing of God, recovered in this diſtinct ſort of ſmall-pox, in *December*, 1670.

13. I ſhall add nothing more relating to the ſmall-pox of this conſtitution, as having treated of the other kind at large, from which the preſent only differs by being of a hotter and more inflammatory nature; whence it follows that more care was required in order to diminiſh the conſiderable heat, which was ſo natural to it, and ſo certainly threatened deſtruction to the patient.

CHAP. VII.

Of the bilious Colic of the Years 1670, 1671, *and* 1672.

1. DUring all the years of this conſtitution the blood was conſiderably diſpoſed to depoſite hot and choleric humours in the inteſtines, whence the *bilious colic* prevailed more than ordinary; which diſeaſe, tho' it ſhould be reckoned amongſt thoſe of the chronic kind, and of courſe foreign to my purpoſe, yet as it depended on the ſame indiſpoſition of the blood at that time, from which moſt of the then prevailing epidemics aroſe, it ſhould for this reaſon be treated of here; but eſpecially becauſe I perceived that the ſame febrile ſymptoms preceded it, which uſually preceded the reigning *dyſentery* of thoſe times. And ſometimes alſo this diſtemper, as above remarked, ſucceeded the dyſentery, when it had continued a long time, and ſeemed to be going off. But when it did not ſucceed an inveterate dyſentery, it generally aroſe from a fever, which afflicted the patient only for a few hours, and ordinarily terminated iu this diſeaſe. The *bilious colic*, why treated of here.

2. It

Sect. 4.

Its symptoms.

2. It chiefly attacked young perſons of a warm and bilious conſtitution, eſpecially in the ſummer ſeaſon. (1) A violent and intolerable pain of the bowels attends it, which ſometimes ſeem to be tied together, and at others cloſely purſed up, and bored through, as it were, with a ſharp-pointed inſtrument: the pain abates between whiles, but immediately returns again. (2) In the beginning the pain is not ſo certainly fixt in one place, as in the progreſs of the diſorder; (3) the vomiting is leſs frequent, and the belly more eaſily moved by purgatives; (4) but as the pain increaſes, it becomes more obſtinately fixt in one place; (5) frequent vomitings ſucceed, and the belly is more coſtive, till at length (6) the exceſſive violence of the ſymptoms occaſions a total inverſion of the periſtaltic motion of the guts (unleſs the patient be relieved ſooner) and conſequently an *iliac paſſion*, in which diſtemper all cathartics immediately become emetic, and glyſters likewiſe, together with the *fæces*, are forced up the inteſtinal tube, and ejected by vomit. If the matter thus thrown up be quite pure, it is ſometimes green, ſometimes yellow, and ſometimes of an uncommon colour (*e*).

The indications of cure.

3. As all the ſigns of this diſeaſe clearly ſhew it to ariſe from ſome ſharp humour, or vapour, thrown off from the blood into the inteſtines; I judge the primary indication of cure, (1) to conſiſt in evacuating both the *antecedent* humour in the veins, and that contained in the inteſtines; and the next, (2) in checking the great

(*e*) The *bilious colic* proceeds (1) from an acrimonious, corrupt, bilious humour, copiouſly collected, and ſtagnating in the ſmall guts, eſpecially in the *duodenum*; and (2) frequently from a furious paſſion, eſpecially in young perſons of a warm and dry conſtitution, in the ſummer ſeaſon. I knew a perſon in years, otherwiſe ſubject to this diſorder, who every time he put himſelf in a violent paſſion, as certainly had a fit of it ſoon after, in one of which he, at length, died in a few hours. Or (3) this diſorder is occaſioned by too free an uſe of ſpirituous and hot liquors.—Its principal ſymptoms are (1) a hoarſeneſs; (2) *cardialgia*; (3) continual loathing of food; (4) vomiting of green bile; (5) an hiccup; (6) a hot and feveriſh indiſpoſition; (7) reſtleſſneſs; (8) great thirſt; (9) a bitter taſte in the mouth, to which (10) there ſometimes ſucceeds a frequent diſcharge of bilious matters downwards.

When the bilious colic attacks with a ſhivering, and the pain is exceeding violent, great danger attends it; an inflammation being denoted hereby, which, if not remedied, terminates in a mortification.

tendency

tendency of the humours to the parts affected, and easing the intolerable pain, by exhibiting opiates (*f*). Chap. 7.

4. In order hereto I bleed freely in the arm, if no blood has been taken away before, and in three or four hours after administer an opiate. The next day I direct some lenient purgative, and order it to be repeated a second time, at a day's interval, and sometimes a third time, according as the remains of the humour seem to be more or less in quantity. But it must be observed, that if this disease proceeds, either from a surfeit of fruit, or any other kind of aliment of difficult digestion, whence depraved and corrupt juices are first received into the blood, and thence separated into the intestines; in these cases the stomach must first be well cleaned by drinking posset-drink plentifully, and vomiting it up again, which being over, an opiate must be given, and a vein opened the next day, and, in other particulars, the process above delivered is to be followed (*g*).

The method of answering them.

How to be cured if it proceeds from a surfeit.

5. But

(*f*) It may not be amiss to observe here, that the medicines in this species of the colic should rather be exhibited in a tepid than a hot vehicle, and warm infusions and decoctions, a sweating regimen, and very hot bathing forborn; the bilious humour being exasperated by this means, and made to penetrate more intimately into the nervous parts. And indeed we learn from practical observations, that the drinking of cold water only, which *Galen* used in this disorder, is highly beneficial, and curative thereof. This advice is worth attending to, more particularly if it be occasioned by a furious passion. But this necessary caution is to be inculcated, that in all cases where there is reason to apprehend an inflammation, cold water must absolutely be refrained; otherwise fatal consequences may ensue.

(*g*) I do not perceive, says the ingenious *Huxham*, what service bleeding can do now, unless the immoderate quantity, velocity, or heat of the blood requires it, previous to all other helps; and besides in plethoric habits it is dangerous to exhibit a vomit, unless bleeding has been first performed.

He goes on. I use the following emetic.

Take of the root of Ipecacuanha, *a dram. or a dram and half; salt of wormwood, half a scruple; boil in four ounces of spring water to two; strain off the liquor; to which add of the compound distilled water of camomile flowers, and the syrup of buckthorn, each half an ounce: mix them together for a vomiting draught.—To promote the operation, let thin chicken broth be drank plentifully, or an infusion of the leaves of sage, and camomile flowers, which latter I most approve.*

This emetic appears to be the gentlest of all those I have yet tried, is a sufficiently powerful cleanser, and the most certain in its effects; for it will work speedily, and not occasion gripings

Sect. 4. 5. But when the violence of the pain, and the vomiting, whence the inteſtines are in a manner inverted, do

ings by continuing long in the ſtomach; which *Ipecacuanha*, taken in powders, often does. When I would have it ſtronger, I add two or three grains of *emetic tartar*, or a ſpoonful or two of the *infuſion of* CROCUS METALLORUM thereto.

Huxham de morb. col. Dannoniorum, p. 25,—27.

When the colic proves very ſevere, opiates ſhould be joined with purgatives, in order to eaſe the pain, relax the inteſtines, and render the periſtaltic motion conſtant and regular.——— All pain acts as a *ſtimulus*, or the *ſtimulus*, more properly, cauſes the ſenſation of pain; every *ſtimulus* drawing the fibres into contractions, and, if violent, into ſpaſms. If therefore the pain in the colic be extremely urgent, it occaſions convulſions in ſome parts of the inteſtines, and they are, as it were, tied together, ſo that, unleſs the pain be mitigated, neither *fæces* nor *flatus* can be diſcharged by the *anus*; for which reaſon a vehement colic is moſtly accompanied with great coſtiveneſs. In this caſe, therefore, opiates are conveniently mixed with purgatives,—*e. g.*

Take of the leſſer Pil. cochiæ, *a ſcruple, or half a dram; calomel, half a ſcruple; ſolid* laudanum, *a grain; oil of cloves, one drop, make them into pills.* Or,

Take of the powder of jalap, a ſcruple, or half a dram; ſpecies diambra, *eight grains; calomel, half a ſcruple; ſyrup of buckthorn, enough to make them into a bolus.---But pills are beſt retained.*

Two or three hours after exhibiting either of theſe, or the like, I give an *infuſion of ſena*, a *ſolution of manna*, or ſomething of this kind, to which I ſometimes add *oil of ſweet almonds*, or *oil olive*, unleſs the patient has a great averſion to oil. I increaſe the doſe of theſe remedies, and repeat them, according to the urgency of the ſymptoms. Theſe medicines eaſe the pain, relax and lubricate the bowels, and gently ſtimulate them to diſcharge their contents. But if, notwithſtanding the uſe of theſe, the body continues bound, I order the *abdomen* to be fomented with an emollient fomentation, eſpecially when it is much diſtended and hardened, or conſiderably contracted by ſpaſms. The mild vapour hereof penetrates the coats of the *abdomen*, ſoftens and ſupples the inteſtines, and relaxes the too tenſe and rigid fibres. I have often found wonderful effects follow upon the application of ſuch a *fotus*.———For inſtance,

Take of the roots of marſh mallows, linſeed, and fenugreek ſeed, each three ounces; camomile flowers, three handfuls; white poppy heads, four ounces; boil them together in equal parts of milk and water, for a fomentation.

But greater ſervice may be expected from uſing it by way of *ſemicupium*. *Id. p.* 29, 30, 31.

Hoffman likewiſe obſerves, that *warm bathing* cures all ſuch diſtempers as proceed from a contraction of the parts of the lower belly. Of this kind are pains in the inteſtines, gripings, violent convulſive colics, heavy pains and contractions, occaſioned by the ſtone in the kidneys, and attended with ſuppreſ-

ſion

do not yield to purgatives, they muſt be made ſtronger; for it avails not to exhibit a gentle cathartic, unleſs pernaps the patient be eaſy to work upon, which ſhould be carefully enquired into, becauſe ſuch a medicine, being too weak to make its way thro' the inteſtinal tube, does more miſchief, the vomiting and pain being increaſed by its languid and ineffectual motion. A lenitive purging potion, made of an infuſion of *tamarinds*, *ſena*, and rhubarb, in which *manna* and *ſyrup of roſes* may be diſſolved, is to be preferred to other purges, becauſe it diſturbs and agitates the juices leſs. But if this cannot be retained in the ſtomach, either (1) becauſe the patient has an averſion to a liquid medicine, or (2) by reaſon of the vomiting, recourſe muſt neceſſarily be had to pills, amongſt which I eſteem *pil. cochiæ* moſt, becauſe it operates beſt in this and moſt other caſes. But where either (1) thro' the weakneſs of the ſtomach, or (2) the vomiting, pills cannot be retained, I firſt preſcribe an opiate, and in a few hours after a purgative, at ſuch a proper interval, for inſtance, that the latter may not be overcome, and rendered ineffectual, but continue long enough in the ſtomach to communicate its purging quality thereto, ſo that it may at length operate immediately after the virtue of the opiate is gone off. However, if the caſe will admit, it is beſt to give the purge a conſiderable time after the opiate, becauſe it operates with difficulty, even twelve hours after the exhibition of the opiate.

Chap. 7.

The purgatives when to be made ſtronger.

An opiate when to be given before a purgative.

6. But becauſe a purge always increaſes the pain in this and moſt other diſeaſes where opiates are indicated, at leaſt when the operation is over, the patient ſometimes finding relief whilſt it works, I generally give an opiate immediately after it has done operating, and order it to be repeated daily morning and evening, on

One to be exhibited when the purge has done working.

ſion of urine, coſtiveneſs, *&c.* in all which caſes the *warm bath* is eminently ſerviceable. It muſt however be obſerved, in the convulſive colic proceeding from a ſtagnation of the blood, if the body is full or over charged with juices, *warm bathing* becomes unſafe; except ſome blood be firſt taken away. But in ſuch colics as proceed from hardneſs of the excrements, a *bath* prepared with emollient ingredients is highly ſerviceable, along with proper laxative medicines, ſuch as *oil of ſweet almonds*, *manna*, EPSOM *ſalt*, *cream of tartar*, &c. See *New experiments and obſervations upon mineral waters*, &c. *tranſlated by Dr* Shaw, *p.* 192, 193.---and *Dr* Porter's *eſſay on warm bathing in the bilious colic*, in the *medical eſſays*, 8vo. vol. 3. p. 358.

the

Sect. 4. the intermediate days, that I may more certainly eaſe the pain, till purging has been ſufficiently performed.

To be given morning and night after the affair of purging is over.

7. When the affair of purging is over, I endeavour to check the violent motion of the humours, which is all that now remains to be done, by exhibiting an opiate every morning and evening, which muſt ſometimes be repeated oftener: nor have I ever been able to eaſe very violent pains, without adminiſtering a larger doſe than ordinary, and repeating it. For what might be ſufficient to overcome another diſeaſe proves ineffectual in this; the violence of the pain deſtroying the force of the medicine. Opiates may be ſafely repeated whilſt this kind of pain continues violent, but not after it ceaſes; for which reaſon I repeat the opiate in proportion to the violence of the pain, till it either goes quite off, or abates conſiderably; obſerving however, to adminiſter it at ſuch convenient intervals, that I may know what effect is to be hoped for from the former doſe, before I proceed to give another. But, in general, unleſs the pain be very ſevere, it will ſuffice to exhibit an opiate morning and night. My uſual opiate then is *laudanum* above deſcribed (*h*); of which I give ſixteen drops at a time, in ſome diſtill'd cordial water; or the doſe may be augmented occaſionally, according to the violence of the pain.

Carminative glyſters bad.

8. This plain method, whereby (1) the peccant humour is diſcharged by bleeding and purging, and then (2) eaſe procured by means of opiates, has always ſucceeded better with me than any other I ever knew: whereas carminative glyſters, injected in order to expel the ſharp humours, prolong the diſeaſe by raiſing a diſturbance in the juices. But I would have it particularly remarked here, that tho' I have affirmed that bleeding and purging muſt neceſſarily precede the quieting method, yet ſometimes, when the caſe demands it, omitting both, the cure is to be begun with opiates.

When the cure is to be begun with opiates.

For inſtance, when, by reaſon of ſome preceding illneſs, large evacuations have been uſed not long before the colic began; for frequently ſuch as have recovered lately from ſome other diſeaſe, are ſuddenly attacked with this, from a weakneſs of the bowels, eſpecially if a greater degree of heat be occaſioned by too free an uſe of wine, or any ſpirituous liquor: now in this caſe I

(*h*) See above, *Chap.* III. *Par.* 14.

eſteem it not only unneceſſary but detrimental to raiſe freſh commotions, by giving more purges. Not to mention that the patient, in this diſeaſe, has generally cleanſed his bowels ſufficiently, by the frequent uſe of glyſters, before applying to a phyſician; ſo that partly upon this account, and partly by reaſon of the long continuance of the diſeaſe, it ſhould ſeem that only opiates ought to be exhibited. Chap. 7.

Exemplified in a caſe.

9. In *Auguſt*, 1671, I was ſent for to *Belvoir* caſtle by lord *Anneſley*, who had been afflicted for ſome days with a bilious colic, attended with exquiſite pain, and frequent vomiting. He had tried all kinds of glyſters, and other remedies directed by the neighbouring phyſicians: I immediately adviſed the repeated uſe of opiates in the manner above delivered, and by this means he recovered in a few days, and returned to town with me in good health.

10. As this pain of its own nature is more apt to return than any other, all occaſion of relapſe is to be prevented by exhibiting an opiate twice a day for ſome time. But if it ſhould return upon omitting the opiate, as it ſometimes happens, I have hitherto diſcovered nothing that will ſo certainly promote the cure, as taking long journeys on horſeback, or in a coach, obſerving in the mean while to give an opiate every morning and evening. For by this kind of exerciſe the morbific matter is brought to the habit of the body, and the blood, broken and divided by the continual motion, does, as it were, undergo a new depuration, and at length the bowels are greatly ſtrengthened and refreſhed by this way of rouſing the natural heat (*i*). Nor do I think it beneath

Riding on horſeback excellent to promote the cure.

(*i*) Nothing ſtrengthens the *viſcera* and inteſtines more than riding on horſeback, for by the very different and frequent agitation of the body which this exerciſe occaſions, it gently ſhakes all the parts of the lower belly, and by this means drives out all viſcidities contained in the bowels and blood-veſſels, and eminently promotes the circulation of the blood thro' the meſenteric veſſels and the ramifications of the *vena porta*, where it circulates ſloweſt. Hence it diſſolves the blood, which is in a manner congealed, partly by the violence of the diſeaſe, and partly by its long continuance in thoſe parts, and conſequently opens the obſtructions of the glands of the liver, *pancreas*, meſentery and inteſtines, and likewiſe greatly aſſiſts the action of the ſpleen, which ſends the blood to the liver. Moreover it appears by numerous experiments, that perſpiration is much increaſed by riding; whence it proves ſerviceable not only in this,

Sect. 4. beneath me to own that I have frequently cured this diſeaſe by this exerciſe, when all other means had failed me. But this muſt not be attempted, unleſs ſufficient evacuations have been previouſly made, and is to be perſiſted in ſeveral days afterwards.

Inſtanced in a caſe. 11. During theſe years one of my poor neighbours, yet living, was ſeized with a moſt violent bilious colic, which he had long endeavoured ineffectually to relieve by cathartics, glyſters, and ſwallowing leaden bullets. I had recourſe here to the frequent uſe of opiates, nor did they prove unſucceſsful, for he remained tolerably eaſy whilſt he was taking them. But perceiving they only palliated and did not eradicate the diſorder, for it returned immediately after the effect of the opiate was gone off, I had compaſſion on the man, labouring under low circumſtances, and a violent diſeaſe, and lent him a horſe to ride a long journey, as above directed; and after riding a few days, his bowels became ſo ſtrong as to be able to expel the remains of the diſeaſe, and he recovered perfectly by this means without the aſſiſtance of opiates.

12. And, to ſpeak the truth upon this occaſion, I have always known this kind of exerciſe uſed with great ſucceſs, not only in this caſe, but in moſt other chronic diſeaſes, provided it were reſolutely perſiſted in. For if we conſider that the lower belly, wherein all the ſecretory organs are ſeated, is greatly ſhook by this exerciſe, perhaps ſome thouſand times a day, we ſhall readily believe that they are hereby enabled to ſhake off any groſs ſizy humours fixt there; and (which is ſtill more material) ſo ſtrengthened by this powerful rouſing of the natural heat, as to be able to perform the function of purifying the blood, aſſigned them by nature, in a proper manner.

The regimen in this diſeaſe 13. For young perſons of a hot conſtitution I direct a cooling and incraſſating diet; for inſtance, barley-cream, panada, *&c.* and a ſmall chicken, or a boiled whiting every third day, if the appetite continues craving. And I allow no other liquor than ſmall-beer, or milk boiled

this, but in moſt chronic diſeaſes, by deriving the noxious humours to another part, and expelling them by the pores. In reality riding only has cured where tedious courſes of medicine have failed; when therefore the patient can ſit a horſe, let him ride every day. See *Huxham de morb. colic. Danmon, p.* 38.

with thrice the quantity of water for drink; unleſs riding, which is neceſſary to compleat the cure, requires a more nouriſhing diet, and the uſe of ſome more generous liquors, to recruit the loſs of ſpirits occaſioned by exerciſe (*k*). Chap. 7.

Cordials to be given when it proves inveterate.

14. Moreover it is manifeſt from obſervation, that when this diſeaſe thro' wrong management proves of long ſtanding, ſo that the bowels become weak, and the patient is extremely emaciated and debilitated, the free uſe of *plague-water*, AQUA MIRABILIS, or any other cordial that was moſt grateful to him when in health, relieves at this time beyond expectation. For by this means the ſmall remains of the natural heat and ſpirits are rouſed, and the preternatural ferment lodged in the bowels, which occaſions freſh fits between whiles, will be ſtopt.

A ſlender diet to be continued for ſome time after the cure.

15. The ſlender diet abovementioned muſt be continued, not only thro' the courſe of the cure, but for ſome time after the diſeaſe is gone off; for as it is more apt to return than any other, and beſides is ſeated in the principal inſtruments of concoction, which are the bowels, already weakened thereby, the leaſt error of this kind will immediately occaſion a relapſe. And therefore all aliment of difficult digeſtion muſt be carefully avoided, both in this and all other diſorders of the bowels, and food of eaſy digeſtion uſed very ſparingly (*l*).

16. Some

(*k*) To reſtore the due mixture of the blood, and ſtrengthen the *viſcera*, *chalybeates* and *ſtomachics* are very proper. I uſe the following infuſion.

Take of the roots of gentian and galangal, each half an ounce; ſweet flag, and dried SEVIL *orange-peel, each two ounces and half; cloves, two drams, ſteel prepared with tartar, three ounces; pour upon them of mountain wine, three pints and half; compound wormwood water, a pint and half: let them ſtand in infuſion for at leaſt twelve days in a glaſs veſſel, obſerving to ſhake it often. When the* viſcera *are weak, and the body is full of phlegmatic humours, this infuſion is extremely proper, as not being at all diſagreeable to the ſtomach.* Id. *p.* 37.

(*l*) *Abſorbents* and *coolers* are very beneficial in this diſtemper, as the *teſtacea* and *nitre*, and *dulcified ſpirit of nitre*, which, *Sylvius* ſays, is the beſt corrective of the acrimony of the gall, and almoſt a ſpecific for it. *Purcel* aſſerts, in his treatiſe of the colic, that cold ſpring water will anſwer the ſame indication, and the great quantity of liquid will both diſſolve the acrimonious ſalts of the gall, or of the corroſive humours, relax the fibres, and cool the parts:---but adds, that it ought

Sect. 4.

The *hyſteric colic* deſcribed.

16. Some women are afflicted with an hyſteric diſorder, ſo nearly reſembling the bilious colic in (1) the ſharpneſs of the pain, (2) its ſeat, and (3) the yellow and green colour of the matter diſcharged by vomit, that I will treat of it by the way, for fear it ſhould be taken for the diſeaſe juſt mentioned.

What women moſt ſubject to it.

17. Females, (1) of a lax and groſs habit of body are chiefly ſubject to it, as are (2) likewiſe ſuch as have formerly had ſome hyſteric indiſpoſition, or (3) (which frequently happens) thoſe who have juſt recovered of a difficult labour, occaſioned by the largeneſs of the infant, whereby the mother's ſtrength and ſpirits were nearly exhauſted.

Its ſymptoms.

(1) It attacks the region of the ſtomach, and ſometimes the parts juſt below it, with as violent a pain as accompanies the colic, or iliac paſſion; which (2) is ſucceeded by exorbitant vomitings, ſometimes of green, and ſometimes of yellow matter; (3) and to theſe ſymptoms, as I have frequently obſerved, ſucceed a greater lowneſs of ſpirits and deſpondency than occur in any other diſeaſe. The pain goes off in a day or two, but returns again in a few weeks after, and rages with as much violence as ever, before the fit terminates. It is ſometimes attended with a remarkable *jaundice*, which vaniſhes ſpontaneouſly in a few days.

A relapſe how occaſioned.

When the ſymptoms are all gone off, and the patient ſeems pretty well recovered, the leaſt diſturbance of mind, whether proceeding from anger or grief, to both which women are extremely ſubject in this caſe, is apt to occaſion a relapſe. Walking alſo, or any other exerciſe uſed too ſoon will do the ſame; ſuch cauſes being productive of vapours in lax and weak conſtitutions. I uſe the term *va-*

never to be given but to perſons of a ſound habit of body; nor even to thoſe, without the advice of a ſkilful phyſician. Spirituous liquors and all hot things in general are extremely hurtful in moſt colics, and moſt particularly ſo in this kind of colic.——There is ſcarce a better carminative, ſays *Hoffman*, than *nitre* given either alone or mixed with carminatives, for which reaſon it is juſtly extolled in the bilious colic eſpecially. The bile (as one has obſerved) in conſequence of its deterſive and bitter quality, is a balſamic and natural medicine, without which no animal can long remain ſound, and in a due ſtate: now if the bile is vitiated by a congeſtion of acrid *ſordes* retained in the humours, it acts like poiſon, by irritating the nervous ſyſtem, and producing preternatural heat, anxiety, inquietudes, enormous evacuations, and intenſe pains. And in order to correct this peccant ſtate of it, no medicine is more efficacious than *nitre*.

pours

pours with the vulgar, but whether they be vapours, or convulsions of particular parts, the appearances may be equally accounted for. Chap. 7.

18. When these *vapours*, or convulsions attack any particular part of the body, they produce such symptoms as are natural to the part affected; whence, tho' they every where constitute the same individual distemper, yet they artfully resemble most diseases incident to mankind; as plainly appears from the disease under consideration, which exactly counterfeits the bilious colic, when it attacks the parts adjacent to the *colon*. And this is equally manifest also in many other parts of the body affected with this disease. For instance, it sometimes attacks one of the kidneys with a violent pain, occasioning excessive vomiting; and being frequently conveyed thro' the uteters, it counterfeits the stone, in which case, the pain being increased by glysters and other *lithontriptic* medicines used to bring away the stone, it continues with the same violence for a long time, and sometimes destroys the patient, contrary to its nature, as being of itself not dangerous (*m*). I have also known it occasion a train of symptoms exactly like those of the stone in the bladder. I was called up lately in the night to a countess in the neighbourhood, who was seized, on a sudden, with a very severe pain in the region of the bladder, along with a stoppage of urine; and having learnt that she was subject to various hysteric complaints, I conjectured that the disorder was mistaken; and therefore forbid the injecting a glyster, which her woman had got ready, as apprehending it might be augmented thereby; and instead of this and the emollients brought by the apothecary, such as the *syrup of marsh-mallows*, &c. I ad-

Vapours artfully resemble most diseases.

A case wherein they counterfeited the stone in the bladder.

(*m*) I have myself met with an instance of this kind of pain in a lady, who had taken *laxatives, carminatives, and oleous medicines* by the mouth and glysterwise with no effect. Upon enquiry therefore finding that she was much subject to hysteric complaints, I directed the following draught to be taken immediately, and ordered it to be repeated every six or eight hours, according to the urgency of the symptoms, and the pain was entirely removed thereby in twenty four hours. And the lady being some months after affected again in the same manner, had recourse to the same medicine with equal success.

Take of the distilled waters of penny-royal and rue, each six drams; compound briony, and compound camomile water, each three drams; tincture of castor, and of amber, and of liquid laudanum, *each fifteen drops; syrup of white poppies, two drams: mix them together.*

Sect. 4. miniſtered an opiate, which ſoon removed the complaint. In reality, no part of the body, either external or internal, is quite free from the attacks of this diſtemper, as the jaws, hips and legs, in all which it cauſes intolerable pain, and when it goes off leaves ſuch a tenderneſs of the part behind, that it cannot bear the touch, as if the fleſh had been bruiſed with abundance of ſtripes.

19. Having now, by way of digreſſion, communicated ſome remarks belonging to the hiſtory of the *hyſteric colic*, to prevent its being taken for the *bilious colic*; I will briefly treat of ſome other particulars relating to the cure of the ſymptom of pain attending it: for the *radical* cure of the diſeaſe itſelf, which is effected by removing the cauſe, is a quite different ſubject, and to be conſidered in another place.

The pain in the *hyſteric colic* generally increaſed by bleeding and purging.

20. Bleeding and repeated purging, which are ſo manifeſtly indicated in the bilious colic, at the beginning, ſhould be omitted here, except in the caſe hereafter to be mentioned. For experience ſhews that the pain and other ſymptoms are increaſed by the diſturbance cauſed by theſe evacuations, and I have often obſerved that the repetition of the gentleſt glyſters hath occaſioned a continued train of ſymptoms. For if we take a view of the cauſes whence this diſeaſe generally proceeds, both reaſon and experience teach that it is rather owing to an irregular motion of the ſpirits, than to any depravity of the juices. Now theſe cauſes are either (1) copious and preternatural hæmorrhages, (2) inordinate paſſions of the mind, (3) violent exerciſe of the body, and the like; in all which, ſuch medicines as increaſe the hurry of the ſpirits are improper, and opiates are to be exhibited in their ſtead, tho' the green and ill colour of the matter ejected by vomit ſhould ſeem to indicate the contrary. For the conſideration of colours is of too ſubtile and refined a nature to authorize ſuch evacuations as experience proves to be detrimental. And I doubt not but this diſeaſe, which, tho' it be very painful, does no way endanger life, hath proved fatal to abundance of perſons, thro' miſtakes of this kind. To this may be added, that tho' the ſtrongeſt emetic be given to-day, in order to expel the ſuppoſed cauſe of the diſeaſe, yet the patient will next day vomit a matter, full as green, or of ſome other bad colour, like the former.

21. But

21. But it must be observed, that sometimes there is such a fulness of blood and juices, as resists the operation of an opiate so powerfully, that notwithstanding it be very frequently repeated, it avails not to quiet the disturbance, unless bleeding or purging precede: as I have remarked in women of a very sanguine constitution, and robust make. This being the case, one or other of these remedies, and perhaps both, must be previously used, in order to make way for the opiate, a moderate dose whereof will then produce the intended effect; tho' before bleeding or purging the largest dose availed not. But this is a case that seldom happens, and these remedies are not then to be repeated. These particulars being premised, where there is a demand for opiates, we are to proceed in administering them according to the method specified in treating of the *bilious colic*: and they are to be repeated, in point of frequency, in proportion to the abatement of the pain. This method indeed is only adapted to relieve the present symptom of violent pain; for I have not undertaken to treat of that, in this place, which removes the cause of the disease.

Chap. 5.

Yet sometimes they are necessary, and where.

22. But as this distemper, both in hypochondriac and hysteric subjects (for the reason is the same in both, as we shall shew in another place) often terminates in a *jaundice*, which increases proportionally as the original disorder goes off, it must be remark'd that in curing this kind of jaundice all purgatives are either wholly to be refrained, or none exhibited except *rhubarb*, or some other gentle lenitive; for it is to be apprehended that a new commotion may be occasioned by purging, and consequently a return of the symptoms. In this case therefore it is more expedient to give no medicines at all, as the jaundice arising from this cause abates by degrees spontaneously, and totally vanishes in a short time. But if it continues long, and seems to go off slowly, we must have recourse to medicines. I commonly use the following.

It often ends in a *jaundice*.

The cure of it.

Take of the roots of madder and turmeric, each an ounce; the roots together with the leaves of the greater celandine, and the tops of the lesser centaury, each an handful; boil them in equal quantities of Rhenish *wine, and spring water, to a quart; to which, when strained*

An aperient apozem.

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ſtrained off, add two ounces of the ſyrup of the five opening roots: mix them together for an apozem, of which let the patient take half a pint warm, every morning and night, till the cure be compleated (*n*).

The cure of an original jaundice.

23. But where the jaundice comes of itſelf, without being preceded by the colic, beſides the alteratives juſt ſet down, ſuch medicines muſt be given once or twice, as evacuate the bile by ſtool, before the patient begins with the apozem above preſcribed, and once a week afterwards, whilſt it is continued (*o*). *Take*

(*n*) This apozem might as well be prepared with water only, ſince long boiling will totally exhale the ſpirit of the *rheniſh* wine, and leave it nothing better than mere water.

The following is much better contrived, and more likely to anſwer the end propoſed.

Take of the roots together with the leaves of the greater celandine, the roots of turmeric, and madder, of each an ounce; ſpring water three pints; boil them together till there remains a quart of the ſtrained liquor; to which when cold add the juice of two hundred millepedes, and two ounces of the ſyrup of the five opening roots; and mix them together.

A decoction ſo well adapted, Dr *Shaw* obſerves, cannot but be of great ſervice in the cure of the jaundice, when uſed freely by the patient as ordinary drink. See the *Edinburgh diſpenſatory, tranſlated by Dr* Shaw, *p.* 101. And the ſame by *Lewis* p. 149.

(*o*) The cure of the jaundice here is very ſuperficially delivered by our author; no mention being made of the *volatile, ſaponaceous, attenuant, deterſive*, and *chalybeate* kinds of medicines, which, if judiciouſly ſuited to the caſe, will often prove effectual where this ſimple method muſt needs fail.

To ſupply in ſome meaſure its apparent defects, we ſhall ſubjoin in a ſummary manner the general method of curing the ſeveral kinds of this diſeaſe, taken chiefly from Dr *Huxham*'s treatiſe *de aere et morb. epid.* &c. p. 143. &c.

It is never without danger, when accompanied with an hæmorrhage; for this denotes the blood to be very acrimonious and thin; in which caſe *attenuants, aloetics, volatiles*, and *chalybeates* are highly detrimental; on the contrary *acids, diluents, ſmoothers, mineral waters*, and the like, are eminently beneficial. If it be attended with a fever, and quick pulſe, a decoction of *hempſeed in milk*, or an emulſion made with *ſweet almonds* and *white poppy ſeed*, often does great ſervice, after moderate bleeding, and proper purging.

There is alſo another, and a very different kind of the jaundice, which proceeds from a ſluggiſh and viſcid bile, and accordingly requires a quite different method of cure. Here the blood being clammy and thick generates a very tenacious and vapid bile, which at length obſtructs the bilious veſſels, ſo that the obſtruction of the liver is rather an effect than the cauſe of the diſeaſe. In this caſe *emetics* are firſt required, and then *aloetic*

Chap. 7.

A purging bolus.

Take of the electuary of the juice of roſes, two drams; rhubarb finely pulverized, half a dram; cream of tartar, a ſcruple; ſyrup of ſuccory with rhubarb, enough to make them into a bolus, to be taken betimes in the morning, drinking after it a glaſs of Rheniſh *wine.*

If it proves obſtinate, a courſe of mineral waters muſt be uſed.

But if, notwithſtanding the long continuance of theſe medicines, the diſeaſe ſtill remain obſtinate, the patient ſhould go to ſome place where there is a chalybeate mineral ſpring, for inſtance *Tunbridge*, and drink the water every morning at the well-head till he recovers (*p*). —And let this ſuffice for the diſeaſes of this conſtitution.

aloetic and *mercurial* purgatives; and afterwards *attenuants*, *ſaponaceous*, *tartarous* and *volatile* medicines are neceſſary. But care muſt be had not to give *chalybs* too ſoon, namely before having thinned the juices; otherwiſe inſtead of relieving the diſorder, an incurable *ſchirrus* of the liver may perhaps be occaſioned. And here I cannot forbear extolling *regenerated tartar*, or the *terra foliata tartari*, as it is called, as an admirable *diſſolvent* or *attenuant*, not only in this, but likewiſe in ſeveral other diſtempers; for it powerfully diſſolves groſs and fizy humours, and opens obſtructions of the veſſels; and tho' it poſſeſſes ſuch excellent virtues, it has ſcarce any acrimony, and, what perhaps will ſeem ſurprizing, it may be given as ſafely in pleuritic and dropſical diſorders. In reality ſuch medicines, as are able by their weight and ſubtility to divide thick and viſcid humours, are of very conſiderable uſe; but their efficacy may be much improved by an admixture of ſome deterſive ſoap, which diſſolves and thins all unctuous and tenacious humours.

It muſt be remembered that *ſteel* and *heating medicines* prove extremely prejudicial, if the diſtemper be inflammatory: and that *emetics* are improper, if it ariſes from calculous concretions in the gall-bladder, which may be conjectured to be the caſe, if it returns frequently.

(*p*) Our author in adviſing a courſe of mineral waters, which is indeed of great efficacy in a ſtubborn jaundice, hath taken no notice of the proper ſeaſon for drinking them, which is the beginning of ſummer: neither hath he inculcated that they may be drank with advantage at a diſtance from the well-head, when the patient cannot conveniently go to the ſpring. As to the method of drinking any mineral water, it cannot well be particularized, becauſe it requires to be ſuited to the nature of particular diſtempers, conſtitutions, and ways of living; all which are very different in particulars. Beſides, in ſome caſes proper correctives are to be uſed along with them, and medicines interpoſed during the courſe; and in all a due regimen, as to diet, exerciſe, *&c.* muſt be ſtrictly obſerved, in order to receive the full benefit of the waters without hazard, or danger: all which plainly ſhews how difficult, and perhaps impoſſible, it is to deliver a ſet of rules that ſhall be applicable to ſuch an exceeding diverſity of circumſtances.

SECT. V. CHAP. I.

Of the epidemic Conſtitution of part of the Year 1673, *and of the Years* 1674, 1675.

The riſe of a new kind of fever.

1. ABOUT the beginning of *July* in 1673 there aroſe another kind of fever, which did not prove very epidemic; becauſe the conſtitution was not yet ſo entirely diſpoſed to favour it, as wholly to exclude the diſeaſes of the preceding conſtitution. For that kind of ſmall-pox which began in 1670 was not yet extinct, tho' it appeared leſs frequently, and the ſymptoms were milder; ſo that theſe two diſeaſes prevailed almoſt equally, but neither very ſeverely, the former conſtitution being not ſo totally gone off, as to leave none of the diſeaſes belonging thereto (for the dyſentery continued to attack a few) and the then reigning conſtitution not being ſo perfectly eſtabliſhed, as to produce ſuch as might exterminate all other diſtempers.

2. The ſmall-pox and this fever continued equally prevalent during this autumn and the following winter, but neither of them raged with great violence; and the dyſentery was in a manner extinct. But in *November* following, a ſharp froſt of ſome days being unexpectedly ſucceeded by warmer weather than I ever remember to have obſerved at this ſeaſon, ſome few perſons were ſeized with the dyſentery a little before and about *Chriſtmas*; but it ſeemed then to be going off, and in a ſhort time afterwards this kind of it at leaſt quite vaniſhed.

When the meaſles began in this conſtitution.

3. The next year the meaſles appeared very early, namely in *January*, and proved as epidemic, as that kind which began about the ſame time in 1670. For few families eſcaped it, and it attack'd children eſpecially; but it was not ſo regular in its ſtages, as that which prevailed in the abovementioned year. But I ſhall ſay more of the difference between them, when I come to treat of this kind more particularly. It increaſed every day more and more, till the *vernal* equinox, after which it abated as gradually, and at length went off ſoon after the *Summer* ſolſtice.

4. As

Chap. 1.

4. As the epidemic meaſles of 1670 introduced the *black ſmall-pox* above deſcribed, ſo the preſent kind, which appeared in the beginning of the current year 1673, being equally epidemic, was accompanied with a ſimilar kind of ſmall-pox. For whereas the ſmall-pox of the preceding conſtitution, as hath been already obſerved, after the firſt two years, gradually abated of their blackneſs, and alſo increaſed proportionally in ſize, till towards the end of the year 1673, when, conſidering the kind, it was mild and favourable, it now returned with its former violence, and attended with very dangerous ſymptoms. This kind of ſmall-pox prevailed during the following autumn, and continued longer than uſual in winter, which, on account of its uncommon warmth, favoured this diſeaſe; but when colder weather came in, it abated, and ſoon gave place to the preſent epidemic fever.

The ſmall-pox returns

5. This fever, which had continued the whole year, made great devaſtation in the beginning of *July* 1675, but at the approach of *autumn* it began to ſtrike in upon the bowels, appearing ſometimes with the ſymptoms of a dyſentery, and at others with thoſe of a diarrhoea; tho' ſometimes it was free from both, and rather ſeized the head, and cauſed a kind of *ſtupor*. In the mean while the ſmall-pox, which attacked only a few ſubjects here and there, diſappeared entirely towards the *autumnal* equinox: and now the fever, having overcome the other epidemics, became the capital diſeaſe of the year. It muſt however be obſerved, that as this fever was much diſpoſed to throw off the morbific matter upon the bowels, which ſometimes occaſioned a dyſentery, but more frequently a diarrhoea; ſo upon this account the gripes were generally ſuppoſed to have deſtroyed the numbers that died at this time, whereas in reality their death was rather to be aſcribed to the fever, for ſuch as attended the ſick during this *autumn* knew how much the fever prevailed; ſo that both the dyſentery and the diarrhoea ought rather to be accounted *ſymptoms*, than *eſſential* and *original* diſeaſes.

The fever aſſumes a different ſhape.

6. This fever proceeded in this manner during the *autumn*, ſometimes ſeizing the head, at others the bowels, every where raging under the appearance of ſymptoms peculiar to thoſe parts, till the end of *October*; when the weather, which till now had continued in a manner

Undergoes ano her change.

Sect. 5. manner as warm as ſummer, changed ſuddenly to cold and moiſt (*q*), whence catarrhs and coughs became more frequent than I remember to have known them in any other ſeaſon. But it is of moſt moment to obſerve, that the ſtationary fever of this conſtitution uſually ſucceeded theſe coughs, and hence became more epidemic, and likewiſe varied ſome of its ſymptoms. For whereas ſome little time before, as abovementioned, it attacked the head and bowels, now it chiefly ſeized the lungs and *pleura*, whence aroſe peripneumonic and pleuritic ſymptoms; tho' it was ſtill preciſely the ſame fever that began in *July* 1673, and continued without any alteration of its ſymptoms till the riſe of theſe catarrhs.

Yet ſtill remains eſſentially the ſame.

7. Theſe catarrhs and coughs continued to the end of *November*, after which time they ſuddenly abated. But the fever ſtill remained the ſame as it was before the catarrhs appeared; tho' it was neither quite ſo epidemic, nor accompanied with the ſame ſymptoms, both theſe depending accidentally upon the catarrhs. Moreover upon their going off a ſmall-pox, manifeſtly of the ſame kind with that of the preceding year, began to attack a few perſons here and there; but as they had now almoſt compleated their ſecond year, the ſymptoms were not ſo violent as in the beginning.

I cannot ſay how long this conſtitution will prevail, but this I certainly know, that it has hitherto been very *anomalous* and irregular, as have likewiſe all the diſeaſes occaſioned thereby. I proceed now to treat of the epidemics of this conſtitution, in the order wherein they ſucceeded each other.

(*q*) A cold and moiſt air, continuing for a time, or ſuddenly ſucceeding a dry and warm ſtate thereof, is extremely prejudicial to the body; for it relaxes the ſolids, whence of courſe the fluids circulate with leſs velocity, and have their inteſtine motion diminiſhed, ſo that they become thick and tenacious, and conſequently cannot be protruded to the extremely fine perſpiratory veſſels, ſo as to have their ſuperfluous and noxious parts exhaled, which is alſo prevented in great meaſure by the ſtoppage of the pores from the ſame cauſe. Hence abundance of impurities are collected in the body, and the juices likewiſe loſe their ſoft, balſamic nature, and become acrimonious and irritating; ſo that if they are not ſeaſonably diſcharged by ſome other evacuation, ſpontaneouſly ariſing, or procured by art, *ſwellings of the throat, coughs, quinſies, catarrhal fevers*, &c. are generated thereby.

CHAP.

CHAP. II.

Of the continued Fever of the Years 1673, 1674, 1675.

1. THIS fever, like other epidemics, was attended with ſuch ſymptoms ſoon after its riſe, as clearly ſhewed that the inflammation was then more violent and ſpirituous, than in its progreſs (*r*). For the firſt year of its appearance, and the following ſpring, pleuritic ſymptoms ſucceeded upon the fever, and the blood that was taken away reſembled that of pleuritics, at leaſt for the firſt and ſecond time, but in the courſe of the diſeaſe theſe ſigns of an extraordinary inflammation diſappeared. This fever moſt inflammatory in the beginning.

2. Beſides the uſual ſymptoms of all fevers, this fever generally had the following. (1) A violent pain in the head and back, (2) a *ſtupor*, (3) and tenſive pain of the limbs, joints, and whole body, but ſomewhat milder than in a rheumatiſm: (4) heat and cold ſucceeded alternately in the infancy of the diſeaſe, (5) and ſometimes alſo a great tendency to ſweat accompanied it; (6) when the fever was ſuffered to proceed according to its own nature, the tongue was not dry, and but little altered in its natural colour, only it was whiter; (7) the thirſt was inconſiderable: (8) but when the heat was increaſed beyond the degree common to this fever, the tongue appeared extremely dry, and of a deep yellow colour, the thirſt alſo was increaſed, and the urine became intenſely red, which otherwiſe uſed to retain almoſt its natural colour. When this fever was accompanied only with theſe ſymptoms, it went off on the *fourteenth* day, if ſkilfully treated; but when it proved very inveterate, it continued till the *one and twentieth* day. Its diſtinguiſhing ſymptoms.

(*r*) It is not at all improbable that the contents of the air, productive of an epidemic diſeaſe, are poſſeſſed of a much greater degree, both of virulence and activity, when they firſt begin to communicate their morbific impreſſions, than ſome time afterwards; and hence the diſeaſe occaſioned thereby may be conſiderably more inflammatory and univerſal at the beginning, than in the progreſs and declenſion thereof.

3. Amongſt

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The principal one a kind of *coma*.

3. Amongſt the ſymptoms attending this fever the principal one was a kind of *coma*, which rendered the patient ſtupid and delirious, ſo that he would doze ſometimes for ſeveral weeks, and could not be awakened without loud noiſes, and then he only opened his eyes, and directly after taking either a medicine, or a draught of ſome liquid he was uſed to, fell into a ſleep again, which ſometimes proved ſo very ſound as to end in an entire loſs of ſpeech.

The firſt ſign of recovery.

4. When this ſymptom vaniſhed, the patient grew better on the *twenty eighth*, or the *thirtieth* day, the firſt ſign whereof was the deſiring or longing for ſome odd and uncommon kind of liquid or ſolid aliment. But the head continued weak for ſome days, and nodded ſometimes on this and ſometimes on that ſide; and there were other ſigns, which manifeſted it to have been greatly diſordered: but in the ſame degree the ſtrength returned, this ſymptom went off.

Sometimes a ſilent *delirium* happened.

5. Sometimes the patient did not ſleep, but was rather ſilently delirious, tho' at times he talked wildly as if in a paſſion; but the fury never roſe to ſo great a height, as is common in a phrenzy in the ſmall-pox and other fevers; from which it alſo differed in this particular, that he ſlept confuſedly at intervals, and likewiſe ſnored more ſoundly. Neither was this ſymptom ſo acute as a phrenzy, but it continued longer, and chiefly affected children and youths, whereas that chiefly attacks grown perſons. But in both, if heating medicines were given, and ſweating promoted, the diſeaſe ſoon flew up to the head, and occaſioned this ſymptom.

6. But where this ſymptom neither came ſpontaneouſly, nor was forced by medicine, the diſeaſe generally terminated in *fourteen*, and ſometimes in *three* or *four* days, as I have occaſionally obſerved.

7. In *Autumn*, 1675, as we intimated above, this fever endeavoured to go off by a dyſentery, and ſometimes by a looſeneſs; but the latter eſpecially happened very frequently, whilſt the *ſtupor* ſtill continued: however, as far as I could learn from diligent obſervation, both theſe were only ſymptoms of this fever.

This fever of a peculiar kind.

8. To proceed to the cure: when this fever aroſe, *viz.* in *July* 1673, I immediately perceived it was of quite another kind, both from the various ſigns wherein it differed from thoſe which accompanied the fevers

of

of the preceding conſtitution, and from its not yielding to purging, by which I ſucceſsfully cured all thoſe fevers. Upon this account I employed more time than ordinary in ſearching into its ſpecies, and was conſequently under much perplexity in what manner to proceed in the cure. For when this fever firſt appeared, it had no epidemic cotemporary therewith, whoſe genius being thoroughly known, might enable me to diſcover ſomewhat of the nature of this; for the ſmall-pox, which accompanied it, as I have before ſaid, ſeemed to be the remains of the black ſmall-pox of 1670, and was now become very mild, and nearly extinct. I had no other way left, therefore, but to enquire carefully into this diſeaſe as it ſtood alone, and to uſe my beſt endeavours to find out a ſuitable method of cure, by always attending diligently to the *juvantia & lædentia*, *i. e.* to what made the patient better or worſe (*s*). Chap. 2.

Attended with great inflammation.

9. The violent pain in the head, and the tendency there was to a pain in the ſide, together with the reſemblance of the blood to that of pleuritics, ſoon ſhewed that this fever was accompanied with a conſiderable inflammation, notwithſtanding which it would not admit of ſuch large evacuations as are proper in a pleuriſy; for

(*s*) The attending to theſe in doubtful and intricate caſes has indeed its uſes occaſionally; but too ſcrupulous and cloſe an attachment to this ſlow method argues, I ſhould think, too much caution.—It may be ſometimes neceſſary to ſtrike out of the common road, and make a bold puſh to relieve the patient; at leaſt in obſtinate caſes of great difficulty, and more eſpecially *chronic* ones, the thing is practicable without any conſiderable riſque, and with great probability of ſucceſs.—Suppoſe, for inſtance, ſome ſtrong *alcaline* medicine, or an equally powerful *acid* one, was given under theſe circumſtances, and the phyſician were to attend diligently to the effects it might produce, and be guided by the indications hence ariſing in the future courſe of the cure.—To illuſtrate this by an example.—A perſon was affected with ſeveral complex ſymptoms, of ſo perplexing a nature, that little or no light could thence be got in the caſe, and the phyſician was quite at a loſs how to proceed. Upon which he ordered *ſpirit of ſal ammoniac* to be taken, as a ſtrong alcaline, the conſequence of which, after a few doſes, was a conſiderable hæmorrhage, which ſhewed the blood to be in a very alcaleſcent ſtate, and manifeſtly enough indicated a ſubacid regimen and medicines, along with ſtrengtheners, which produced a cure.—This hint may not, perhaps, be thought unworthy the attention of phyſicians, as it is pregnant with deductions and conſequences of no ſmall moment to the recovery and health of their patients in abundance of diſtempers.

after

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after the firſt and ſecond bleeding the blood intirely loſt its fizy ſurface, and repeated bleeding did not at all relieve, unleſs perhaps the diſeaſe changed to a true pleuriſy, which ſometimes happened by uſing a hot regimen, eſpecially during the firſt ſpring wherein it attacked, namely in 1664, at which time being promoted by the approach of the ſun, it ſeemed to tend to a kind of peripneumony, the diſeaſe being then in its infancy, and more ſpirituous than afterwards. Being deterred from repeated bleeding, by the ill ſucceſs which attended it in ſome inſtances, notwithſtanding this fever manifeſtly appeared to be of a very inflammatory nature, eſpecially at its firſt coming, I had no other means left to mitigate the heat thereof, except the frequent repetition of glyſters, and the uſe of cooling medicines (*t*). Beſides the ſymptoms that ſo apparently diſcovered an inflammation, the *ſtupor*, which happened oftener in this than in any other fever, indicated the frequent injection of glyſters, in order to make a revulſion of the febrile matter from the head, which it was very apt to attack in this diſtemper; and they were ſubſtituted inſtead of repeated bleeding, which agreed not well with the nature of it, and ſupplied the want thereof by gradually and gently cooling the blood, and expelling the morbific cauſe.

Repeated bleeding bad.

Glyſters,

10. Moreover I judged that large bliſters applied between the ſhoulders muſt needs do more ſervice in this than in other fevers, where the febrile matter does not equally affect the head; for by the violent heat and pain they uſually occaſion in the part whereon they are laid, the matter, which would otherwiſe fly up to the head, is derived thereto. By the uſe of theſe remedies, along with a cooling regimen, the diſeaſe at length yielded, as it were, naturally and ſpontaneouſly, how ſeverely ſoever it raged, when it was treated by a different method; as plainly appeared to me from numerous inſtances.

And bliſtering ſerviceable

11. I proceeded therefore in the following manner: I firſt took away ſuch a quantity of blood from the arm, as the ſtrength, age, and other circumſtances required,

The method of cure particularized

(*t*) The beſt of this claſs are *nitre*, *crude ſal ammoniac*, *Mindererus's ſpirit*, the *diuretic ſalt*, heretofore called, *foliated earth of tartar*; none of which are mentioned by our author, whence it may probably be inferred, that the phyſicians of thoſe days were ſtrangers to their excellent virtues.

and then immediately applied a large bliſter between the ſhoulders. The next day I ordered a laxative glyſter to be given ſo early in the afternoon (*viz.* about two or three o'clock) that the diſturbance thereby occaſioned might be quieted before the evening, and it was repeated every day till the diſeaſe abated, when I judged that glyſters were to be omitted, and even ſooner, if the fever continued after the *fourteenth* day; having found that they availed not after this time, even tho' the fever had not been conquered by thoſe which had already been injected. For the violence of the diſeaſe, and the ſymptoms thereon depending, being now abated by the preceding ebullition, and the danger over, I judged it beſt to leave the diſeaſe to itſelf, to go off by degrees ſpontaneouſly. And this method always ſucceeded better with me, than the attempting ſome conſiderable evacuation at this time. In the mean while I forbad the uſe of fleſh, but allowed ſmall-beer to be drank at pleaſure. Chap. 2.

12. In treating of the regimen of this diſtemper I muſt not omit to obſerve here, that the patient ſhould ſit up at leaſt ſome hours every day; much experience having ſhewn that this is of ſingular ſervice. But if it be contra-indicated by great weakneſs, the patient ſhould however put on his clothes, and lie down on the bed with his head raiſed high. For having conſidered how violently the fever was carried up to the head, and alſo the inflammatory ſtate of the blood, I conceived he might find ſome relief by placing the body in ſuch a poſture, as might prevent all increaſe of heat from the bed-clothes (which cannot be avoided if he lies conſtantly in bed) and check the courſe of the blood to the head, which increaſes the heat of the brain, and conſequently heats and agitates the animal ſpirits, whence the heart beats quicker, and the fever riſes higher. The patient ſhould riſe every day, and why.

13. But how ſerviceable ſoever it be in all fevers, attended with great inflammation, not to confine the patient continually in bed; yet it muſt be obſerved, that the ſitting up too long at a time, particularly in the declenſion of the diſeaſe, diſpoſes to flying pains, that may end in a rheumatiſm; and ſometimes a jaundice is hereby occaſioned. In theſe caſes lying in bed is neceſſary, which opens the pores, ſo that the particles occaſioning either of theſe diſorders may be conveniently carried off thereby. But not ſit up too long.

Sect. 5. thereby. But the patient is to be kept only a day or two in bed, without exciting ſweat. Theſe accidents however ſeldom happen, and never but in the decline of the fever; when the diſeaſe being abated, it is much ſafer to let the patient lie conſtantly in bed, than in the beginning or height thereof; for at this time it forwards the digeſtion of the febrile matter, which is more exaſperated and inflamed by an earlier confinement in bed.

The method of cure vindicated.

14. But if it ſhould be objected here, that this method, though it be proper enough to divert the courſe of the blood from the head, and cool the patient, is nevertheleſs improper, becauſe it checks the evacuation by ſweat, whereby the febrile matter, now concocted, ſhould be wholly expelled; I reply, that the objection is of no force, unleſs it be firſt proved that this kind of evacuation is neceſſary in every fever, which cannot eaſily be done. For experience, not reaſon, points out which ſpecies of fevers is to be cured by ſweat, and which by purging, *&c.* (*u*). Moreover it is not improbable that there are ſome kinds of fevers, which nature cures by a peculiar method of her own, without any viſible

(*u*) This poſition of our author appears odd at firſt ſight; for reaſon, *ſcientifical* reaſon, can never claſh with *clinical* experience, but, on the contrary, ſerves to eſtabliſh and confirm it, and ſhews how to carry it further by a juſt analogy. What he ſhould ſeem to mean here therefore muſt be, that that ſort of experience which is got by attending the ſick, and diligently obſerving the nature, riſe, and progreſs of fevers, as they appear in the human body, and the effects of evacuations and medicines, and not mere *hypothetical* reaſoning, deduced from dry and jejune ſyſtems, or ſpun out of a man's own prolific brain, the creature of the imagination only, is to be relied on, in forming a judgment of the different treatment which different fevers require.

For reaſon is ſo excellent, and ſo eminently and extenſively uſeful a faculty to guide us in our enquiries after truth, and holds ſo principal a place in all ſciences, that we may ſafely conclude it muſt be of the greateſt uſe and advantage in one of the nobleſt of them, *phyſick*, and therefore ought not to be ſuperciliouſly, or contemptuouſly rejected and diſclaimed. In reality (as Dr *Clifton* well obſerves*) if ever phyſick be brought to perfection, it muſt be by the method of *Hippocrates*, viz. *judicious obſervation, and wiſe reaſoning*.

But allowing that experience is the moſt certain rule for a phyſician to direct his practice by; it may be aſked, what ſort of experience may be ſafely relied upon? the anſwer to which is eaſy, *viz.* ſuch as is conſonant to the general experience of others, and agreeable to reaſon. *See Dr* Barker *on the epidemic fever*, p. 81.

* See his ſtate of phyſic, p. 17.

evacuation,

evacuation, *viz.* by moulding and aſſimilating the morbi- Chap. 7.
fic matter in the blood, with which it did not well mix. And going upon this principle I have often cured this and other ſorts of fevers (provided they were not intermittent) in the beginning, before the whole maſs of blood was vitiated, only by directing ſmall-beer to be drank at pleaſure, forbidding broths, and every other kind of aliment, allowing the patient the uſe of his ordinary exerciſe, and the open air, and not ſo much as once uſing any evacuation. Thus I have cured my children and intimate friends, by making them faſt ſtrictly for two or three days; but this method is only to be uſed in young perſons, and ſuch as are of a ſanguine conſtitution (*w*).

15. But

(*w*) This is no new doctrine, but as antient as *Hippocrates*, who tells us (in *lib. de morb.*) that *abſtemiouſneſs in eating and drinking is a preſervative from all diſeaſes*;—and in another place—that *nothing is more conducive to health than to eat ſparingly and uſe exerciſe*. The beſt antient phyſicians, amongſt whom the Methodiſts (a ſect of phyſicians ſo called) are of no mean repute, did more, in abundance of diſeaſes, by abſtinence, faſting, and a proper diet, than others by the moſt powerful medicines. To ſpeak ingenuouſly and freely, there is not the leaſt doubt to be made but abſtemiouſneſs or faſting would cure many, and prevent moſt diſtempers, had phyſicians honeſty enough to preſcribe it, and ſkill enough to ſpecify the requiſite kind and degree; and were their patients wiſe enough not to deſpiſe ſuch wholeſome advice, and reſolute enough to purſue it for a ſufficient length of time, which one would think they would chearfully and readily do, were they fully perſuaded of the unſpeakable value of health, and did they conſider how many nauſeous medicines this would prevent their taking, and the expence it would likewiſe ſave them beſides.

The firſt phyſicians by debauch were made,
Sloth firſt begun, and luxury ſuſtains the trade. Dryden.

Whoever obſerves and reflects upon the indolent, free and luxurious way of living, which prevails amongſt almoſt all ranks of people in our licentious downward days, will ſee but too much reaſon to acknowledge that it does ſo in a great meaſure ſtill.

Nothing is more manifeſt than that we are ſhamefully departed from the ſimplicity of manners, and the hardy abſtemious manner of life, for which the greateſt and beſt perſonages among the antients are ſo juſtly celebrated, and which rendered them ſo remarkably robuſt and healthy, preſerved the vigour of the mind unimpaired, and prolonged their lives to a good old age. Whereas the contrary practice is followed with innumerable dreadful evils; for it weakens the nerves, exhauſts the ſpirits, impairs the vigour of the conſtitution, and ſo produces moſt of the diſtempers incident to mankind, by which means the whole, or a great part of life is made ſupremely

Sect. 5. 15. But if it be granted, that nature can conquer the diſeaſe no otherwiſe than by ſweat, ought it not to

premely wretched, and the days of vaſt numbers of people ſhortened. For, as Dr *Cheyne* emphatically expreſſes it, "*health* and *luxury* are incompatible; *ſtrong fibres* and "*nerves*, and *immoderate lechery*, are contradictory; *long life* "and *continued intemperance*, in the nature of things, are "impoſſible; *phyſicians* under ſuch conditions, by ſtrong and "repeated *evacuations*, and violent *aſtringents* and *bracers*, "alternately preſcribed, may keep up the patient for a while, "but that even poorly and precariouſly, and at the ſame time, "and by theſe very means, they precipitate the patient's fate." *Diſeaſes of body and mind*, p. 313.

It is a true and beautiful obſervation of Dr *Nicholls* (in his very elegant *Latin* oration on St *Luke*'s day 1739, before the college of phyſicians, printed at the end of his *Compendium Anatomicum* in 1742, p. 24.) that---"The proviſion which na-"ture has made for our health, ſloth and luxury engage us "to reject, and in conſequence of thoſe new methods of "living which men have invented, it is become neceſſary, "that having by the practice of their own art found out the "way to make themſelves ſick, they ſhould have recourſe to "yours for their recovery."——This is one of the many fine paſſages in this oration which ſuffers by a tranſlation; for which reaſon I muſt refer the learned reader, who is deſirous of ſeeing it in its beſt dreſs, to the maſterly original.

The truth then of this ſhort, but comprehenſive dietetic precept,

Be TEMPERATE, *and be* HEALTHY *for your pains*;

which has the joint ſuffrage of reaſon and experience to recommend it to our notice and practice, remains inconteſtable. And yet after all, I fear that the ſalutary advice which this note inculcates, tho' ſo well ſupported, and back'd by ſo great an authority as *Sydenham*'s, will ſound but harſhly in the ears of all thoſe that are ſlaves to their ſenſual appetites and paſſions, and place all their felicity in the unlimited gratification of them; utterly diſregardleſs of the grievous conſequences which a conduct, ſo unworthy of the character and dignity of a rational being, created for the higheſt enjoyments in this life, as well as in that which is to come, may be attended with.

To give leſſons of ſelf-denial and temperance to the ſons of riot and debauchery, the ſleek epicure, and the bloated toper, is like preaching to the winds; they deſpiſe all our remonſtrances on this hateful topic, tho' ever ſo clearly and ſtrongly enforced, or at leaſt will not hearken to the voice of reaſon in time; not till convinced by woeful experience of the folly and madneſs of their ways, and probably not till it is too late to have their relaxed nerves braced, their vitiated juices corrected, and the ruins of a conſtitution, enfeebled and ſhattered by a long courſe of intemperance and voluptuouſneſs, repaired.

But ſome perhaps may be induced to reflect in time, by what is here offered to their conſideration, and reſolve to ſacrifice their falſe and deſtructive pleaſures to their health; and if but one

to be underſtood of the ſweat that appears in the decline of the diſeaſe, in conſequence of the previous digeſtion of the peccant matter, and not of that which is forced in the beginning, and proceeds from diſturbing the procedure of raging nature? I conceive that ſuch a ſweat is not to be promoted, but contrariwiſe that the diſturbance whence it proceeds is rather to be quieted. This kind of ſweat uſually accompanies many, tho' not all ſorts of fevers. But I am well aware that ſome kinds of fevers naturally require this ſort of critical ſweat at their declenſion. Such are the particular fits of intermittents, and likewiſe the great and moſt frequent fever of nature, ariſing from that conſtitution which only tends to produce intermittents epidemically. For if any method be followed which does not tend, (1) to digeſt the morbific matter, and (2) to expel it by ſweat, the diſeaſe will be increaſed thereby: ſo that no evacuations muſt be uſed here, unleſs inaſmuch as they moderate the violence of the diſeaſe in the beginning, for fear of occaſioning the death of the patient during the courſe of the cure. Moreover the cauſe of a peſtilential fever, as it is of an exceeding ſubtile nature, may be carried off by ſweat on the firſt days of the illneſs, as experience univerſally ſhews.

Chap. 2.

What kind of ſweat is to be promoted in fevers.

one of my fellow creatures ſhould be perſuaded by any thing I can ſay, to quit the high road to infirmities, diſeaſes, pain, and death, and enter upon a courſe of ſobriety, temperance, and abſtemiouſneſs, the grand preſervative and reſtorative of health, that moſt valuable bleſſing of life, I ſhall think my pains not ill beſtowed.

And were I to incur the cenſure of a few narrow-ſoul'd mercenary retainers to the faculty (from whom only I have any reaſon to apprehend it) for delivering my ſentiments ſo freely, and urging them ſo warmly on this important ſubject, it would give me no manner of concern; for I have long learnt not to be deterred by theſe, or any other conſiderations, from advancing a plain, tho' it ſhould be an unfaſhionable and a diſagreeable truth, whenever I think it may contribute to promote the welfare of any one of the human race; but to be perfectly eaſy as to any ſuch conſequences, when I know that the deſign of my actions is good, and not really blame-worthy. *See Sir* John Floyer *of cold bathing*, p. 329. *and* 418; *and* Wintringham *of endemic diſeaſes*, p. 110; *and the learned reader may, if he pleaſes, turn to* Hoffman's *works*, tome 5. p. 328. *for a curious diſſertation on this ſubject, intitled,* de inedia magnorum morborum remedio, *and* p. 334. *another intitled,* de medicina ſimpliciſſima et optima, motu, inedia, et aquæ potu.

Sect. 5.

In what fevers ſweating is prejudicial

16. But in thoſe fevers, wherein we never find, by the common courſe of the ſymptoms, and when they are ſuffered to proceed according to their own genius, that nature is uſed to diſcharge the morbific matter, now prepared, in a limited time, it would be very imprudent to attack the diſeaſe, and endeavour to cure it, only by promoting ſweat, ſince, as *Hippocrates* obſerves, it is in vain to oppoſe the motions or tendency of nature (*x*). And I conceive this ought to take place in the fever under conſideration, which I know by much experience may be cured without ſweat, and likewiſe that, whilſt

(*x*) This is a mark of great importance, and which *Hippocrates* has inculcated more than once in his works.—In one place he aſſerts, that NATURE *cures diſeaſes* *.—In another, when he bids us obſerve the tendency of nature, he adds,—*That if the humours tend to an improper part, we ſhould make a revulſion of them from that part; but if they have a right tendency we ſhould encourage it, by opening the paſſages to which they tend* †. -- It is certain (ſays *Dr Barker*) from repeated experience (the ſureſt guide) that nature has the chief hand in curing many diſeaſes, and in particular acute ones of all kinds, as the *criſis* which carries off theſe diſeaſes is entirely nature's work. Prudence, therefore, directs us diligently to enquire what the tendency of nature is, and what the road is which ſhe takes to expel the febrile matter after it is diſſolved, and rendered moveable; and when we know this, to forward the expulſion of it, by opening the paſſages to which it tends, and gently ſtimulating nature to perform her work ‡. It being then of ſuch vaſt conſequence, diligently to obſerve the motions, and judiciouſly to promote the ſalutary tendency of nature, if need be, or to check its too violent efforts, nothing better deſerves our cloſeſt application, and in nothing can our judgment appear to greater advantage. The miſchiefs that enſue from thwarting her in the beginning of diſeaſes, are always great, and often remedileſs; and yet, of this unſkilful apothecaries are too frequently guilty, by which means they make complex caſes of ſimple ones, and embarras the phyſician to find out and diſtinguiſh the *genuine* ſymptoms of the diſeaſe from the *adventitious* and irregular ones occaſioned by their improper method and medicines. Thus, for inſtance, in a fever, the natural criſis of which is ſweat, this is perverted by purging, and the diſeaſe thereby certainly prolonged, if not rendered dangerous. Again, a bilious fever, the natural criſis of which is purging, an injudicious apothecary will endeavour to carry off by ſweating, whence there ariſes a freſh train of complicated ſymptoms, which it may perhaps be difficult to conquer.

* De Morb. Vulgarib. Lib. vi. Sect. 5. † Epidem. Lib. vi. Sect. 2.

‡ *See his eſſay on the agreement betwixt antient and modern phyſicians*, p. 5. 261. *And the learned reader will do well to conſult* Hoffman de imprudenti medicatione multorum morborum, et mortis cauſâ, tom. vi. p. 296.

we

we endeavour to force it unſeaſonably, the life of the patient is often unneceſſarily endangered, by the morbific matter being tranſlated to the head. But however no prudent phyſician will reckon it a trifling advantage, either in this or any other fever, not excepting ſuch as are not uſually terminated by a *critical* ſweat, if ſuch a kind of ſweat ſhould by accident ſucceed ſpontaneouſly upon the abatement of the diſeaſe, ſince by the remiſſion of all the ſymptoms this ſweat may be eſteemed to proceed from a due concoction of the febrile matter. But when it does not appear ſpontaneouſly, what aſſurance have we that the patient will not be deſtroyed, whilſt we endeavour by a hot regimen, and heating cardiacs, to diſpoſe the humours to ſweat? Should a perſon by chance find ſomething of value in his way, he would doubtleſs ſtoop to take it up, unleſs he were a fool; but he muſt needs deſerve that character, who, having had this good fortune, ſhould uſe his utmoſt endeavours to obtain ſuch another prize with the hazard of his life. Be this as it will, it is apparent to me, that the fever alone is attended with a ſufficient degree of heat to prepare the febrile matter for concoction, and needs no additional heat from without, by means of a hot regimen in order thereto. Chap. 2.

17. I have found the abovementioned method of bleeding, and injecting glyſters, very ſucceſsful in the cure of this fever; whereas contrariwiſe ſudorifics not only occaſioned anomalous ſymptoms of a bad kind, but likewiſe rendered the cure uncertain. The capital ſymptom in this fever was the ſilent *delirium*, which did not manifeſt itſelf ſo much by talking wildly, as by a *ſtupor* reſembling a *coma*, which, as we ſaid above, often happened in this fever. I have ſometimes known it come ſpontaneouſly, but it is generally occaſioned by the ill-tim'd over-officiouſneſs of nurſes in raiſing ſweat, whereby the morbific matter (which in this kind of fever does not admit of expulſion of ſweat) is put into a violent motion, and at length flies up to the head, to the endangering the life of the patient. Bleeding and glyſters ſucceſsful, but diaphoretics bad in this fever.

18. I have already remarked, in treating of the cure of the fever of another conſtitution, that in the latter years of its prevalence a *ſtupor* of this nature chiefly affected children, and ſuch as were under fourteen years of age; but that was neither ſo conſiderable, nor ſo

Sect. 5. epidemic, as the *ſtupor* which accompanied the preſent fever. Yet I could not conquer the firſt, and much leſs the laſt, in the beginning of the fever, tho' I uſed all poſſible endeavours, by repeated bleeding both in the arms, neck and feet, bliſtering, cupping, giving glyſters and ſudorifics of all kinds, and the like. So that at length I determined, after bleeding in the arm, to apply a bliſter to the neck, and throw up two or three glyſters of milk and ſugar in the beginning of the illneſs, without doing any thing more than forbidding the uſe of fleſh and all kinds of ſpirituous liquor: in the mean time I attended to the procedure of nature, and by following her ſteps learnt at length how to conquer this ſymptom, for the diſeaſe went off ſafely, tho' ſlowly. Upon this account I judged it neceſſary to purſue this method in all the fevers I have ſince treated; and look upon it as a thing of great importance, if the greatneſs of the ſymptom, and the conſtant ſucceſs attending it be conſidered.

The *ſtupor* yielded to nothing in the beginning.

19. And in reality I have ſometimes thought that we do not proceed ſlowly enough, and ought to uſe leſs expedition in removing diſtempers, and that more is frequently to be left to nature than is uſual in the preſent practice (*y*). For it is a grand miſtake to conclude that nature

Haſte in curing diſeaſes ſometimes pernicious.

(*y*) The folly and impatience of mankind often oblige phyſicians, according to the trite, but well-grounded adage, *to make more haſte than good ſpeed*, and to order medicines when it would be much better to do nothing at all, ſo little do they underſtand and conſider their own true intereſt; whereas the wiſeſt and beſt thing they could do, would be to ſubmit implicitly to be directed by a conſcientious and judicious phyſician, allowing him to be only a ſpectator of the procedure of nature, when he judges it beſt to wait her motions; it being often, as the antients adviſe, *the beſt remedy to uſe none at all*; or to act at the time, and in the manner he ſhall ſee fit.—If he is an *honeſt* phyſician, the patient may be aſſured he will always do what is *neceſſary*; — and if a *ſkilful* one, what is beſt in due time, and no more. — But ſo it is — the phyſician (as Dr *Langriſh* obſerves) is ſometimes under a neceſſity of preſcribing *non ſignificants* merely to preſerve his character, and not be thought negligent or ignorant of the cauſe of the diſeaſe. The officious buſy tempers of ſome men have greatly prevented their obſerving, as they ought, the tendencies of nature; they think to force a *criſis* when they pleaſe, by boldly adminiſtering ſtrong and powerful medicines; whereas it may be, the greateſt benefit is to be done by the moſt ſimple, eaſy, and gentle means, or, perhaps, by leaving it entirely to the management of nature. Many inſtances

nature always wants the assistance of art; for if that were the case, she would have made less provision for the safety of mankind than the preservation of the species demands; there being not the least proportion between the multitude of diseases, and the knowledge men were endowed with to remove them, even in those ages wherein the healing art was at the highest pitch, and most cultivated. What it may do in other diseases I cannot say; but I am convinced, from diligent observation, that in the fever under consideration this symptom, after using the general evacuations, *viz.* bleeding and glysters, was successfully conquered by time alone. Chap. 2.

Improper diet when to be indulged.

20. It has been already observed that the signs of recovery did not usually appear till the *thirteenth* day, when the *stupor* was considerable, and attended with a loss of speech; and then the patient earnestly longed for some odd kind of liquid or solid aliment, the ferment of the stomach being greatly vitiated by the long continuance of the fever. Now in this case, tho' the patient was so weak as to need a restorative diet, yet I willingly allowed such things as were less proper, provided they were more grateful to the palate.

History of a cure.

21. In *September*, 1674, I attended the son of Mr *Not*, bookseller, a youth of nine years of age, who was afflicted with this fever, accompanied with the abovementioned symptom. After bleeding in the arm, and injecting glysters every day in the beginning of the illness, the mother earnestly importuned me to hasten the cure more than I judg'd consistent with the safety of her child, and therefore I refused to comply with her request. Having accordingly gained time, I directed only a common julap; which I did rather to please the mother, than to relieve the son. On the *thirtieth* day he began to amend, and earnestly desired several odd kinds of eatables, some of which were indulged him upon this

stances might be alledged to shew what vast advantages have accrued by a strict attendance to the demands of nature, without pouring in a load of physic. Nature is often conquered by obeying and humouring her; for by diligently watching and observing the ways and means she uses to free herself from the disease, and then joining with her in the same undertaking when she needs our assistance, we compleat the cure, which otherwise might have been very uncertain. *See his modern theory and practice of physic*, p. 173. 220. par. 8. Clifton's *state of physic*, &c. p. 154. *and* Cheyne's *diseases of body and mind*, p. 65.

Sect. 5. account, tho' they ought not otherwiſe to have been allowed; and by this means he at length recovered (z).

22. But

(z) The prudent caution of our author in indulging his little patient with only ſome of the odd kind of eatables for which he long'd, well deſerves to be commended and imitated; but it requires ſome diſcernment to know how far the humour and appetite of the patient may be ſafely gratified. Beſides, the reputation of the phyſician may ſuffer if he ſhould commit any conſiderable miſtake in this matter, as the error will be very manifeſt to the friends and attendants of the patient, who are often but too ready to cenſure, and call his judgment in queſtion, without his giving, or their being able to aſſign the ſhadow of a reaſon for it. Hard indeed, and much to be lamented is the lot of phyſicians, and it really makes ours a very mortifying and diſagreeable profeſſion, that we are ſo frequently cenſured and condemned, not only by ſuch as pretend to a ſmattering in phyſic, yet in truth know little or nothing of the matter, at leaſt in what relates to practice, (between which and theory there is often a wide difference,) but even by perſons of the meaneſt capacity, who, every body of common underſtanding muſt allow, are utterly incapable of forming any judgment of our abilities; and, therefore, only expoſe their own folly and ignorance the more, by aſſuming a province for which neither nature nor education has qualified them.

It is no ſuch eaſy matter, as it is generally imagined, to know whether a man, who has the appellation of a phyſician, is poſſeſſed of all the neceſſary qualifications that go to make up the character of a ſkilful one, which in ſhort are *learning*, *ſagacity*, *humanity*, and *probity*. For who does not ſee that none but a perſon of unblemiſhed integrity, and eminently verſed in all the branches of the art of phyſick, is a proper judge of the medical abilities of another?

Now it is owing to the incapacity which the generality of mankind lies under of judging of the true merits of phyſicians, that they too often meet with the cruel uſage and ungrateful returns above complained of, when in reality they deſerve the higheſt praiſe, and the heartieſt acknowledgment, for their extraordinary pains and anxious ſolicitude to diſcharge their duty, which every honeſt and able phyſician does to the utmoſt, in all tedious, obſtinate, and dangerous maladies.——But with us, all is well that ends well: —— nothing ſo, that does not.—— We muſt be aſperſed and bear all the blame, and no allowance is made for the wilfulneſs and ungovernableneſs of the patient, the falſe tenderneſs of parents, relations, and friends, and the negligence, thoughtleſſneſs, miſtakes, imprudent officiouſneſs, and opinionativeneſs of thoſe about him; and perhaps the badneſs of medicines likewiſe: but how little we deſerve ſuch unfair and ungenerous treatment, I leave to the candid, the ſenſible, and good-natured part of mankind to judge.

" If the phyſician takes never ſo much care on his part, " ſays Dr *Chiſton*, and the apothecary ſends the beſt medicines " that can be prepared, the patient may eaſily ſpoil all by his

" own

22. But tho' this comatous kind of *ſtupor* oftener accompanied this fever than the other ſymptoms, yet ſometimes, tho' rarely, a *delirium* happened without a *ſtupor*, in which the patient ſlept neither night nor day, and was ungovernable, and was ſeized with other ſymptoms, reſembling thoſe which affect delirious perſons either in the ſmall-pox, or in other fevers. This ſymptom would not admit of palliation, like the comatous diſorder juſt mentioned, till concoction could be performed, but proved fatal in a ſhort time, unleſs the inflammation was abated. In this caſe *ſpirit of vitriol* did more good than any thing elſe, ſo that, after bleeding, and injecting a glyſter or two, I allowed it to be dropt into ſmall-beer for common drink: and in a few days it diſpoſed the patient to ſleep, and having removed the ſymptoms, reſtored him to health, which indeed I was not able to effect by any other method. And this was manifeſt to me by much experience.

Chap. 2.

Sometimes a *delirium* with watchfulneſs, *&c.* happened in this fever.

Spirit of vitriol moſt effectual in removing theſe ſymptoms.

23. In *Autumn*, 1675, dyſenteric ſtools, and ſometimes a looſeneſs ſucceeded this fever, which I preſently perceived were *ſymptomatic*, and not *original* diſorders, as in the preceding conſtitution. But notwithſtanding, as the cauſe of the diſeaſe was contained in the maſs of blood, bleeding was indicated, which, with the aſſiſtance of two doſes of an opiate afterwards, proved ſufficient to overcome this ſymptom.

24. In *September*, 1675, I was called to Mrs *Conisby*, who was ſeized with this fever, which was ſuddenly followed with gripings, and theſe by bloody and mucous ejections. Tho' her ſtrength was much exhauſted by the long continuance of the diſeaſe, and eſpecially by the

The dyſentery ſucceeding this fever how conquered.

" own bad management; and yet (which is very hard) nei-
" ther the phyſician nor apothecary ſhall eſcape cenſure in
" this caſe. It were therefore to be wiſhed, that every pa-
" tient would endeavour to get the better of unreaſonable
" objections, and reſolve to conform to his phyſician's direc-
" tions, or elſe not ſend for him. This would certainly be
" the caſe, if private perſons could be ſenſible of the unea-
" ſineſs and vexation that the phyſicians and apothecaries of-
" ten feel, when a promiſing caſe is made deſperate (a thing
" that frequently happens) merely by the frowardneſs and
" miſmanagement of the patient. Add to this, that the cha-
" racter and reputation of both parties ſuffer ſometimes con-
" ſiderably by it; an injury that ought never to fall upon
" thoſe whoſe conduct all along has been judicious, honeſt,
" and unblameable." *State of phyſick antient and modern*, p. 136.

frequent

Sect. 5. frequent ſtools which had greatly fatigued her the preceding night, I directed bleeding in the arm immediately, and ſoon after gave an opiate, after which there appeared natural ſtools the ſame evening. I repeated the opiate the following morning and evening, and ordered a gentle cardiac to raiſe the ſpirits; and by this treatment ſhe ſoon recovered.

The looſeneſs ſucceeding it how cur'd.

25. As to the *diarrhoea*, which frequently happened in this fever, about this time of the year, it occaſioned little inconvenience; and as it neither proved ſerviceable, nor prejudicial, as far as I could perceive, whether there was a *ſtupor*, or not, ſo it furniſhed me with no indication, provided it was not ſo violent as to endanger the life of the patient, in which caſe an opiate was clearly indicated; and in this ſymptom only is the uſe of anodynes to be approved throughout the courſe of this diſeaſe; for the extraordinary tendency to a *ſtupor* in this fever was increaſed by medicines of this kind, conſequently they were not to be given without an abſolute neceſſity.

Night-ſweats whence, and how cured.

26. It muſt be obſerved, that it often happens that thoſe perſons who recover after this and other fevers, eſpecially ſuch as have been much exhauſted by its long continuance, and have required large and tedious evacuations to compleat their cure (particularly if they were alſo of a weak conſtitution) do, as they lie in bed at night, firſt grow hot, and then fall into a profuſe ſweat, whereby they are greatly debilitated, and recover ſtrength ſlowly; and ſome likewiſe fall into a conſumption. As I conceived that this ſymptom proceeded only from the blood's being ſo impoveriſhed and weakened by the continuance of the preceding illneſs, that it could not aſſimilate the juices lately taken in, but endeavoured to expel them by ſweat; I ordered that the patient ſhould take five or ſix ſpoonfuls of old *Malaga* ſack, morning and evening, whereby the ſtrength increaſed daily, and the ſweats vaniſhed (*a*).—And thus we have finiſhed our diſcourſe of the continued fever of this conſtitution, which we chuſe to call the *comatous fever*, on account of the great *ſtupor* which generally accompanied it.

CHAP.

(*a*) A reſtorative diet, proper exerciſe, and the uſe of a *light infuſion of the bark in red wine* will ſeldom fail of producing the deſired effect in this caſe. *Elixir of vitriol* is alſo eſteemed an excellent medicine for the ſame purpoſe.

CHAP. III.

Of the Meaſles of 1674.

1. IN *January*, 1674, there aroſe a different kind of the *meaſles* from that which began in the ſame month, in 1670, and yet it proved as epidemic, but was not equally regular, nor ſo conſtantly kept its ſeveral ſtages: for ſometimes the eruptions came out earlier, and ſometimes later, whereas in the other kind they always appeared on the *fourth* day incluſive from the beginning of the illneſs. Again, the eruptions here appeared firſt on the ſhoulders, and other parts of the trunk; but in the other ſpecies they firſt ſhewed themſelves in the face, and by degrees ſpread over the reſt of the body. In this ſpecies likewiſe I ſeldom found that the ſkin peeled off like branny ſcales upon the diſappearance of the eruptions, which happened as certainly in the other kind, as after a ſcarlet fever. Moreover this ſort proved more deſtructive, when unſkilfully treated, than the former: for the *fever* and *difficulty of breathing*, which uſed to ſucceed at the cloſe of the diſtemper, were more violent here, and reſembled a *peripneumony* more. But tho' this ſpecies of the meaſles was anomalous and irregular, with reſpect to the ſymptoms juſt mentioned, yet in general the deſcription of that of 1670 agreed pretty well therewith; which need not therefore be repeated here. This kind alſo, like the former, increaſed till the *vernal* equinox, from which time it abated, and at length vaniſhed, at the approach of, or ſoon after, the *ſummer* ſolſtice. The riſe of a new ſpecies of the *meaſles*.

2. As the method of cure differs little from that which is amply delivered above in the hiſtory of the meaſles, it is to be ſought for there; and I will only give a ſingle inſtance hereof in this place, according to my cuſtom. The method of cure whence to be taken.

3. In *February*, 1674, the counteſs of *Salisbury* ſent for me to one of her children in the meaſles, which the reſt, to the number of five or ſix, ſoon afterwards catched, and I treated them all in the ſame manner. I ordered they ſhould lie in bed for two or three days before the eruption, that the blood might breathe out thro' the pores the particles occaſioning the diſtemper, which Exemplified in ſome children.

Sect. 5. which were eaſily ſeparable from it. But I allowed them no more clothes, nor a larger fire, than they were accuſtomed to when in health. I forbad the uſe of fleſh, and permitted them to ſup water-gruel, and barley-broth, and between whiles to eat a roaſted apple, and I gave them ſmall-beer, or milk boiled with thrice its quantity of water for drink. I alſo preſcribed a pectoral ptiſan, as uſual, to be drank occaſionally, as the cough proved troubleſome. By this means they recovered in the ſhort time wherein this diſeaſe ordinarily terminates, and were not ſeized with any ſymptom which is not common in the meaſles, throughout the courſe, or after the departure thereof.

The origin of a *morbillous fever.*

4. During the firſt two months in which this kind of the meaſles prevailed, a kind of *morbillous fever* intervened in a few ſubjects, attended with ſome eruptions in the body, but eſpecially in the neck and ſhoulders, reſembling the meaſles, from which however they differed in being confined to the parts abovementioned, and not ſeizing the whole body. The fever alſo, tho' manifeſtly of the ſame kind, was more violent, and laſted *fourteen* days, and ſometimes longer. It admitted neither bleeding nor glyſters, being exaſperated by both, but readily yielded to the method adapted above to the meaſles.—And let this ſuffice for the meaſles.

Bleeding and glyſters bad therein.

CHAP. IV.

Of the anomalous Small-pox of 1674, 1675.

The return of the *black ſmall-pox.*

1. AS the *epidemic meaſles*, which appeared in the beginning of the year 1670, introduced the *black ſmall-pox* there deſcribed; ſo that kind which aroſe in the beginning of 1674, and proved equally epidemic, introduced a ſort of ſmall-pox, ſo extremely like the former, that it ſeemed to be the ſame revived, and not a new kind. For as we have before obſerved of that ſort of ſmall-pox, that after the firſt two years of its prevalency the puſtules became daily leſs black, and grew larger by degrees, till the end of the year 1673, when the diſeaſe was mild and gentle, conſidering the kind, it now returned again with its former violence, and attended with a train of deſtructive ſymptoms. For

in

in the *flux kind* the puſtules appeared of a ſooty black- Chap. 4.
neſs, unleſs the diſeaſe proved fatal before they came to ſuppuration; for whilſt they ripened, they were only of a brown colour. Moreover, when the puſtules were numerous, they were very ſmall (for where very few appeared, they were of the ſame ſize as in other kinds of the ſmall-pox, and very rarely black) and nearly reſembled that kind above deſcribed which prevailed in 1670, differing only in a few particulars, which ſhewed that this ſort was attended with a greater degree of putrefaction, and of a groſſer and more indigeſtible nature: for when the eruptions came to maturity, they were much more fetid than in the other kind, inſomuch that I could ſcarce bear to approach ſuch as were very full, the ſtench was ſo offenſive. They alſo ran thro' their ſtages ſlower than any other ſpecies I had hitherto ſeen.

2. It is worth obſerving, that the milder the kind is, the ſooner the eruptions come to ſuppuration, and the diſeaſe is terminated. Thus in the regular ſpecies of the *confluent ſmall-pox*, that began in 1667, the *eleventh* day was attended with moſt danger, after which the danger was generally over. In the next ſucceeding irregular ſpecies of the confluent ſmall-pox, which aroſe in the beginning of 1670, the *fourteenth*, or, at fartheſt, the *ſeventeenth* day proved moſt fatal, which if the patient ſurvived, he was in no further danger; for I never knew a perſon deſtroyed by this diſeaſe after the *ſeventeenth* day. But in this ſort of the confluent ſmall-pox, there was danger after the *twentieth* day; and ſometimes if the patient recovered, which happened to few, the ankles not only ſwelled, which is common in every ſpecies of the confluent ſmall-pox, but the ſhoulders, legs, and other parts; and theſe ſwellings begun with intolerable pain, like a rheumatiſm, and frequently came to ſuppuration, and terminated in very large ſinus's and impoſthumes in the muſcular parts; ſo that the patient's life was greatly endangered for ſeveral days after the ſmall-pox was gone off. Hence I clearly perceived by what degrees this epidemic diſtemper advanced thro' theſe three conſtitutions, the latter whereof always exceeded the former, both in the degree of putrefaction, and the indigeſtible ſtate of the morbific matter.

The milder the kind the ſooner the puſtules ſuppurate.

3. But

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This ſmall pox ſeems to be a new kind.

3. But the *ſmall-pox*, whereof I now treat, ſeems to me to be a new ſort ariſing from the former, now in the decline. For tho', according to the tendency of the air productive of this epidemic, the *black* ſmall-pox, which firſt appeared in 1670, had arrived at its declenſion, yet, like a relapſe of ſome diſeaſe cauſed by the freſh fermenting of the former matter, the air, being again diſpoſed to produce the *ſmall-pox*, brought it back; and the diſeaſe being renewed, and having obtained freſh force, ſeemed clearly to revive, and in a manner to grow young again. And this kind proved ſo much more irregular, and was accompanied with greater putrefaction, in proportion as the matter occaſioning it was groſſer and fouler than that which produced the preceding kind. Now, to render this ſtill more manifeſt, we muſt not imagine there is the leaſt neceſſity of ſuch a diſpoſition in the air, as may propagate a particular epidemic in one place, and a very different one in another not far diſtant from it; for if this were the caſe, as it ſometimes is, every motion of the winds would have a power of ſpreading a conſtitution. But I conceive it more probable, that a certain particular tract of air becomes replete with *effluvia* from ſome mineral fermentation, which infecting the air thro' which they paſs, with ſuch particles as prove deſtructive ſometimes to one kind of animals, and ſometimes to another, continue to propagate the diſeaſes peculiar to the various diſpoſitions of the earth, till the ſubterraneous ſupplies of thoſe *effluvia* fail; which may likewiſe undergo a new fermentation from the remains of the old matter, as in the caſe juſt mentioned.

Was of a groſſer, and more putrefactive nature

4. But whether this or any other hypotheſis may better ſerve to ſolve the phenomena, is equal to me, who pretend to know nothing more than is clear from the fact itſelf. Of this however I am certain, that the preſent ſmall-pox exactly reſembled that of the preceding conſtitution; only it ſeemed to be of a groſſer nature, and attended with a much greater degree of putrefaction. And from theſe two cauſes it followed, that when the eruptions were very confluent, it deſtroyed abundance more than any other ſort I had hitherto ſeen; and, in my opinion, was as fatal as the plague itſelf, with reſpect to the numbers it affected: tho', when it proved the diſtinct kind, it was not more dangerous

than any other ſort, and by the ſize and colour of the puſtules, and other particulars, appeared to be a good ſort. Chap. 4.

5. With reſpect to the cure, I have long wondered to find ſuch manifeſtly contrary indications, as this diſeaſe ſeemed to exhibit. For it was very evident that a hot regimen immediately cauſed ſuch ſymptoms as proceed from a too violent inflammation, *viz.* a *delirium*, purple ſpots, and the like, whereto this diſeaſe is chiefly ſubject. And contrariwiſe too cool a regimen prevented the ſwelling of the face and hands, which is highly neceſſary here, and ſunk the eruptions. But after a long and thorough conſideration of theſe matters, I at length found that I could remedy both theſe inconveniencies at the ſame time. For by allowing the free uſe of milk boiled with three parts of water, ſmall-beer, or ſome ſimilar liquor, I was enabled to check the commotion of the blood; and, on the other hand, by keeping the patient conſtantly in bed, with his arms covered, the filling of the puſtules, and the ſwelling of the hands and face were promoted by the moderate warmth thereof. Nor does this method contradict itſelf; for after the eruption is over, it is to be ſuppoſed that the blood hath thrown out the inflamed particles upon the habit, and therefore needs no *ſtimulus* in order to a further ſecretion of the matter: ſo that, as the principal affair lies now in the habit of the body, and promoting the ſuppuration of the puſtules, all that is to be done, with reſpect to the blood, is, to prevent its being injur'd by the hot vapours that may ſtrike in from the ſkin covered therewith; and, with reſpect to the *puſtules*, they are to be brought to ſuppuration by the gentle heat of the external parts.

Intimated contrary curative indications.

The method of cure ſpecified.

6. But tho' this method ſucceeded well in the other kinds of the confluent ſmall-pox, it nevertheleſs failed in that of this conſtitution; for moſt of thoſe died who had it in a violent degree, whether they were treated by my method, or by the hot regimen and cardiacs. I was very ſenſible therefore that, beſides the medicines which ſerved to check the ebullition of the blood, or promote the elevation of the puſtules, and the ſwelling of the face and hands, there was further required a medicine of ſufficient force to overcome the putrefaction, which appeared to be much greater in this ſort than in any

It failed in this ſpecies of *ſmall-pox*.

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A different one ſet down, which ſucceeded.

any other I had obſerved. At length I thought of ſpirit of vitriol, which I conceived might anſwer both intentions, *viz.* (1) check the progreſs of the putrefaction, and (2) mitigate the vehement heat, Whereupon leaving the patient to himſelf, without doing any thing till the pain and vomiting preceding the eruption were gone off, and all the puſtules come out, at length on the *fifth* or *ſixth* day I allowed ſmall-beer, gently acidulated with *ſpirit of vitriol*, to be taken at pleaſure for common drink, recommending it to be drank more plentifully upon the approach of the ſuppuratory fever, and the uſe of it to be continued daily till the patient recovered.

Spirit of vitriol commended.

7. This ſpirit, as if it were truly a ſpecific in this diſeaſe, ſurpriſingly abated all the ſymptoms; the face ſwelled earlier, and in a greater degree, the ſpaces between the eruptions inclined more to a bright red colour, like that of a damaſk roſe; the ſmalleſt puſtules alſo became as large as this kind would allow; and thoſe, which had otherwiſe been black, diſcharged a yellow matter, reſembling a honey-comb; the face, inſtead of being black, appeared every where of a deep yellow; laſtly, the eruptions came ſooner to ſuppuration, and ran thro' all their ſtages a day or two ſooner than uſual. In this manner did the diſeaſe proceed, provided the patient drank freely of the liquor above commended; ſo that, when I found there was not enough of it drank to take off the ſymptoms, I exhibited ſome drops of the *ſpirit of vitriol* between whiles, in a ſpoonful of ſome ſyrup, or a mixture of ſome diſtilled water and ſyrup, in order to make amends for the ſparing uſe of the abovementioned liquor.

No inconvenience attending the uſe thereof.

8. I have now enumerated the many advantages of this medicine, and indeed I have not hitherto found the leaſt inconvenience from the uſe thereof (*b*): for tho' it moſtly

(*b*) It is juſtly to be apprehended that the blood may be coagulated, and the lungs and nervous parts highly injured by the free uſe of this noxious acid ſpirit. Oil of ſulphur by the bell, or much dulcified ſpirit of nitre, will anſwer the ſame end, and may be given more ſafely.

Oil of ſulphur by the bell, *Van Swieten* ſays, is the pureſt foſſile acid in nature, without the leaſt mixture of metalline particles *.—But a very expert and ingenious chymiſt, after

* Comment. in *Boerhaave* aphoriſm. Vol. I. p. 127.

giving

mōſtly ſtopt the ſalivation on the *tenth* or *eleventh* day, yet ſome ſtools uſually ſucceeded at this time inſtead of it, which were leſs dangerous than that ſtoppage; for, as we have often mentioned, ſuch as have the confluent ſmall-pox are principally endangered on theſe days, becauſe the *ſaliva*, being rendered more viſcid, does then threaten ſuffocation. But in the preſent caſe, this ſymptom is relieved by the looſeneſs, and either goes off ſpontaneouſly, or is eaſily cured by the milk and water, and an opiate, when the danger from the ſmall-pox is quite over. Chap. 4.

9. Tho' the patient by my order kept his bed during this time, and his arms in bed, I ſuffered no more clothes to be laid upon him than he was accuſtomed to when in health; and permitted him to change place as often as he pleaſed, to prevent his ſweating, to which he was extremely ſubject, notwithſtanding this remedy. In the mean time he ſupp'd water-gruel and barley-broth, and ſometimes eat a roaſted apple. Towards the decline of the diſeaſe, in caſe of faintneſs, or ſickneſs at ſtomach, I allowed three or four ſpoonfuls of canary; but after the *fifth* or *ſixth* day I ordered a compoſing draught (earlier than uſual) every evening for grown perſons, for children had no occaſion for it: the draught was *fourteen drops of liquid laudanum in* a little cowſlip water.

The patient not to lie always in the ſame place in bed.

The regimen.

10. On the *fourteenth* day I allowed the patient to riſe, on the *twenty-firſt* directed bleeding in the arm (*c*), and then purged him twice or thrice, after which he

Bleeding and purging when to be uſed after the ſmall-pox is gone off.

giving a proceſs for making it from the *Edinburgh* medical eſſays, makes the following remark, which ſhews him to be of a different ſentiment.—We have inſerted the above proceſs, in conformity to the prejudices of ſome who believe, that this ſpirit, or oil of ſulphur by the bell, as it is called, eſſentially differs from the common oil of vitriol of the ſhops. We have long been perſuaded of the truth of the contrary opinion; and have not been able, by any experiment whatſoever, to diſtinguiſh a difference between the two, provided both liquors were of equal purity and ſtrength. But this diſpute will now perhaps be quickly at an end; for if we are rightly informed (and from our own experiments we are well aſſured of the poſſibility of the thing) almoſt all the oil of vitriol now ſold, is prepared from the fumes of burning ſulphur, catched by a more convenient apparatus than any commonly known. *Lewis's Edinburgh diſpenſatory*, p. 296.

(*c*) Few authors have inſiſted upon bleeding univerſally after

Sect. 5. he had a better colour, and looked briſker, than thoſe uſually do whom this diſeaſe has ſo ſeverely treated. Beſides, this method generally preſerved the face from thoſe unſeemly ſcars, which are occaſioned by the corroſion of the ſkin from hot humours.

The method exemplified in a grown perſon.

11. On the twenty-ſixth of *July*, 1675, Mr *Elliot*, one of the grooms of the bed-chamber to the king, committed one of his ſervants to my care, who had this ill-conditioned ſort of black ſmall-pox coming out. He was about eighteen years of age, of a very ſanguine conſtitution, and was attacked with this diſtemper ſoon after hard drinking. The puſtules were of the confluent kind, and ran together more than any I had hitherto ſeen, ſo that ſcarce any intermediate ſpace was left between them. Relying upon the virtue of this efficacious medicine, I omitted bleeding, tho' I was called in ſoon enough to have done it, and ought indeed to have ordered it, as the diſeaſe was occaſioned by drinking too much wine. When the eruption was over, *viz.* on the *fifth* or *ſixth* day, I ordered *ſpirit of vitriol* to be dropt into ſome bottles that were filled with ſmall-beer, and allowed this liquor to be drank at pleaſure for common drink. On the *eighth* day he bled ſo much at the noſe, that the nurſe, terrified by this ſymptom, ſent in great haſte for me. And as ſoon as I came, perceiving that this hæmorrhage aroſe from the immoderate heat, and unuſual commotion of the blood, I ordered him to drink ſtill more freely of the acidulated ſmall-beer, whereby the flux of blood was ſoon ſtopt. The ſalivation being plentiful enough, and the ſwelling of the face and hands, and the filling of the puſtules, proceeding in a proper manner, the diſeaſe went on very well, except that in the decline thereof ſome bloody and mucous ſtools ſucceeded, which might have been prevented perhaps by bleeding in the beginning, for the reaſon abovementioned. Nevertheleſs I uſed no other medicine in the *dyſentery*,

the ſmall-pox, and the modern practice by no means favours it; and indeed when the diſeaſe has been ſevere, it ſhould ſeem prejudicial, as the blood muſt needs have been greatly impoveriſhed, and the ſpirits conſiderably exhauſted by the preceding illneſs. Caſes however may happen where bleeding is requiſite, but they ſhould be particularly deſcribed, and marked as exceptions to the general rule.—Purging is always proper, and ought never to be omitted.

but

but the composing draught, which I should have ordered to be taken every evening, if this symptom had not happened; and by this means it was checked, till the eruptions went off; and afterwards, upon taking away a sufficient quantity of blood from the arm, and drinking plentifully of milk and water, the patient soon recovered. Chap. 4.

12. About the same time, Mr *Clinch*, a neighbouring gentleman, committed two of his children to my care; one was four years of age, the other sucked, and was not six months old; the eruptions were very small and confluent in both, and of the black kind, and came out like an *erysipelas*. I directed *spirit of vitriol* to be dropt into all their drink, which, notwithstanding their tender age, they drank without any aversion; and not being seized with any worse symptom, they soon recovered. My intimate friend, Dr *Mapletoft*, accompanying me to visit them, found the eldest recovering, and the youngest then lying ill in the cradle. In two children.

13. But it must be noted that as the distinct sort of the *small-pox* of this constitution was very mild, it needed not this remedy; the method we have before laid down, for the treatment of the distinct kind, sufficing here. Spirit of vitriol was unnecessary in the distinct kind.

14. I have now given the reader all my observations relating to the *small-pox*; and tho' they may perhaps in this censorious age be esteemed of little moment, yet I have with great pains and care spent many years in making of them; nor had I now published them, if a design of benefiting mankind had not induced me to it, even at the expence of my reputation, which I am sensible will suffer on account of the novelty of the method. And yet I cannot conceive why a new way of curing a disease, not to be met with in *Hippocrates* or *Galen*, (unless perhaps some passage in their writings have a forced interpretation put upon it) should be disliked, since the methods of cure appropriated by the modern physicians, not having been established by those two great lights of physic, may as reasonably be rejected by some, as magnified by others. The *small-pox* not to be met with in *Hippocrates* or *Galen*.

15. And for the same reason it should not seem strange, that I have made some alteration in the method of curing those fevers, which depend on such constitutions as are epidemic with the small-pox. For if

Sect. 5. the *ſmall-pox* never appeared in thoſe early ages, it follows likewiſe that ſuch fevers never exiſted. Now it is highly probable there was no ſmall-pox to be found at that time; for if this diſtemper had been as common then as it is now, I am of opinion it could not have been concealed from the ſagacious *Hippocrates*, who, as he underſtood the hiſtory of diſeaſes better, and has deſcribed them more accurately, than any of his ſucceſſors, would alſo have left us, (according to his cuſtom) a plain and genuine deſcription of this diſeaſe.

Diſeaſes have certain periods, and whence.

16. Hence therefore I conjecture, that diſeaſes have certain periods, reſulting from the ſecret and hitherto unknown alterations happening in the bowels of the earth, that is, according to the different age and continuance of the ſame. And that as ſome diſeaſes have exiſted in former ages, that are now either quite extinct, or at leaſt appear very ſeldom, as being waſted with age, ſuch as the *leproſy*, and perhaps ſome others; ſo the diſeaſes which now prevail, will at length vaniſh, and yield to other new ſpecies, of which indeed we can form no idea. This may be the caſe, whatever notions we form of this matter, who were born, as it were but yeſterday, and to-morrow perhaps may die; nor are the practical obſervations of the antients of much longer ſtanding, if compared with the beginning of the world.

CHAP. V.

Of the epidemic Cough of the Year 1675, and the Pleuriſy and Peripneumony which followed upon it.

The riſe of an *epidemic cough*

1. IN 1675 the ſeaſon having continued unuſually warm, like ſummer, till towards the end of *October*, and being ſuddenly ſucceeded by cold and moiſt weather, a cough became more frequent than I remember to have known it at any other time; for it ſcarce ſuffered any one to eſcape, of whatever age or conſtitution he were, and ſeized whole families at once. Nor was it remarkable only for the numbers it attacked (for every winter abundance of perſons are afflicted with a cough) but alſo on account of the danger that attend-

ed

ed it. For as the conſtitution, both now and during the preceding autumn, eminently tended to produce the epidemic fever above deſcribed, and as there was now no other epidemic exiſting, which by its oppoſition might, in ſome meaſure, leſſen its violence, the cough made way for, and readily changed into the fever. In the mean while, as the cough aſſiſted the conſtitution in producing the fever, ſo the fever on this account attacked the lungs and *pleura*, juſt as it had affected the head even the week preceding this cough; which ſudden alteration of the ſymptoms occaſioned ſome, for want of ſufficient attention, to eſteem this fever an *eſſential pleuriſy* or *peripneumony*, tho' it remained the ſame as it had been during this conſtitution. Chap. 5. The fever remained the ſame notwithſtanding the ſudden change of its ſymptoms.

2. For it began now, as it always did, with a pain in the head, back, and ſome of the limbs; which were the ſymptoms of every fever of this conſtitution, except only that the febrile matter, when it was copiouſly depoſited in the lungs and *pleura*, thro' the violence of the cough, occaſioned ſuch ſymptoms as belong to thoſe parts. But nevertheleſs, as far as I could obſerve, the fever was the very ſame with that which prevailed to the day when this cough firſt appeared; and this likewiſe the remedies to which it readily yielded plainly ſhew'd. And tho' the pungent pain of the ſide, the difficulty of breathing, the colour of the blood that was taken away, and the reſt of the ſymptoms that are uſual in a pleuriſy, ſeemed to intimate that it was an *eſſential pleuriſy*; yet this diſeaſe required no other method of cure than that which agreed with the fever of this conſtitution, and did no ways admit of that which was proper in the *true pleuriſy*, as will hereafter appear. Add to this that when a pleuriſy is the original diſeaſe, it uſually ariſes betwixt ſpring and ſummer; whereas the diſtemper we now treat of, begun at a very different time, and is only to be reckoned a ſymptom of the fever which was peculiar to the current year, and the effect of the accidental cough. Exemplified in the manner of its ſeizure, and the cure.

3. Now in order to proceed in a proper manner to the particular method of cure, which experience ſhews to be requiſite both in this cough and in thoſe which happen in other years, provided they proceed from the ſame cauſes, it is to be obſerved that the *effluvia* which uſed to be expelled the maſs of blood by inſenſible perſpiration, Particulars to be conſidered, preparatory to the method of cure.

Sect. 5. ſpiration, are ſtruck in, and thrown upon the lungs, from the ſudden ſtoppage of the pores by cold, and, by irritating the lungs, immediately raiſe a cough. And the hot and excrementitious vapours of the blood being hereby prevented from paſſing off by perſpiration, a fever is eaſily raiſed in the maſs; namely, when either the vapours are ſo copious that the lungs are unable to expel them, or the inflammation is increaſed by the adventitious heat ariſing from the uſe of over-heating remedies, or too hot a regimen, ſo as ſuddenly to cauſe a fever in a perſon who was already too much diſpoſed to one. But of whatever kind the *ſtationary fever* be which prevails the ſame year, and at that time, this new fever ſoon aſſumes its name, becomes of the ſame kind, and in moſt particulars reſembles it; tho' it may ſtill retain ſome ſymptoms belonging to the cough, whence it aroſe. In every cough, therefore, proceeding from this cauſe, it is ſufficiently manifeſt that regard muſt not only be had to the cough, but likewiſe to the fever that ſo readily ſucceeds it.

The method of cure delivered.

4. Relying on this foundation I endeavoured to relieve ſuch as required my aſſiſtance by the following method: if the cough had not yet cauſed a fever, and other ſymptoms, which, as we ſaid, uſually accompany it, I judged it ſufficient to forbid the uſe of fleſh-meats and all kinds of ſpirituous liquors, and adviſed moderate exerciſe, going into the air, and a draught of a cooling pectoral ptiſan to be taken between whiles. Theſe few things ſufficed to relieve the cough, and prevent the fever, and other ſymptoms uſually attending it. For as by abſtaining from fleſh and ſpirituous liquors, along with the uſe of cooling medicines, the blood was ſo cooled, as not eaſily to admit of a febrile impreſſion, ſo by the uſe of exerciſe thoſe hot *effluvia* of the blood, which ſtrike in, and occaſion a cough, as often as the pores are ſtopt by ſudden cold, are commodiouſly exhaled in the natural and true way, to the relief of the patient.

Opiates, ſpirituous liquors, and heating medicines unſafe.

5. With reſpect to quieting the cough, it is to be obſerved that opiates, ſpirituous liquors, and heating medicines uſed for this purpoſe are equally unſafe; for the matter of the cough being intangled and ſtiffened thereby, thoſe vapours which ſhould paſs off from the blood, in a gentle and gradual manner, by coughing,

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are retained in the maſs, and raiſe a fever (*d*). And this frequently proves very fatal to abundance of the common people, who, whilſt they unadviſedly endeavour to check the cough, by taking burnt brandy and other hot liquors, occaſion pleuritic or peripneumonic diſorders; and by this irrational procedure render this diſeaſe dangerous, and often mortal, which of its own nature is ſlight, and eaſily curable. Neither do they err leſs, tho' they ſeem to act more reaſonably, who endeavour to remove the cauſe of the diſeaſe by raiſing ſweat; for tho' we do not deny that ſpontaneous ſweats frequently prove more effectual than all other helps in expelling the morbific cauſe, yet it is apparent that whilſt we attempt to force ſweat, we inflame the blood, and may poſſibly deſtroy the patient, whom we deſire to cure (*e*). Chap. 5.

6. But

(*d*) *Opiates* cannot be given with ſafety or advantage, unleſs copious evacuations have been already made; and ought not then to be adminiſtered without giving *nitre*, *crude ſal ammoniac*, freſh *ſweet oil*, and the like, at the ſame time.

(*e*) Our judicious author abounds with cautions againſt the very abſurd and raſh, but too common practice of attempting to force ſweats by heating medicines (ſuch as) *Venice treacle*, *Mithridate*, *the cordial confection*, *compound powder of crabs claws*, *ſpirit of hartſhorn*, *volatile ſalt of hartſhorn*, *volatile aromatic ſpirit*, *compound powder of contrayerva*, *ſaffron*, (and the like) in the beginning of acute inflammatory diſeaſes, contrary to the plain dictates of reaſon, and the current of experience; for moſt certain it is, that inſtead of cooling and relieving the patient, they inflame the blood, quicken the circulation, exhale and waſte the fineſt and ſmootheſt parts of the fluids, and leave them in a thick, glewy, acrid, and undiſſolvable ſtate, apt to form fatal obſtructions in the ſmalleſt veſſels, and to bring on violent and dangerous ſymptoms.—— Such great miſchiefs, (as one has well obſerved) are daily done by extorting ſweats imprudently, that it ſhould not be attempted without great caution and judgment; for nothing is more frequent than fevers of the moſt malignant kind, excited from very ſmall beginnings, a cold, for example, or ſlight fever, which would have terminated in a few days without any aſſiſtance from medicine, by the imprudent uſe of heating medicines and diaphoretics.

Hippocrates, the prince of phyſicians, never adviſes the uſe of heating medicines, in the cure of acute diſtempers. *Sydenham*, the modern *Hippocrates*, learned from obſervation the bad effects of ſuch remedies; and *Boerhaave* abſolutely rejected them in ſuch caſes. But had they all approved them, I could not have ſo far diſtruſted my own ſenſes as to ſubmit to their opinion; for I have met with caſes where patients have, in all appearances, been much relieved by evacuations; but upon the repetition of a few doſes of Sir *Walter Raleigh*'s

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The cough ſometimes joined with feverish ſymptoms.

6. But it happens ſometimes, not only when the diſeaſe has been unſkilfully treated, in the manner above deſcribed, but alſo ſpontaneouſly, at the beginning of the illneſs, or in a day or two afterwards, eſpecially in tender and weakly perſons, that the cough is ſucceeded by alternate intervals of heat and cold, a pain in the head, back, and limbs, and ſometimes a tendency to ſweat, eſpecially in the night; all which ſymptoms generally followed the fever of this conſtitution, and were frequently joined with a pain of the ſide, and ſometimes with a conſtriction, as it were, of the lungs, which occaſioned a difficulty of breathing, ſtopped the cough, and increaſed the fever.

The feverish ſymptoms, how beſt relieved.

7. According to the beſt obſervation I could make, the fever, and its moſt dangerous ſymptoms, were beſt relieved by bleeding in the arm, applying a bliſter to the neck, and giving a glyſter every day *(f)*. In the mean time, I adviſed the patient to ſit up ſome hours every day, to forbear fleſh meats, and ſometimes to drink ſmall-beer, ſometimes milk and water, and ſometimes a cooling and lenient ptiſan. If the pain of the ſide abated not in two or three days, but continued

confection, or the *cordial confection*, as the college now term it, or ſomething of the ſame nature, the heat has been violently increaſed, the tongue has grown black, and a *delirium* has come on, ſucceeded by death, whilſt the patient has all the time ſweated profuſely at every pore. I am ſenſible that heating medicines were originally brought into practice by the chymical phyſicians, and a falſe theory; but I am inclined to believe that artifice has had a great ſhare in their introduction, and cuſtom and inattention have continued them; for their uſe undoubtedly renders more medicines, and more attendance neceſſary than any other method, and protracts a fever, which would, in all probability, terminate in a few days, to almoſt as many weeks. If men were ſtatues, ſuch treatment would be only wicked; but when rational creatures endowed with ſenſibility are deſignedly tortured by ſuch a proſtitution of ſcience, language is too barren to repreſent ſuch a conduct in its proper colours. *See the ſchedula monitoria of our author*, p. 516. *& ſeq. The medical eſſays, vol.* V. *part* II. p. 545.

(f) This ſeems to be the only proper time for applying a bliſter, when the fever is abated, and the violent ſymptoms relieved; and indeed unleſs the pulſe be very low, and the heat moderate, bliſtering is needleſs, and will do harm. In inflammatory caſes, therefore, bliſters ought not to be applied, even though the head and nerves ſhould be affected in the beginning of the diſtemper, till after large evacuations have been made by bleeding and purging.

very

very violent, I bled a second time, and advised the continuance of the glysters. But with respect to glysters, it must be carefully observed, either in this or other fevers, that they are not to be long and frequently used when the disease is in its decline; especially in hysteric women, and in men that are subject to the hypochondriac disease; for the blood and juices of such persons are easily changed, and soon agitated and heated, whence the animal oeconomy is disturbed, and the febrile symptoms continued beyond the usual time. Chap. 5. A caution concerning glysters.

8. But to return to our subject: whilst by this means we allowed time that the blood might gradually free itself from those hot particles that were lodged in the *pleura* and lungs, all the symptoms usually went off in a gentle manner; whereas when the disease was treated in a rough way, by giving abundance of remedies, it either destroyed the patient, or rendered it necessary to repeat bleeding oftener than the disease required, or would safely bear, in order to save his life. For tho' repeated bleeding answers every purpose in the true pleurisy, and is alone sufficient for the cure thereof, provided there be no hindrance from a hot regimen, and heating medicines; yet here, on the contrary, it sufficed to bleed once, or at most twice, in case the patient refrained from bed, and drank cooling liquors. And I never found it necessary to bleed more frequently, unless the symptoms relating to the *pleura* and lungs were much increased by some adventitious heat, and even in this case the practice was not wholly void of danger. Rough methods, and abundance of remedies very pernicious.

9. Upon this occasion I shall briefly deliver my sentiments with respect to a very trite and common opinion, *viz.* that a pleurisy is found to be of so malignant a nature in some years, that it will not then bear bleeding, at least not so often as this distemper ordinarily demands (*g*). Now tho' I conceive that a true and *essential* pleurisy, which, as shall hereafter be observed, happens indifferently in all constitutions, does in all A *malignant pleurisy* sometimes happens.

(*g*) I have more than once found this the case, and so have some physicians of my acquaintance likewise; so that it requires great skill, and a close attention to the peculiar epidemic fever of the year, to know when to bleed, how much blood to take away, and how often bleeding may be repeated with safety. But to be sure it ought not to be repeated, if the blood is rather florid than sizy, and the first bleeding does not give the least relief.

years

Sect. 5. years equally indicate repeated bleeding; yet it ſometimes happens that the peculiar epidemic fever of the year, from ſome ſudden alteration of the manifeſt qualities of the air, readily throws off the morbific matter upon the *pleura* and lungs, whilſt the fever notwithſtanding continues exactly the ſame. Wherefore in this caſe, tho' bleeding may be uſed to abate this ſymptom when it is very violent, yet, generally ſpeaking, little more blood ought to be taken away than is required by the fever whereon this ſymptom depends; for if the fever be of a kind that will bear frequent bleeding, it may likewiſe be repeated in the pleuriſy, which is a ſymptom thereof: but if the fever will not bear repeated bleeding, it will prove prejudicial in the pleuriſy, which will go off with, or laſt as long as the fever does. And in my judgment this was the caſe in the *ſymptomatic pleuriſy* that accompanied the fever which prevailed here at the time the cough began, namely in winter, in 1675; and therefore I muſt obſerve that whoever, in the cure of fevers, hath not always in view the conſtitution of the year, inaſmuch as it tends to produce ſome particular epidemic diſeaſe, and likewiſe to reduce all the contemporary diſeaſes to its form and likeneſs, proceeds in an uncertain and fallacious way.

Repeated and copious bleeding bad herein.

10. In the month of *November*, of the above-mentioned year, I attended the eldeſt ſon of Sir *Francis Windham* in this fever. He complained of a pain in his ſide, and the other ſymptoms that attended thoſe who had this diſeaſe. I bled him but once, applied a bliſter to his neck, injected glyſters every day, gave him cooling ptiſans and emulſions, and ſometimes milk and water, or ſmall-beer to drink; and adviſed his ſitting up a few hours every day: and by this method he recovered in a few days, and a purge compleated the cure.

A pain in the ſide, removed, *&c.* without repeated bleeding.

11. But it muſt be remarked, that tho' theſe were the common ſymptoms which ſucceeded the cough, during this winter, yet the cough, unattended with theſe ſymptoms, was more prevalent at the ſame time. But this required neither bleeding nor glyſters, provided a fever was not occaſioned by a hot regimen, or heating medicines; it ſufficed to allow the benefit of the open air, and to forbid the uſe of fleſh, wine, and ſuch ſpirituous liquors,

The cough without a fever how to be treated.

liquors, which are apt to cauſe a fever. I likewiſe ordered the following troches to be taken often, which indeed are the beſt I know for ſtopping coughs occaſioned by taking cold (*h*). Chap. 5.

Pectoral troches.

Take of ſugar-candy two pounds and a half; boil it in a ſufficient quantity of common water till it ſticks to the fingers ends: then add of powder of liquoriſe, elecampane, and ſeeds of aniſe and angelica, each half an ounce; powder of Florentine *orrice root, and flower of brimſtone, each two drams; oil of aniſeed, two ſcruples; make the whole into troches with the requiſite art; which the patient ſhould always carry in his pocket, taking one of them frequently.*

12. Before I conclude this eſſay on epidemic diſeaſes, I muſt anſwer an objection that I foreſee will be made to part of it, *viz.* that it does not ſeem ſufficient to oppoſe the *malignity* that accompanies many of theſe diſeaſes. It is not my deſign, nor am I able, to confute the received opinion of the learned, whether antients or moderns, in relation to *malignity*, ſince there are plain proofs of it in moſt epidemics (*i*). I only beg leave to give my ſentiments of the nature of this malignity, to prove the reaſonableneſs of my practice. For I may ſay with the very learned *Scaliger*, "I do

(*h*) The troches here deſcribed and commended will do ſervice in habitual coughs, unattended with a fever, where the matter requires to be thinn'd, in order to facilitate its expectoration. But where the matter is thin, acrimonious, and irritating, troches ſhould be made of agglutinant, ſmooth, mucilaginous, and mild aſtringent ingredients: in both caſes bliſtering freely is highly ſerviceable.—The following lohoch, from the *Edinburgh* diſpenſatory, is an excellent medicine to ſtop a cough occaſioned by a thin, tickling rheum.

Take of freſh ſtarch, two drams; japan earth, one dram; ſyrup of comfrey, and whites of eggs, beat into a thin liquor, of each one ounce. Mix them together, ſo as to make a lohoch.

(*k*) Malignant diſeaſes are known by theſe ſigns: they begin with a ſlight coldneſs and ſhivering, a great loſs of ſtrength immediately enſues, and the pulſe at the ſame time is ſmall, quick and contracted; an erect poſture eaſily occaſions fainting, the patient is perpetually drowſy but cannot ſleep, and if he does, a greater decay of ſtrength ſucceeds thereupon, with a *delirium*; he complains of no great pain, thirſt, or other troubleſome ſymptom, and yet is uneaſy, and at length the extremities grow cold, the pulſe begins to intermit, and can no longer be perceived in the wriſt, and death is at hand.

"not

Sect. 5. " not contend for my own opinion, but for reason, or " what carries the appearance of it, without regarding " what some censorious persons assert".

Malignity explained. 13. I conceive then that the malignity in epidemics, whatever its specific nature be, consists and centers in very hot and spirituous particles, that are more or less opposite to the nature of the circulating fluids, because such particles only are capable of producing so sudden an alteration of them, as is frequently observed in malignant diseases. And I judge that these hot and spirituous particles act chiefly by way of assimilation; because by the law of nature every active principle endeavours to produce its like, and to reduce and mould whatever opposes it to its own nature. Thus fire generates fire, and a person seized with a malignant disease infects another by an emission of spirits, which soon assimilate the juices to themselves, and change them into their own nature.

In what kind thereof sweating is proper. 14. From these considerations it follows that it is best to expel these particles by sweat, since by this means the disease would be immediately eradicated. But experience contradicts this, and shews it cannot be done in every kind of malignity. For tho' in the *plague*, the pestilential particles, both by reason of their exceeding subtility, and their residing in the most spirituous parts of the blood, are dissipable, and may be expelled by a continued sweat; yet in other fevers, where the assimilating particles are less subtile, and mixt with grosser humours, the malignant fuel cannot only not be expelled by sweat, but is frequently increased by the diaphoretics given to promote it. For the more active those hot and spirituous particles are rendered by heating medicines, the more is their power of assimilating increased; and the more likewise those juices are heated whereon they act, so much the more readily are they assimilated, and yield to the impressions thereof. Whereas contrariwise, it is reasonable to think that medicines of an opposite nature do not only restrain the action of the hot and acrid particles, but likewise thicken and strengthen the juices, so as to enable them to undergo, or even to conquer the force of the morbific spirits. And here I may appeal to experience, which hath taught me that the purple spots in fevers, and the black eruptions in the small-pox, increase more readily in proportion as the pa-

patient is heated; and that according to the coolneſs of the regimen employed, which is very ſuitable to them, they are uſed to decreaſe and be diminiſhed. Chap. 5.

15. Now were it to be inquired whence it happens, ſince malignity conſiſts in ſuch hot and ſpirituous particles, that ſo few ſigns of a fever are frequently found in the moſt malignant diſeaſes; it might be anſwered, firſt, that in the *plague*, the moſt remarkable inſtance of malignity, the morbific particles are ſo very ſubtile, eſpecially in the beginning, that they paſs thro' the blood with the utmoſt velocity, and (the ſpirits being as it were fixed or congealed) raiſe no ebullition therein, whence the patient dies without a fever. Why malignant diſeaſes have often few febrile ſymptoms.

16. But in other epidemics, accompanied with a leſs degree of malignity, the febrile ſymptoms are ſometimes ſo ſlight, from the diſturbance raiſed in the blood by the morbific particles contained in the maſs, that nature, being in a manner oppreſſed, is rendered unable to produce the more regular ſymptoms that are ſuitable to the diſeaſe, and almoſt all the phenomena that happen are irregular, by reaſon of the entire ſubverſion of the animal œconomy; in which caſe the fever is often depreſt, which of its own nature would be very high. Sometimes alſo fewer ſigns of a fever appear than the nature of the diſeaſe requires, from the tranſlation of the malignant cauſe, either to the nervous ſyſtem, to ſome other parts of the body, or to ſome of the juices not contained in the blood, whilſt the morbific matter is yet turgid.

17. But which way ſoever it be, I cannot even ſo much as conjecture what other method of cure ought to be uſed to conquer the malignity, beſides that which is ſuitable to the epidemic wherewith it is joined. So that whether the epidemic be of the number of thoſe wherein the febrile matter muſt firſt be concocted, and ſoon after properly expelled by ſweat; or of thoſe that are terminated by ſome eruption, or of thoſe that require the aſſiſtance of art to make way for them: in all theſe kinds, the malignity, which is the concomitant of the diſeaſe, will riſe, and ſink, continue, and go off with the original diſeaſe; and conſequently whatever evacuation agrees in general with the fever, agrees likewiſe with the malignity, how much ſoever theſe evacuations may be of a contrary nature to each other. Hence the malignity that accompanies autumnal intermit- Malignity how moſt conveniently conquered.

Sect. 5. mittents, and alſo the continued fever, which is of the ſame nature, will yield to a ſweat, which follows concoction as its effect. And the ſeaſonable ſuppuration of the puſtules in the ſmall-pox will carry off the malignity attending that diſeaſe, and ſo of the reſt: in all which the peculiar ſpecies of malignity is beſt overcome by thoſe methods which prove moſt ſucceſsful in the cure of thoſe diſeaſes whereto it belongs, whether by this or any other procedure. This appears evident to me from reaſon, and is likewiſe univerſally confirmed by experience.

CHAP. VI.

The Recapitulation.

Five kinds of conſtitutions deſcribed in the foregoing ſheets.

1. AND thus we have, at length, ſhewn, that the ſpace of years which furniſhed us with the preceding obſervations produced five different kinds of conſtitutions, that is, five peculiar diſpoſitions of the air, productive of as many peculiar epidemic fevers. But the firſt of theſe fevers, which prevailed in thoſe years wherein autumnal intermittents chiefly raged, ſeems to be the only one, as far as I have hitherto obſerved, in which nature regulated all the ſymptoms in ſuch manner as to fit the febrile matter, prepared by proper concoction, for expulſion, in a certain time, either by a copious ſweat, or copious perſpiration; and upon this account I call it the *depuratory fever*. And in reality I am inclined to believe, that this is the capital and *primary* fever of nature, as well with reſpect to the regular method which nature uſes in promoting and accompliſhing the digeſtion of the morbific matter in a limited time, as alſo becauſe it occurs more frequently than other fevers.

Intermittents, the moſt frequent diſorders.

2. For it is probable that intermittent fevers oftener prevail epidemically than all other diſeaſes, if thoſe authors may be credited who have wrote ſo largely of their frequency in former ages, whatever may be the reaſon of their appearing ſo ſeldom ſince the plague depopulated this city; for the peſtilential fever was the forerunner of all the inflammatory fevers that afterwards ſucceeded. But I am miſtaken if the neceſſary and excellent apho-

riſms,

riſms, left us by *Hippocrates* and other antient phyſici- Chap. 6.
ans, are not adapted to the *primary* fever abovementioned, by means of which it is to be ſo regulated, that the febrile matter may be prepared for a proper *criſis* by ſweat: nor do I perceive how theſe aphoriſms can be adapted to the ſucceeding kinds of fevers, which being of a very different nature are rarely cured by ſuch a method, as enables us to cure thoſe diſeaſes, provided we embrace and purſue it to the end. But however this be, it is worth obſerving, that this fever, which depended on that conſtitution wherein intermittents prevailed over the reſt (if it proved of long continuance, or if the patient was weakened by large evacuations) ſometimes changed to an intermittent; whereas the fevers that prevailed in the following years, tho' they continued very long, ſcarce ever became intermittent; which was a pretty clear proof, that the continued fever and thoſe intermittents differed little in their nature from each other.

The ſpecies of a fever, how diſcovered

3. Now if I ſhould be aſked in what manner the ſpecies of a continued fever may be gathered from the ſigns ſet down by me in the deſcription of fevers, ſince every particular fever is moſtly attended with thoſe ſymptoms which all fevers have in common, as heat, thirſt, reſtleſſneſs, and the like; I anſwer, it is indeed difficult, but not impoſſible, in caſe all the circumſtances enumerated in the preceding hiſtory be thoroughly attended to, eſpecially to a phyſician reſiding in a city, or other populous place. For let us ſuppoſe that he is called to attend a perſon in a continued fever; he has this in the firſt place to aſſiſt him to form a right judgment of the ſpecies, *viz.* (1) he may eaſily learn, either from his own obſervation, or the relation of others, what other diſeaſes beſides this fever, rage epidemically in thoſe places, and of what kind they are; which being known, he will be no longer in doubt of what kind that fever is, which accompanies the other then reigning epidemic. For tho' the fever may poſſibly appear with ſuch ſymptoms only as are common to all fevers, eſpecially if it be diſturbed by a method of cure directly contrary to it, yet other epidemics will clearly diſcover the ſigns that are peculiar to its nature and genius.

4. Thus,

Sect. 5. 4. Thus, for inſtance, whoever ſees the ſmall-pox, and is well acquainted with the hiſtory of it, will eaſily conjecture, either by the day on which the eruptions came out, or by their ſize, colour, and the like, to what kind of *ſmall-pox* this particular ſort is to be referred; and when he has once diſcovered that ſort of ſmall-pox which prevails chiefly in that year, and in thoſe places, he will be no ſtranger to the ſpecies of any fever that then and there prevails. And undoubtedly if I were perfectly acquainted with the hiſtory of diſeaſes, which I do not pretend to, as I ſhould not ſcruple, upon ſeeing any epidemic, to declare of what kind the reigning fever of that time was, tho' I had never ſeen it, ſo likewiſe having ſeen any fever, it would ſufficiently teach me what epidemic accompanied it; *viz.* if the meaſles, ſmall-pox, or dyſentery, *&c.* For ſome particular ſpecies of theſe diſeaſes, as well as a peculiar fever, conſtantly attends every particular conſtitution.

5. (2) Beſides the ſigns, which an attention to the contemporary epidemics affords, the ſymptoms of every fever let in ſome light for diſcovering the ſpecies thereof. For tho', as we intimated above, all fevers have ſome ſymptoms in general, yet there are certain diſtinguiſhing ſigns which nature has particularly affixed to every ſpecies; but as theſe are more latent and obſcure, they are uſually diſcovered only by very diligent and accurate obſervers *(k)*. Amongſt theſe diſtinguiſhing ſigns, I have

(k) The ſcientifical knowledge of diſeaſes cannot be ſo effectually promoted and improved by any other means, as by making accurate obſervations, and carefully regiſtering and publiſhing them; which the phyſicians of thoſe truly charitable and excellent foundations, our *publick hoſpitals*, are beſt qualified to perform, as they have the moſt and beſt opportunities of doing it.

For in theſe houſes every thing is ſo much under their immediate inſpection and direction, that they may be morally certain of ſeeing the genuine and natural progreſs of diſeaſes through all their ſtages, and of all their uſual ſymptoms, of obſerving the motions and tendencies of nature, making a fair trial of the virtues and efficacy of medicines, diſcovering the inconceivable advantages of a proper regimen, ſtrictly purſued, the benefit of cold and warm bathing, *&c.* and what ſtanding method of cure beſt ſuits each particular diſtemper.

What valuable and extenſively beneficial diſcoveries might not be hoped for, then, from the ſagacity, labour, and manifold experience of *hoſpital phyſicians*, if they had as much leiſure,

I have always reckoned that *ſweating* or *dryneſs*, at a particular time of the diſeaſe, chiefly ſhewed the ſpecies of the fever, in caſe the fever had not been forced from its own natural ſtate by an improper method. And this manifeſtly appeared to me in all the epidemic fevers, which have been treated of in theſe obſervations.

Chap. 6.

Sweating or dryneſs principal diſtinguiſhing ſigns. Exemplified.

6. To give ſome inſtances of this: in thoſe fevers which prevailed upon the decline of autumnal intermittents, the external parts were dry, nor was there the leaſt ſign of ſweat before the concoction of the febrile matter, which was generally compleated on the *fourteenth* day: and in this caſe it was very dangerous to raiſe a ſweat; a *delirium*, and other fatal ſymptoms being immediately occaſioned thereby. In the peſtilential fever, which followed this, and preceded all the ſubſequent inflammatory fevers, no ſpontaneous ſweat appeared, but a ſweat might be raiſed in the beginning,

ſure, as ſome of them, to my knowledge, have inclination to oblige the world with them? But as a conſiderable part of their time muſt needs be taken up in attending their other patients, it were to be wiſhed that they had ſuch ſalaries allowed them, as might enable them to ſubſiſt decently without any other buſineſs.

To ſhew I am not ſingular in my opinion, I will tranſcribe a paſſage or two to the ſame effect from the ingenious Dr *Clifton's ſtate of phyſic antient and modern.—Speaking of a plan for improving phyſic*, he ſays, p. 166. — "This I apprehend may "be brought about by phyſicians rejecting every thing that is "doubtful or perplexed, and cultivating the buſineſs of *ob-* "*ſervation*, in the beſt manner it is capable of. By this "means we ſhall come (if ever we can come) to the true "knowledge of diſeaſes, and the readieſt method of curing "them."---And therefore, in order to collect *facts* enow to ground a good *ſyſtem* upon, he adviſes, p. 171. --- "That "three or four perſons of proper qualifications ſhould be em- "ployed in the hoſpitals (where there are the greateſt variety) "to ſet down the caſes of the patients there from day to day, "*candidly* and *judiciouſly*, without any regard to private opi- "nions, or publick *ſyſtems*, and at the year's end to publiſh "theſe *facts*, juſt as they are, leaving every one to make the "beſt uſe of them he can for himſelf. Would not ſome ſuch "method as this (he goes on) let us more into the nature of "diſeaſes in a few years, than all the books of *theories*, or "even the books of *obſervations*, hitherto publiſhed? Cer- "tainly it would: and yet if proper encouragement was gi- "ven, it is not at all unlikely, but that perſons enow would "ſoon be found, every way qualified for ſuch an undertaking. "And if even good ſalaries were allowed them, and every "thing made as eaſy and agreeable to them as they could de- "ſire, the benefit the publick would receive from them would "vaſtly more than balance the expence."

Sect. 5. by exhibiting ſudorifics, and as ſoon as it flowed all the ſymptoms went off. In the next ſucceeding fever, which accompanied the ſmall-pox in thoſe years wherein it proved regular, the patient was ſubject to profuſe ſpontaneous ſweats in the beginning of the illneſs, but by encouraging them, all the ſymptoms were increaſed. In the two fevers that accompanied the two irregular kinds of the ſmall-pox, and the dyſentery, the ſweat was likewiſe irregular, and generally appeared only in the beginning of the diſeaſe, tho' the ſweat which accompanied the former fever, was ſomewhat more copious than that which accompanied the latter; but neither afforded any relief, becauſe the ſweat proceeded not from previous concoction, but from the confuſed motion of the noxious particles.

7. But it ſeems exceeding difficult to me to diſcover the ſpecies of a new fever in the firſt year of a conſtitution, when no body has ſeen an example of it, or can imagine what epidemic diſeaſes may hereafter ariſe, which are generally preceded by this fever. It would be tedious to enumerate all the particulars that occurred in thoſe years of which I have treated, whereby it might appear that many manifeſt ſigns were ſuggeſted by nature, to enable us to make ſuch diſcovery; and conſequently this knowledge neceſſarily depends upon a careful and accurate obſervation of all circumſtances.

8. But tho' it be difficult, if not impoſſible, to aſcertain the ſpecies of a new fever at its firſt coming, yet with reſpect to the cure, the indication to be taken from ſuch things as do good or miſchief, at leaſt remains to aſſiſt us therein; by means of which we may by degrees find out a way to ſecure the patient, provided we do not hurry on too faſt, which indeed I eſteem to be moſt particularly pernicious, and to have deſtroyed more perſons in fevers than any other thing whatſoever. Nor do I think it below me to acknowledge, with reſpect to the cure of fevers, that when no manifeſt indication pointed out to me what was to be done, I have conſulted the ſafety of my patient, and my own reputation, moſt effectually, by doing nothing at all; for whilſt I carefully attended to the diſeaſe, in order to cure it in the beſt and ſafeſt manner, the fever either went off gradually of itſelf, or came to ſuch a ſtate as ſhewed what medicines were to be uſed to remove

it (*l*). But it is much to be lamented that abundance of ſick perſons are ſo ignorant, as not to know that it is ſometimes as much the part of a ſkilful phyſician to do nothing at all, as, at others, to exhibit the moſt effectual remedies; whence they not only deprive themſelves of the advantages of a fair and honourable procedure, but impute it either to negligence or ignorance; whereas the moſt illiterate empiric knows how to heap medicine on medicine as well as the moſt prudent phyſician, and uſually does it in a much greater degree. Chap. 1.

9. And now I have communicated the obſervations I have hitherto made (at leaſt ſuch as could be brought into ſome method) with reſpect to the ſpecies of *epidemic diſeaſes*, and the order wherein they ſucceeded from 1661 to the end of 1675; when the ſmall-pox and the continued fevers, which accompanied it, and had prevailed for near two years, became more gentle, and ſeemed to be going off. As to the diſeaſes that may hereafter ſucceed, they are only known to that omniſcient being from whom nothing is hid.

SECT. VI. CHAP. I.

Of intercurrent Fevers.

1. THE obſervations of the preceding years, above delivered, ſufficiently ſhew that ſome fevers are deſervedly entitled *ſtationary fevers*; I mean ſuch as ariſe from ſome peculiar conſtitution of a particular year not yet ſufficiently known. Every one of theſe prevails in its order, and rages with great violence, having, as it were, the aſcendant over all the reſt, during that continued courſe of years. Whether *Stationary fevers* prevail according to their order.

(*l*) What can ſet our judicious author in a more amiable point of light, than this open and honourable procedure? His great integrity in acting thus, and ſingular candour in owning it, are deſerving of the higheſt praiſe, and of general imitation. It is manifeſt from this and ſeveral other inſtances of the ſame kind which occur in his writings, that he had acquired ſuch deep-rooted and confirmed habits of virtue, as rendered him ſuperior to the ſtrongeſt attacks of temptation; and in particular that he was a man of inflexible *probity*, that eſſential quality of a good phyſician, which *Hippocrates*, though a pagan, makes a part of his character in his celebrated definition of one.

Sect. 6. there are any other ſpecies, beſides thoſe juſt mentioned- or whether they ſucceed each other in a certain term of years in a conſtant and invariable order, or whether it be otherwiſe, I have not yet been able to diſcover. But there are alſo other continued fevers, which, tho' they ſometimes rage leſs, and at other times more ſeverely, yet becauſe they are mixed with all kinds of *ſtationary* fevers, and likewiſe with each other indifferently in the ſame year, I conceive they ſhould be called *intercurrents*. I ſhall in the following ſheets communicate all that I have learnt from obſervation concerning the nature of theſe fevers, and the method of curing them: they are, the *ſcarlet fever*, *pleuriſy*, *baſtard peripneumony*, *rheumatiſm*, *eryſipelatous fever*, *the quinſy*; and, perhaps, ſome others.

Intercurrents mixt with theſe and each other indiſcriminately.

Intercurrents enumerated.

2. But as all theſe diſeaſes are, during their ſtate, or at leaſt were, accompanied with a fever, till it went off, the febrile matter being thrown upon ſome particular part, according to the nature of the diſtemper, I queſtion not that the fever is to be accounted the primary diſeaſe, and that the other diſorders whence thoſe diſeaſes generally derive their name, are ſymptoms, which chiefly regard either the peculiar manner of the *criſis*, or the part principally affected. But provided the thing be agreed upon, I will not contend about names; tho' I take the liberty to call a diſeaſe by the particular name, which pleaſes me beſt (*m*).

The *fever* the original diſeaſe in all.

3. It muſt be obſerved, that as the *ſtationary fevers*, of which we have treated above, prevailed more or leſs

Intercurrents are ſometimes epidemic.

(*m*) Whoever is but ſlightly acquainted with the writings of phyſicians, cannot but have obſerved their confuſion and diſagreement in this matter. Diſeaſes are multiplied and ſubdivided without neceſſity, and new names aſſigned to not a few, to the great perplexity of the reader. Thus, for inſtance, to what a vaſt number have the diſeaſes of the eyes been ſwelled by ſome authors; whereas, by a few plain queſtions, they might be reduced to a much narrower compaſs, and much better ſpecified, *viz.* Is the eye inflamed? Is the retina affected? Is there a cataract? So with regard to *eruptions*, of which there are innumerable kinds, it may be aſked: ---Are they *ſcorbutick*, *venereal*, or *inflammatory*, &c.? The aſcertaining to which claſs they properly belong, would convey a juſt notion of them, and determine at once how they were to be treated. The ſingular advantage and uſefulneſs of this ſimple method will manifeſtly appear to the learned reader that will take the pains to look into *Heiſter*'s *compendium medicinæ practicæ*.

epide-

epidemically, as we ſaid, according as they were favoured by the conſtitution of years, reſulting from a ſecret and inexplicable temperature of the air; ſo likewiſe did theſe *intercurrents* ſometimes, but leſs frequently. For tho' they generally ariſe from ſome peculiar diſorder of particular bodies, whereby the blood and juices are ſome way vitiated, yet ſometimes they proceed *mediately* from ſome general cauſe in the air, which, by its manifeſt qualities, ſo diſpoſes the human body, as to occaſion certain diſorders of the blood and juices, which prove the immediate cauſes of ſuch *epidemic intercurrents*. As for inſtance, when a ſharp froſt, which has laſted a long time, and continues late in the ſpring, is ſuddenly ſucceeded by warmer weather, *pleuriſies*, *quinſies*, and the like diſeaſes uſually ariſe, whatever be the general conſtitution of the year. And becauſe theſe diſeaſes, which happen indifferently in all years, do ſometimes rage as epidemically as thoſe which continue only for a certain courſe of years, we chuſe to call them *intercurrents*, in order to diſtinguiſh them from the latter. Chap. 1.

Wherein *ſtationary* and *intercurrent* fevers agree.

4. But notwithſtanding the conſiderable difference there is between theſe two kinds of fevers, with reſpect to the cauſes proceeding from the air, yet they frequently agree in other external and *procatarctic* cauſes. For not to mention *infection*, which ſometimes communicates ſtationary fevers, and *ſurfeits*, which give riſe to both ſtationary and intercurrent fevers, the manifeſt external cauſe of the greater part of fevers is to be ſought for hence; either (1) a perſon hath left off his clothes too ſoon, or (2) imprudently expoſed his body to the cold after being heated with violent exerciſe; whence the pores being ſuddenly cloſed, and the perſpirable matter retained in the body, that would otherwiſe have paſſed thro' them, ſuch a particular kind of fever is raiſed in the blood, as the then reigning general conſtitution, or the particular depravity of the juices, is moſt inclined to produce. And indeed I am of opinion, that abundance more have been deſtroyed by this means than by the *plague*, *ſword*, and *famine* together; for if a phyſician examines his patient ſtrictly concerning the firſt occaſion of the diſeaſe, he will generally find it to proceed from one of theſe cauſes, provided it be of the number of thoſe acute diſeaſes we have treated of above. Upon this account I always adviſe my

Moſt fevers occaſioned of catching cold.

Sect. 6. friends never to leave off any wearing apparel till a month before midſummer; and not to expoſe themſelves to the cold after being heated by exerciſe.

Moſt *intercurrents* are *eſſential diſeaſes.*

5. But it muſt here be carefully remarked, that tho' the diſeaſes I am now to treat under the title of *Intercurrents*, were moſt, if not all of them, *eſſential* diſeaſes; yet frequently certain diſorders happen in *ſtationary* fevers, reſembling theſe *intercurrents* as to the phenomena, and likewiſe characterized by the ſame name, which however are manifeſt ſymptoms of thoſe fevers. Now in this caſe they are not to be treated by the method which is to be uſed when they are eſſential diſeaſes, but rather by that which the fever requires, whereof they are now ſymptoms, which method is only to be ſlightly adapted to their particular cure: but, in general, great attention is to be had to the fever of the year, and to find out the eaſieſt method of conquering it, whether by bleeding, ſweating, or any other procedure: for if this be diſregarded, we ſhall frequently miſtake, to the great detriment of the patient. Should it be objected that the diſorders under conſideration, which I term *eſſential*, are in reality only ſymptoms, I reply, that perhaps they may be ſymptoms with reſpect to the fever whereto they properly belong, but they are at leaſt ſymptoms of fevers which always neceſſarily produce them. To exemplify this matter: in an *eſſential pleuriſy* the fever is of ſuch a nature, as always to depoſite the morbific matter upon the *pleura*; in an *eſſential quinſy*, of ſuch a nature as always to throw off the morbific matter upon the throat; and thus it happens in the reſt: whereas when any one of the abovementioned diſeaſes ſucceeds a fever that belongs to a particular conſtitution of years, and is dependent thereupon, it is then produced *accidentally* only, and no way neceſſarily: for which reaſon there is a remarkable difference between them.

When not ſo, how they are to be treated.

Eſſential and *ſymptomatic* diſorders how to be diſtinguiſhed.

6. But, in order to diſtinguiſh rightly between *eſſential* and mere *ſymptomatic* diſorders, it is of moment to conſider that the ſame ſymptoms which accompany any particular *ſtationary fever* at the beginning, will likewiſe happen at the ſame time in a *pleuriſy*, or *quinſy*, when theſe are only accidental ſymptoms of ſuch a fever.

ver (*n*). We had a proof of this in the abovementioned *ſymptomatic pleuriſy*, that ſucceeded the fever which prevailed in this winter of 1675. For all that were ſeized with the *pleuriſy*, were afflicted, in the beginning, with a pain in the head, back, and limbs; which were the moſt certain and common ſymptoms of all thoſe fevers that preceded the *pleuriſy*, and continued after that diſeaſe went off. Whereas when either of theſe *intercurrents* is the *eſſential* diſeaſe, it attacks in the ſame manner in all years indifferently, having nothing at all in common with the then prevailing *ſtationary fever*. Beſides, all the ſymptoms that afterwards ariſe are more apparent, as not being concealed and perplexed by a mixture of other phenomena, of a different nature, and belonging to another fever. Again, the time of the year, wherein the greater part of *eſſential intercurrents* uſually make their appearance, frequently points out the kind of diſorders whereto they ſhould be referred. But, laſtly, he is beſt qualified to diſcover the diagnoſtic ſigns, both of theſe, and all other diſeaſes, who, by daily and diligent obſervation, hath ſearched ſo intimately into their nature and ſymptoms, as at firſt ſight to be able to diſtinguiſh the *genus*; tho' perhaps the characteriſtic differences of ſome of them may be ſo very ſubtile, that he cannot expreſs them by words to another. Chap. 1.

7. But as theſe different ſpecies of fevers, ſo far as I can learn by carefully conſidering their concomitants, and the method of cure, proceed from an inflammation of the blood, peculiar to every diſeaſe, I place the principal part of the cure in cooling the blood. In the mean time I always endeavour to expel the morbific matter, by a method of cure, varied according to the nature of the diſeaſe, and which experience ſhews to be readily curative of the particular ſpecies thereof. In reality whoever certainly knows how to expel the febrile

Theſe different ſpecies of fevers how to be treated.

(*n*) *Eſſential* diſeaſes are thoſe which are always attended with ſuch a peculiar and diſtinguiſhing train of ſymptoms, as manifeſtly appear more or leſs in every perſon that is ſeized with them, and depend upon the genuine and invariable nature of each reſpective diſeaſe. But in *ſymptomatic* diſeaſes, the concomitant ſymptoms are accidental and common to other diſtempers, and not always neceſſarily preſent, and differ according to the different conſtitution, age, ſex, and manner of living of the perſons affected.

Sect. 6. matter, either by bleeding, ſweating, purging, or any other more proper way, muſt have the beſt ſucceſs in the cure of all fevers.

CHAP. II.

Of the ſcarlet Fever.

Riſe and ſymptoms of the *ſcarlet fever.*

1. THO' the *ſcarlet fever* may happen at any time, yet it generally comes at the cloſe of ſummer, when it ſeizes whole families, but eſpecially children. (1) A chilneſs and ſhivering come at the beginning, as in other fevers, but without great ſickneſs; (2) afterwards the whole ſkin is covered with ſmall red ſpots; which are more numerous, larger, and redder, but not ſo uniform as thoſe which conſtitute the meaſles: (3) they continue two or three days, and after they are vaniſhed, and the ſkin is ſcaled off, there remains a kind of branny ſcales, diſperſed over the body, which fall off, and come again for twice or thrice ſucceſſively.

The method of curing it.

2. As this diſeaſe ſeems to me to be nothing more, than a moderate efferveſcence of the blood, occaſioned by the heat of the preceding ſummer, or ſome other way, I do nothing that may prevent the deſpumation of the blood, and the expulſion of the peccant matter thro' the pores, which is quickly enough performed. Accordingly, I refrain from bleeding, and the uſe of glyſters, which make a revulſion, whereby I conceive the noxious particles are more intimately mixed with the blood, and the motion which is more agreeable to nature is checked. On the other hand I forbear cardiacs, by the heat of which the blood may perhaps be put into a more violent motion, than ſo gentle and mild a ſeparation as effects the cure requires; and beſides by this means a high fever may be occaſioned. I judge it ſufficient for the patient to refrain wholly from fleſh, and all kinds of ſpirituous liquors, and to keep his room, without lying always in bed. When the ſkin is entirely peeled off, and the ſymptoms vaniſhed, it is proper to give a gentle purge, ſuited to the age and ſtrength of the patient. By this plain and manifeſtly natural method, this diſeaſe in *name* only, for it is little more, is eaſily cured, without trouble or danger.

Whereas

Whereas on the contrary, if we add to the patient's evils, either by confining him continually in bed, or exhibiting abundance of cardiacs and other ſuperfluous remedies, the diſeaſe is immediately increaſed, and he frequently falls a victim to the over-officiouſneſs of the phyſician. Chap. 3.

What to be done if *convulſions*, or a COMA attend the beginning of the eruption.

3. But it ſhould here be obſerved, that when epileptic *convulſions*, or a COMA, ariſe in this diſeaſe at the beginning of the eruption, which ſometimes happen to children and young perſons, it is highly proper to apply a large and ſtrong bliſter to the neck, and immediately exhibit a paregoric of *ſyrup of white poppies*, which is to be repeated every evening during the illneſs; and he muſt be directed to make uſe of milk, boiled with thrice its quantity of water, for his ordinary drink, and to refrain from fleſh.

CHAP. III.

Of the Pleuriſy.

When a *pleuriſy* ariſes, and whom it chiefly affects.

1. THIS diſeaſe, which is one of the moſt frequent, happens at any time, but chiefly between ſpring and ſummer; for the blood, being then heated by the freſh approach of the ſun, is much diſpoſed to fermentations, and immoderate commotions. It chiefly affects the ſanguine, and frequently alſo attacks country people, and ſuch as have been uſed to hard labour.

Its ſymptoms.

It generally begins (1) with a chilneſs and ſhivering, which are followed (2) by heat, thirſt, reſtleſſneſs, and the other well-known ſymptoms of a fever; (3) in a few hours (tho' ſometimes this ſymptom comes much later) the patient is ſeized with a violent pungent pain in one ſide, near the ribs, which ſometimes extends towards the ſhoulder-blades, ſometimes to the ſpine, and ſometimes towards the breaſt; (4) a frequent cough, likewiſe, afflicts the patient, and occaſions great pain by ſhaking and diſtending the inflamed parts, ſo that he ſometimes holds his breath to prevent the firſt efforts of coughing; (5) the matter expectorated, at the beginning of the diſeaſe, is ſmall in quantity, thin, and often ſtreaked with blood; but in the courſe thereof it is more copious, and more concocted, and likewiſe mix-

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Sect. 6. ed and coloured with blood; (6) in the mean time the fever keeps pace, and even grows more violent with the ſymptoms ariſing therefrom: till at laſt, in proportion to the freer expectoration of the morbific matter, both the fever and its dreadful concomitants, as the *cough*, *ſpitting of blood*, and *pain*, &c. abate by degrees (*o*).

2. (7) But the matter productive of this diſeaſe does not always undergo ſuch a concoction in the courſe thereof, as fits it for expectoration; for it frequently remains thin, and only a ſmall quantity is expectorated, as in the beginning, and conſequently the fever and its concomitants remit not at all till they prove mortal (*p*). (8) In the mean time, the belly is ſometimes too coſtive, and at others too ſoluble, the ſtools being both frequent and very liquid; (9) ſometimes, when the diſeaſe proves extremely ſevere, and bleeding has been omitted, the patient cannot ſo much as cough, but having a great difficulty of breathing is almoſt ſuffocated by the violence of the inflammation, which is ſometimes ſo very conſiderable, that he cannot dilate his breaſt ſufficiently for reſpiration, without very acute pain (*q*). (10) And

(*o*) A pleuriſy is excellently deſcribed by *Aretæus* in theſe words: "An acute pain accompanies it, which reaches to the "throat, and in ſome to the back and ſhoulders; it is ſucceed-"ed by a difficulty of breathing, watching, *nauſea*, redneſs "of the cheeks, and a dry cough; the ſpittle is difficultly ex-"pectorated, and is either phlegmy, very bloody, or yellow-"iſh. It is worſe if the ſpittle be not bloody, or a *delirium*, "or a COMA come on." He tells us farther, that perſons in this diſeaſe recover or periſh, according to the vehemence of the ſymptoms, within the *ſeventh* or the *fourteenth* day: or, in caſe the diſtemper runs on to the *twentieth*, are ſeized with an *empyema*. See *Aretæi oper. lib.* 1. *cap.* x.

(*p*) It is worth obſerving here, that pleuriſies of all kinds, from the gentleſt to the moſt violent, are frequently met with in practice, which are not accompanied with even the ſlighteſt expectoration through all their ſtages, ſo that neither the phyſician or patient ever once have it in their thoughts; and theſe pleuriſies are not at all more dangerous than thoſe attended with expectoration.

(*q*) The cauſes of this ſymptom being very accurately and clearly pointed out by Dr *Hoadley*, we ſhall tranſcribe his ſentiments relating thereto. The lungs, ſays he, may be prevented from dilating and contracting, with perfect eaſe and freedom, both externally and internally. They may be prevented externally, firſt, by adhering to the *pleura*; and ſecondly, by a quantity of extravaſated fluid, taking up a part of the cavity, and not allowing them room to play.

Firſt, as to the adheſion of the lungs to the *pleura*. This is

ſo

(10) And ſometimes when the inflammation has been violent, and bleeding omitted (*r*) which ſhould have been uſed

ſo common a caſe, that I believe the number of thoſe who upon diſſection are found with adheſions, greatly ſurpaſſes the number of thoſe without them; but then theſe adheſions are of ſmall extent, except in very diſeaſed bodies.

Whilſt the adheſion is thus of a ſmall extent, and the body is in a tolerable degree of health, the lungs are able to play with ſufficient freedom, and reſpiration is but little diſturbed by it. But when it has ſpread itſelf to a great extent, and the lungs and *pleura* are inflamed, it not only greatly interferes with the action of reſpiration, but increaſes the diſtemper itſelf.

In this caſe, the moſt certain ſymptom to determine us that there is ſuch an adheſion, is the patient's being able to lie on one ſide only without pain, and with tolerable eaſe and breathing; and the adheſion is always on the ſide on which the patient lies with eaſe.

For, firſt, when the patient lies on the oppoſite ſide, the weight of the whole lobe that adheres, acts in a direction to tear it away from the *pleura*; whereas, when he lies on the ſame ſide with the adheſion, there is no ſuch endeavour towards a ſeparation.

And, ſecondly, when there is an adheſion, and the parts are inflamed, the action of reſpiration ſhould, for the eaſe of theſe parts, be carried on by a freer motion of the ribs on the other ſide; but when the patient lies on that other ſide his poſture not only prevents that ſide from relieving the other, by preventing the free motion of the ribs he lies on, but even obliges the diſeaſed ſide to perform the greateſt part of the action of reſpiration: which muſt neceſſarily rather increaſe than alleviate the pain and uneaſineſs in breathing.

Sometimes there are adheſions on both ſides the breaſt, which for the ſame reaſons give little or no trouble in reſpiration, before ſome other diſeaſe of the lungs or *pleura* ariſes; and when this diſeaſe produces an inflammation or impoſthumation, one ſide is generally more affected than the other; and, conſequently, very nearly the ſame ſymptoms will appear, as when the adheſion was on one ſide only.

In lungs, which have been diſeaſed for a long time, the adheſion gradually ſpreads, and ſometimes becomes univerſal. This is a caſe I have myſelf ſeen more than once, and requires our attention. See his *Lectures on the organs of reſpiration*, p. 76, 77.

(*r*) The cure of this diſorder chiefly conſiſts in bleeding; which is highly advantageous, not only in young perſons, but likewiſe in the aged, becauſe in general the latter are fuller of blood, and their blood is alſo thicker, and more tenacious, and occaſions more intenſe inflammations, whence if the ſtrength will permit, bleeding may be repeated in them. Great care ſhould be had to proportion the bleeding to the ſtrength, and quantity of blood, ſo as neither to take away too little, nor too much; for the latter not only checks expectoration, but the obſtruction to be opened is more confirmed thereby, or dege-

nerates

Sect. 6. uſed at the beginning, an impoſthume is ſoon occaſioned, the matter being emptied into the cavity of the breaſt, in which caſe, tho' the original fever either goes off entirely, or at leaſt abates, yet the danger is not over; for an *empyema* and an *hectic fever* ſucceed, and the patient is deſtroyed by a *conſumption*.

A *pleuriſy* ſometimes *ſymptomatic*.

3. Now tho' the *pleuriſy* proceeds from that peculiar and ſpecific inflammation of the blood, which uſually produces it when it is a primary diſeaſe, yet it ſometimes accidentally ſucceeds other fevers, of whatever kind they be, occaſioned by the ſudden tranſlation of the febrile matter to the *pleura*, or intercoſtal muſcles (*s*). This indeed happens in the very beginning of the fever, whilſt the febrile matter is yet in a ſtate of crudity, and not overcome by a due ebullition, and conſequently not fitted for a proper ſeparation by the moſt convenient out-lets. But it is moſt frequently cauſed by an unſeaſonable uſe of ſuch heating medicines, as are uſually given by ſome great ladies to perſons in low circumſtances; whoſe charity, in the mean time,

nerates into a mortification; and the former does little ſervice, the blood in the mean time flowing more freely to the part affected, and the obſtruction increaſing with the inflammation. See *Hoffman. Med. rat. ſyſtemat. tom. quart. pars I. p.* 435.

To this we ſhall ſubjoin an excellent remark of Dr *Huxham*'s about bleeding in pulmonic diſeaſes. Bleeding, ſays he, is ſo far from being ſerviceable in pulmonic diſeaſes, where expectoration is ſufficiently eaſy and quick, that it often totally checks it; conſequently it is no way indicated to be of uſe, unleſs there be an apparent *plethora*, or an acute pain, a difficulty of breathing, or a ſpitting of pure blood be ſo urgent as to require it. See his treatiſe *De aere & morbis epidemicis, p.* 52.

(*s*) The inner ſurfaces of the ribs, and intercoſtal muſcles, and diaphragm, and the whole external ſurfaces of the lungs and *pericardium*, are moſt exactly covered by the *pleura*; which is a ſmooth, ſtrong membrane, ſtretched over, and lining the whole cavity of the breaſt, and forming by its duplicatures the *mediaſtinum*, which divides the cavity into two.

This membrane, when it is in perfect health, is pliable in every part of it, that it may conform itſelf to the perpetual motion of all the parts it covers; but as it is furniſhed plentifully with arteries, veins and nerves, it muſt be liable, like other parts of the body, to obſtructions, inflammations, pain and ſuppuration; and therefore whenever it is in any part of it afflicted with any of theſe diſorders, it muſt neceſſarily very remarkably diſturb the action of the parts it is ſtretched over, and, according as the part affected is applied to the ribs, or diaphragm, the latter, or the former will be obliged to perform the greater ſhare in the action of reſpiration. See Dr *Hoadley*'s lectures on the organs of reſpiration, p. 71, 72.

would

would be much better placed in feeding the neceſſitous, than in curing their diſeaſes. But this, it ſeems, they do, to raiſe ſweat at the beginning of the diſeaſe, little dreaming of the ill conſequences thence ariſing. For nature, being hereby diſturbed, is forced to expel the yet crude humours thro' the firſt paſſage that offers; whence the febrile matter is ſometimes hurried violently to the *meninges*, and occaſions a *delirium*, and ſometimes to the *pleura*, and occaſions a pleuriſy; eſpecially when the age, conſtitution of the patient, and the ſeaſon of the year, namely that between ſpring and ſummer, jointly concur thereto: for in that ſeaſon fevers are apt to turn to pleuriſies. Chap. 3.

4. Now the colour of the blood that is taken away in a pleuriſy, ſeems to ſhew that this diſeaſe ariſes from the ſudden tranſlation abovementioned, for at the ſecond bleeding at leaſt, the blood, when cold, looks like melted tallow to a conſiderable thickneſs, but the top reſembles true *pus*, and yet it is very different from that, as being very fibrous like the reſt of the blood, and not fluid like *pus*; and upon ſeparating this part from the reſt, it appears like a tough fibrous ſkin, and perhaps it is only the ſanguineous fibres, which having loſt their natural red covering by precipitation, have hardened into this whitiſh membrane or pellicle by the coldneſs of the air; but let it be obſerved here, by the way, that tho' the blood flows ever ſo faſt, yet if it does not ſtream horizontally from the open vein, but runs perpendicularly down along the ſkin, it is frequently of another colour, which I confeſs I cannot account for, and ſuch a bleeding is alſo leſs ſerviceable. I have likewiſe obſerved that if blood, that is newly taken away, be ſtirred about with the finger, the top will appear of a red florid colour, as in any other diſeaſe, in what manner ſoever it flowed. But whatever be the appearance of the blood, this diſeaſe, tho' it has a bad name, and is in its own nature more dangerous than moſt others, is eaſily conquered by proper treatment, and indeed with as much certainty as any other diſtemper. Remarks on the blood in this diſtemper.

5. Having thoroughly conſidered all the various *phenomena* of a *pleuriſy*, I conceive it to be only a fever occaſioned by a peculiar inflammation of the blood, whereby nature throws off the peccant matter upon the *pleura*, Whence a *pleuriſy*, and what it is.

Sect. 6. *ra* (*t*), and ſometimes upon the lungs, whence a *peripneumony* ariſes (*u*); which, in my opinion, only differs from a *pleuriſy* in degree, and in reſpect of the greater violence, and larger extent of the ſame cauſe.

Intentions of curing this diſeaſe

6. In order, therefore, to cure this diſeaſe, I have the following ends in view (*w*); (1) to check the inflammation

(*t*) A *true pleuriſy* is an inflammation of the blood, cauſed by a ſtagnation thereof in the minute veſſels of the *bronchia*, diſcovered a few years ago by the celebrated *Ruyſchius*, which ſerve only to the nutrition of the membranes, veſicles, and veſſels conſtituting the lungs. And therefore the lungs themſelves are chiefly affected but only in their external ſurfaces. It is attended with greater difficulty of breathing, than the *ſpurious*, or *baſtard pleuriſy*, along with a ſpitting of blood, and is ſometimes terminated by expectoration. It is alſo joined with a more acute fever, but the pain is neither ſo ſharp, nor the part affected ſo tender, as in the latter diſtemper. See *Hoffman. Med. rat. ſyſtem. tom. quart.* p. 427.

In the *ſpurious*, or *baſtard pleuriſy*, the pain in the ſide is very acute and pungent, and is increaſed by touching the part affected; the patient cannot eaſily lie on the pained ſide, and hath a dry cough, without ſpitting up a flegmy, or bloody matter; but nevertheleſs, if the cough be violent, it augments the pain. This diſtemper is likewiſe accompanied with a fever, and a hard, depreſt, and quick pulſe.——It does not require bleeding, unleſs there be a great fullneſs of blood, but is generally ſucceſsfully and readily terminated by a breathing ſweat, or freer perſpiration, about the *ſeventh* day, and is nothing dangerous. *Ibid.*

Boerhaave obſerves that there are two kinds of *pleuriſies*, a *dry* and a *moiſt* one, the latter eaſily curable, but the former not ſo; whence it is neceſſary to diſtinguiſh them. The *moiſt pleuriſy* is attended with a ſymptomatic ſpitting of a viſcid, yellowiſh matter, tinged with blood, brought up from the inflamed part of the lungs, with a violent motion; but in a *dry pleuriſy*, the ſpittle is thin, and comes from the throat, which is a ſign that the inflammatory matter is not expectorable. See *Prax. Med. P.* IV. *p.* 164.

(*u*) A *peripneumony* is accompanied rather with a tenſive, dull, and heavy pain, than an acute one, and extends to the back and ſhoulders: but the difficulty of breathing is greater than in a pleuriſy, and it is alſo attended with anxiety, and a difficult expectoration of a various coloured matter. For in this diſeaſe the veſſels of the lungs, which convey the blood from one ventricle of the heart to the other are affected, being obſtructed with a very thick blood, inclining to a ſtate of ſtagnation. Hence it is more dangerous, and eaſily deſtroys thoſe whom it attacks, eſpecially if they be aged perſons, and a ſeaſonable cooling of the blood has been omitted. See *Hoffman, the book above quoted*, p. 428.

(*w*) As the ſtagnation of the blood, which occaſions an irregular circulation, is the only proximate cauſe of this diſeaſe, the cure turns wholly upon diſſolving the coagulation, and promoting

tion of the blood, and (2) to make a revulſion of the inflamed particles, fixed upon the *pleura*, by proper evacuation. Chap. 3.

Depending therefore chiefly on bleeding, as ſoon as I am called in, I order about ten ounces of blood to be drawn from the arm of the affected ſide (*x*), and the following draught to be taken immediately after the operation. The method of cure ſpecified.

promoting the circulation; in order whereto theſe indications are to be anſwered. (1) All farther inflammation and ſtagnation of the blood are to be prevented; (2) the *lentor* of the blood is to be diluted and diſſolved; (3) the part affected, become tenſe by the ſpaſm, pain, and copious afflux of blood thereto, is to be ſoftened and relaxed, ſo that the blood ſtagnating therein, may be driven out by the arterious blood brought to it, and be again put in motion; and laſtly (4) the expectoration of the viſcid, bloody and purulent matter lodged in the *bronchia*, is to be promoted, and the generation of an abſceſs, and *empyema* prevented.

Bleeding is to be uſed, in point of quantity and frequency, in proportion to the ſtrength, vehemence of the diſeaſe, *&c.* from a large orifice, in order to prevent the increaſe of the inflammation; and the ſooner it is performed, the more beneficial it proves. Diluents and diſcutients admirably aſſiſt in attenuating and diluting the viſcoſity of the blood, for which purpoſe water gruel, or barley water, ſweetened with honey, and whey are excellent liquors, drank warm. The pain and tenſion in the part affected may be much abated, by applying, and keeping fixt thereto, a bladder filled with a warm decoction of emollient ingredients in milk; as the *flowers of elder, melilot and camomile, white lilly and marſhmallow roots, poppy heads, linſeed and fenugreek ſeed*, &c. [A common emollient fomentation, diligently and carefully applied, is preferable to the application of the bladder in this caſe, and will much better anſwer the purpoſe.] Expectoration may be greatly promoted by lubricating pectoral decoctions, or ptiſans, along with proper lohochs, or mixtures.

The belly ſhould be kept open by emollient glyſters, the extremes of heat and cold are equally to be avoided, and nothing muſt be drank cold; all medicines alſo that work powerfully by urine, ſweat, or ſtool, muſt be carefully reſtrained. Opiates are bad in aged perſons, and where the humours are thick, and the inflammation conſiderable. Expectorating medicines are not to be exhibited in the beginning, nor till the matter is concocted, tough, moveable, and fit for excretion; otherwiſe a greater flow of humours to the lungs will be occaſioned. See *Hoffman. med. rat. ſyſt. tom. quart. p. 4. de feb. pneumon. ſparſim.*

(*x*) It matters not from which arm blood be taken, for the doctrine of topical revulſion and derivation is as much exploded now by the beſt phyſicians, as the *Carteſian* ſyſtem; being contrary to the laws of the circulation. *See the appendix to Dr* Nichols's *compend. anatom. de ſanguine alkaleſcente, aceſcente, et miſſione ſanguinis.*

Take

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A cooling draught.

Take of the diſtilled water of red poppies, four ounces; the ſalt prunella, one dram; ſyrup of violets one ounce; mix them together for a draught (y).

At the ſame time I preſcribe the following emulſion.

An emulſion.

Take ſeven blanched ſweet almonds, the ſeeds of melons and pumkins, of each half an ounce; the ſeeds of white poppies, two drams; beat them together in a marble mortar; then pour on by degrees a pint and half of barley water; mix them well, and, when ſtrained, add two drams of roſe water, and half an ounce of white ſugar.—Let four ounces be taken every fourth hour.

I alſo order pectorals to be taken frequently, *e. g.*

A pectoral apozem.

Take of the common pectoral decoction, a quart; ſyrup of violets and maidenhair, of each an ounce and half; mix them together for an apozem, of which let half a pint be taken three times a day.

A pectoral linctus.

Take of freſh oil of ſweet almonds, two ounces; of ſyrup of maidenhair and violets, each an ounce; white ſugar, half a dram; mix them together, and make a linctus, according to rules of art.—A ſmall quantity of this is to be ſwallowed leiſurely often in a day.

Freſh oil of ſweet almonds alone, or linſeed-oil, is alſo frequently uſed with great advantage.

(y) The *ſalt prunella* is ordered here in too large a doſe, the ordinary effect of which is to make the patient ſick and puke. This preparation of nitre (ſays *Lewis*) was formerly in great eſteem, and is ſometimes ſtill ordered in preſcription, which occaſions its keeping a place here. The proceſs is built upon an erroneous foundation, which ſuppoſed that the *nitre* was purified by the deflagration it undergoes upon injecting a little *ſulphur* upon it. But from proper experiment it appears, that the *ſulphur* is ſo far from depurating the *nitre* from any accidental impurities, or tending to its improvement as a medicine, that it really alters ſome part of it into a ſalt, which has quite different properties; and therefore, as far as ſo little a portion of *ſulphur* can go, changes it for the worſe*. Beſides, as this ſalt is eaſily and for certain too commonly adulterated with alum, the apothecary cannot be ſure of its being good, unleſs he makes it himſelf, and therefore ought to be at this trouble in caſe it is ordered. It is rejected by the college in their laſt diſpenſatory, and *purified nitre* is now generally uſed inſtead of it, which is certainly as good, if not a better medicine. So valuable a remedy, however, ought to be given in the quantity of a ſcruple at a time, every three or four hours, to anſwer the expectation of the phyſician.

* *See his* Edinburgh *Diſpenſatory*, p. 279.

7. As to diet, I forbid all fleſh meats, and the ſmalleſt fleſh broths, and adviſe the patient to ſup barley-broth, water-gruel, and panada; and to drink, a ptiſan, made of *pearl barley, ſorrel, and liquorice roots*, &c. boiled in water, and ſometimes ſmall-beer. And I alſo preſcribe the following liniment. Chap. 3. The regimen.

Take of oil of ſweet almonds, two ounces; pomatum and ointment of marſhmallows, of each an ounce: mix them together for a liniment, with which let the ſide affected be anointed morning and night, applying a cabbage leaf thereto. An emollient liniment.

I direct the abovementioned remedies to be continued the diſtemper throughout.

8. On the ſame day (the firſt of my attendance) if the pain be very acute, I order as much blood to be again taken away; or elſe the next day, and ſo the third day, and if the pain and other ſymptoms rage ſeverely, I bleed in this manner four days running. But if (1) the diſeaſe be leſs violent and dangerous, and therefore allows me to proceed in a gentler manner; or if (2) the patient be too weak to bear repeated bleeding at ſuch ſhort intervals, then, after bleeding twice, I interpoſe a day or two between every bleeding afterwards. In this caſe I make the contraindications my rule; conſidering on the one hand the violence of the diſeaſe, and comparing it with the weakneſs of the patient on the other. And tho' in the cure of diſeaſes I would always be ſuffered to take away more or leſs blood, as the caſe requires, yet I have ſeldom known a confirmed pleuriſy cured in grown perſons, without the loſs of about forty ounces of blood. In children, however, it is generally ſufficient to bleed once or twice. Nor does a *looſeneſs*, which ſometimes happens, obſtruct the abovementioned repeated bleeding; for in reality it may ſoon be ſtopped hereby, without exhibiting *aſtringents*. Bleeding how to be performed.

9. I either refrain from glyſters entirely, or order only ſimple ones of *milk and ſugar*, and take care to have them injected at as great a diſtance between the bleedings as poſſible (z).

10. To

(z) Our author ſeems to be too apprehenſive of ſome ill effects from glyſters by his cautious uſe of them, and does not order purging (ſee par. 11.) till the cloſe of the diſtemper; whereas glyſters are doubtleſs ſafe, but the common and ſucceſsful

Sect. 6.

The patient to ſit up ſome hours every day.

10. To prevent the patient's being over-heated during the continuance of the diſtemper, I allow him to ſit up a few hours every day, as his ſtrength will permit; which indeed is of ſuch moment here, that if he be kept always in bed, neither the plentiful evacuation of blood, nor the moſt cooling remedies will ſometimes at all avail in conquering the ſymptoms above ſpecified.

A purge when to be given.

11. Immediately after the laſt bleeding, and ſometimes before, all the ſymptoms abate, and the patient ſoon recovers his former ſtrength, when it is proper to give ſome gentle purgative: and he ſhould be debarred for ſome days longer from groſs foods, and all kinds of ſpirituous liquors.

Why *expectoration* is not treated of.

12. But if it be ſaid here that our method is defective, becauſe we are ſo far from treating amply of the means of promoting expectoration, in the different ſtages of the diſeaſe, that we ſcarce mention them; we reply, that this has not been omitted thro' negligence, but purpoſely, after mature conſideration, as having always judged thoſe to be in great danger who truſted the cure of this diſeaſe to expectoration. For, not to mention the tedioufneſs of this method, by which nature endeavours to expel the morbific matter, it is likewiſe unſafe; for it often happens that part of the matter being concocted, and perhaps expectorated, the remainder continues yet crude, and this ſucceſſively; the moſt powerfully expectorating medicines having been ineffectually uſed. For ſometimes expectoration goes on very well, and at others is quite ſtopt, the patient, in the mean time, being on all ſides endangered, and as I have not the leaſt power over expectoration, it is equally uncertain whether the diſtemper will end in his recovery or death. Whereas, on the contrary, by bleeding, the morbific matter is brought under my management, and the orifice of the opened vein may be made to ſupply the function of the wind-pipe (*a*). Moreover, I poſitively affirm tha

Advantages of bleeding.

ceſsful practice is to give lenitives, and generally a gentle purge every other day from the beginning of the diſeaſe.

(*a*) To endeavour to promote *expectoration* in a ſimple *pleuriſy* is abſurd. Nothing does ſo much ſervice here as timely, copious and frequent bleeding, along with diluting and emollient liquors, drank freely, for theſe dilute and feed the blood, whilſt they relax the too rigid fibres, and at length reſolve the coagulated humours; eſpecially if *nitre* and *camphire* be taken in a proper manner, with which *opium* may be conveniently mixt

that this diſeaſe, which is juſtly reckoned amongſt the moſt fatal when treated according to the method we have condemned, may be cured with as much certainty and ſafety as any other diſeaſe, by the method juſt laid down, not to mention the ſhort time wherein the cure is compleated: nor have I ever known a perſon in the leaſt injured by the loſs of ſo large a quantity of blood, which the unſkilful ſeem to apprehend (*b*). Chap. 3.

13. I

mixt between whiles, to eaſe the vehemence of the pain. For *opium* is alſo a powerful relaxer, and therefore is very ſerviceable in all diſeaſes proceeding from exceſſive *contraction*, as the *methodiſts* term it. Hence it checks the too quick circulation of the blood, and admirably promotes the concoction of the morbid matter: and hence a copious ſediment in the urine is frequently obſerved after the uſe thereof.

In reality a *true pleuriſy* no more requires *pectorals*, *linctus's*, and the like, than an inflammation of the leg, or the gout itſelf: much more ſervice is done here by proper fomentations, which frequently relieve the pain, and conquer the diſeaſe.—Moreover in a ſharp and obſtinate pain, the application of cupping glaſſes, and ſcarifications proves highly beneficial, when every thing beſides avails little. And in caſe the diſtemper be very violent, bliſters are ſometimes applied. See *Huxham de aere & morb. epid.* p. 64, 65.

This diſeaſe indeed (ſays Dr *Barker*) is ſometimes cured without the uſe of any other remedy but bleeding and diluting liquors, but it is not bleeding which performs the cure; for all that can poſſibly be done by this evacuation, is to mitigate the ſymptoms, and nature afterwards carries off the diſeaſe, by a kindly *reſolution*, or *concoction* of the *morbific* matter*.——Certain it is, however, that the cure is much better attempted by *reſolution* than by *expectoration*.—The rule for bleeding in any caſe (as the ſame writer obſerves) muſt be learnt from a careful examination of the *conſtitution* of the year, and from the patient's ſtrength, but chiefly from the violence of the diſeaſe; for it ought always to be remembered, that it is only a palliative remedy, intended to moderate the ſymptoms, till other remedies can be uſed, but that it is nature after all which muſt effect the cure †.

(*b*) The general method of cure in thoſe *fevers*, which are attended with *diſorders in the organs of reſpiration*, being judiciouſly laid down in a ſummary way by Dr *Hoadley*, I take this occaſion of tranſcribing the whole of what relates thereto; as well to ſupply any deficiency of our author, as to ſpread thoſe directions farther, and by this means render them more beneficial.

Whenever a phyſician, ſays the doctor, finds a patient labouring under the heat, thirſt and reſtleſſneſs of a fever, and at the ſame time violently afflicted with a pain in his ſide, cough, difficulty in breathing, or any other of the ſymptoms,

* Eſſay on the agreement between antient and modern phyſicians, p. 190.

† Ibid. p. 53.

Sect. 6. 13. I have indeed frequently endeavoured to diſcove ſome other method that might prove equally effectual without

which ſhew the organs of reſpiration are diſordered; he is diligently to enquire into the riſe of the whole diſeaſe, and carefully to examine into every complaint, in order to form a judgment, whether the diſorders in his breathing are owing to the fever, or the fever to them.

If it appear evidently that they ariſe from the fever; his next enquiry ought to be into the nature and genius of the fever itſelf, independent of the complaints in breathing; becauſe tho' the violence of the pain, and the great difficulty of breathing, muſt be regarded and alleviated, yet the cure of the patient muſt in the end depend upon the cure of the fever.

And as it is known by experience, that there is a great variety in fevers; that ſome will not abate, but rather grow worſe, on bleeding, whilſt others will hardly yield to any method without frequent repetitions of it; that ſome will be greatly increaſed by a warm regimen, which readily yield to a cooling one, whilſt others are ſo low as to require the conſtant uſe of the warmeſt cordials; that ſome will not bear even the gentleſt opening phyſick, without a very dangerous looſeneſs following upon it, whilſt others viſibly increaſe, unleſs the body be kept open by the daily uſe of glyſters, or ſmall doſes of *rhubarb*; that ſome will give way at once, as it were to a charm, on the application of bliſters, whilſt others receive no benefit at all, but are rather increaſed by the pain and fatigue they occaſion, *&c.* As, I ſay, there is ſo great a variety in the nature of fevers, and the methods of treatment they will ſubmit to; and as theſe acute diſeaſes of the organs of reſpiration often accompany and depend upon each of theſe kinds of fevers; it is impoſſible for any one general rule to be laid down for the management of them: but the whole muſt depend upon the judgment of the phyſician, formed at the time from the circumſtance of every particular patient.

I ſhall, therefore, in the next place, endeavour to point out the ways we have of judging, in particular caſes, which of the different methods of treating theſe diſorders is to be made uſe of, preferably to the others; whether it be more adviſeable to proceed by repeated bleedings, by the cool method, by the hot one, or by the application of bliſters.

This I am ſenſible is a very difficult taſk; and perhaps may not poſſibly be done with ſufficient accuracy, for us ever to frame any certain rule, by which we may judge at once of the nature of the fever, and the particular method we are to purſue: but I make no doubt that there may be ſome ſigns pointed out, by which we may at leaſt be directed when to deſiſt from too obſtinate a purſuit of any of them.

For tho' it be confeſſed to be difficult for us to determine of what ſort the fever is, which attends a pleuriſy (for example) ſo ſoon as the violence of the pain, and the danger of the diſeaſe require us to do ſomething; yet if we know that different fevers make it neceſſary for us to purſue different methods, we may be as certain that they will not all be equally relieved by the firſt or ſecond ſteps in the ſame method; *viz.* they will not

without bleeding ſo copiouſly, *viz.* either (1) by reſolving the humour, or (2) by expelling it by expectoration; Chap. 3.

not all be equally relieved by bleeding: and conſequently if bleeding once, or a ſecond time, affords little or no relief; but on the contrary, if the pulſe falls, and the ſtrength and ſpirits flag, whilſt the pain in the ſide, and difficulty in breathing continue as violent as ever, or nearly ſo; we may be very certain the fever will not admit of this method, and an obſtinate repetition of bleeding muſt be dangerous. This therefore will be a true and proper mark for us to know when to deſiſt.

I have inſtanced particularly in bleeding, becauſe it is univerſally allowed to be the very firſt ſtep that ought to be taken towards the cure; a ſtep which the violence of the pain, and difficulty of breathing abſolutely require, in order to prevent their increaſing the fever to a more dangerous degree: and becauſe the operation itſelf affords us an opportunity of examining into the alterations which the blood has undergone in this fever; and this, together with the feel of the pulſe, and the ſtrength and ſpirits of the patient before and after bleeding, will greatly aſſiſt us in determining, whether we are to proceed in the hot, or the cold method.

If the patient be of a full habit of body, with ſtrong veſſels, and the pulſe high, and the ſpirits good, both before and after bleeding, and the blood of a florid, ſcarlet colour, with little or no ſerum, or very ſizy; bleeding is evidently to be repeated even to the fourth time, if the ſymptoms require it, and the cool emollient method to be purſued: and towards the decline of the inflammation, if the continuance of the pain demands it, bliſters may be applied, and generally anſwer their deſign.

But if the patient is of a weak and low habit of body; if his ſtrength and ſpirits flag, and his pulſe ſinks on bleeding; and, together with theſe ſymptoms, the pain and difficulty of breathing continue; we have very good reaſon to believe the loſs of more blood may be attended with very dangerous conſequences, ſuch as attacks upon the brain, ſyncopes, *&c.* and we ought to deſiſt, as was ſaid before.

In theſe caſes the blood is generally of one, or other of theſe very different kinds: it is either very ſizy, or has all its parts broken, diſſolved, and blended together, and what little *craſſamentum* there is, breaks upon the ſlighteſt touch, and mixes with the reſt.

In the firſt caſe, a free uſe of the *volatile ſalt*, or *ſpirit of hartſhorn*, the *volatile ſalt of amber*, or ſuch like, repeated every ſix, four, or three hours, as occaſion requires, together with warm medicines, are of the greateſt ſervice, and ſometimes give almoſt immediate relief. Bliſters too may in this caſe be applied at the very firſt ſinking of the pulſe and ſpirits, as they anſwer the ſame intention with the other volatile ſalts. It ſeems to be from caſes of this kind, that *goats blood*, and *horſe-dung*, merely as containing volatile ſalts, or ſpirits, have gained their reputation for the cure of pleuriſies.

In the other caſe, neither bliſters nor the volatile ſalts, ſeem to afford ſo much relief to the patient, as large quantities of acids

Sect. 6. tion; but have not hitherto found one of equal efficacy with that above delivered; whereby (notwithſtanding the

acids; ſuch as diſtilled vinegar, together with the warm cordial medicines, as *mithridate*, *confect.* RALEIGH, *&c.* At the ſame time, a whey made with the *aqua theriacalis* is a very ſuitable and beneficial drink for conſtant uſe.

Theſe I only offer as hints that may be ſerviceable in guiding us to the right method of cure; by which I mean the method moſt agreeable to the nature of the fever which accompanies the diſorders in breathing, in theſe acute diſeaſes: but not with a deſign that either of theſe methods ſhould be obſtinately followed, when either the pain or the fever does not yield to us. On the contrary they ſhould be conſtantly varied, as the ſymptoms may require.

But that I may not be thought to have advanced what I have ſaid of the different method of treating theſe fevers, merely on my own authority, and as the reſult only of my own obſervation, I ſhall tranſcribe a few ſentences from the works of Dr *Sydenham*, where he takes occaſion to deliver his opinion in general of the manner of judging at what times his own method of curing pleuriſies, by quick repetitions of bleeding in large quantities, ſhould not be purſued.

Here the quotation is inſerted, as taken from *Sect. V. Chap. V. Par.* 9. of our excellent author's works, to which therefore the reader is referred.

The doctor proceeds: there is a remarkable paſſage to this purpoſe in Dr *Tabor*'s *Exercitationes medicæ*, which I ſhall tranſcribe likewiſe, and then conclude.

The paſſage tranſlated is as follows:

"Theſe particulars are farther verified by a fever of a certain "kind, which has proved very fatal of late years to the com- "mon people of this nation, and ordinarily prevailed ſome- "times at one, and ſometimes at another ſeaſon of the year. "It was of the pleuritic kind, and began with a conſiderable "chilneſs and ſhaking, which the longer they continued, the "worſe event of the illneſs they foreſhewed: but theſe remit- "ting, there immediately aroſe a ſharp, and frequently a "ſpaſmodic, pain in the right ſide, a remarkable loſs of "ſtrength, and a difficulty in breathing, with a great oppreſ- "ſion in the *præcordia*, and a heavineſs. In general the heat "was not intenſe, the pulſe quick or hard, the cough frequent, "the thirſt conſiderable, or the belly looſe or bound. The "urine let fall no ſediment, and was of a ſtraw colour. Ob- "ſtinate watchings continued the diſtemper throughout, but "the patient was not delirious. At firſt the cough was dry, "but in about twenty four hours, a thin matter, tinged with "blood, was frequently expectorated: but afterwards the "cough became more frequent and laſting, the matter being "more copious and tougher, till the diſeaſe was terminated "either by a very plentiful expectoration, or the patient was "ſuffocated by a very viſcous phlegm, remaining in the lungs: "which generally happened before the *ninth* day, ſeldom la- "ter, and often ſooner; *eſpecially if bleeding had been unſea- "ſonably repeated.* Very few, except robuſt and plethoric

"young

the fatal prognoſtic *Hippocrates* hath left us concern- Chap. 3.
ing *a dry pleuriſy)* I recover the patient without waiting for expectoration. 14. But

" young perſons, were obſerved to bear bleeding without in-
" convenience; but in ſuch, bleeding twice, and ſometimes
" thrice, in the firſt days of the diſeaſe, did ſervice: but in
" others bleeding was either wholly to be refrained, or to be
" performed only within a few hours of the attack; and tho'
" in a ſmall quantity, it proved to be highly dangerous, unleſs
" an emetic was ſoon given, and followed by the continued
" uſe of expectorating medicines. For the diſeaſe was of ſuch
" a nature, that, except in plethoric perſons, the cure was
" compleated by a plentiful expectoration of a viſcous phlegm,
" which proceeded more eaſily and ſucceſsfully by not taking
" away blood, than loſing it. For bleeding in perſons who
" were not plethoric generally ſtopt expectoration, and occa-
" ſioned a very difficult reſpiration, with a rattling in the
" throat: and obſervation ſhewed that the *oftener it was re-*
" *peated*, the more all the ſymptoms were increaſed, and the
" ſooner death was occaſioned."

The author goes on.

There is no doubt, but thoſe phyſicians, who have a large ſhare of buſineſs, and numbers in fevers continually under their care, acquire a ſagacity, which is not to be taught to others; by which they can more readily and eaſily judge of the nature of the fever, and conſequently of the proper method of cure, than they who have not the ſame opportunity. But this is no reaſon why others ſhould not be upon their guard, and endeavour to form to themſelves rules, and hints for obſervation, as well as to acquire that ſagacity in time, as to avoid the moſt dangerous conſequences of it at preſent.

And tho' theſe hints, that I have offered, may appear too general, they are not however to be totally neglected, or deſpiſed, becauſe they are equally ſerviceable in the treatment and obſervation of all fevers in general, as well as thoſe in particular which are attended with diſorders in the organs of reſpiration; and becauſe they are every where left to the judgment of the phyſician to follow, as the different combinations of the ſymptoms appear moſt to require.

Indeed the whole deſign of mentioning them at all was only to prevent too prevailing a cuſtom, of treating the ſame train of obvious ſymptoms always in the ſame manner, without conſidering to how many different cauſes they may be owing: a cuſtom, which owes its riſe to general names having been given, not only to thoſe obvious ſymptoms, as if they attended only on one diſeaſe, but to the favourite medicines too of ſome phyſician in repute for that diſeaſe, whence thoſe, who are learned only in receipts, are too apt to preſcribe to the name of the diſeaſe, and not to the diſeaſe itſelf: and the very opinion which a beginner in the practice of phyſic may have formed of the ſkill of the phyſician he borrows his receipt from, may lead him into a method of cure, which that phyſician himſelf would not have purſued at that particular time. *See the learned author's lectures on the organs of reſpiration, from p.* 105. *to the concluſion.*

Sect. 6.

The tendon ſometimes prick'd by bleeding.

14. But as the cure of this diſeaſe chiefly conſiſts in repeated bleeding, which, in country towns, is frequently performed by unſkilful operators, who often prick the tendon, whereby the limb, and conſequently life, is endangered, I judged it not amiſs to ſubjoin here the method of curing this accident.

How this accident is to be remedied.

15. In a puncture of the tendon the patient does not immediately feel pain, but twelve hours after the operation it begins, and is not ſo much perceived in the orifice lately made as in the parts reaching up to the arm-pit, where at length the pain fixes, and is chiefly felt upon extending the arm. The part affected does not ſwell much, the tumor not exceeding a hazel-nut; but an aqueous humour, or *ichor*, continually flows from the orifice, which in reality is eſteemed the principal ſign of a punctured tendon. I have known it cured by the following application.

An emollient cataplaſm.

Take of the roots of white lillies, four ounces; boil them till they become ſoft in a quart of milk; then take oatmeal and linſeed flower, of each three ounces; boil them to the conſiſtence of a cataplaſm in enough of the milk, ſtrained from the white lilly roots, and having bruiſed the roots, mix them therewith for a cataplaſm, to be applied hot every morning and night to the part affected (*c*).

The loſs of forty ounces of blood, which is the quantity mentioned by this great man, is ſo far from being enough in many caſes, that it is aſtoniſhing he ſhould have anſwered his ends by it; for violent pleuriſies often require the loſs of eighty ounces, and ſometimes conſiderably more; and conſtant practice abundantly ſhews the ſafety, neceſſity, and utility of ſuch plentiful bleeding.

(*c*) As a puncture of the tendon will not always yield to this treatment, and is attended with other ſymptoms beſides thoſe mentioned by our author, we ſhall ſubjoin a farther account of them, with the beſt methods of remedying this accident, as they are delivered by the accurate *Heiſter*.

Wounds of the nerves, or tendons, are chiefly manifeſted by the following ſigns. (1) The patient feels ſo acute a pain, the moment the puncture is made, that he can ſcarce refrain from crying out aloud, eſpecially if it continues; (2) this is ſoon ſucceeded by a tumor, inflammation, ſpaſms, and a ſtiffneſs alſo of the limb, and theſe (3) unleſs ſeaſonably remedied, by exceeding dangerous convulſions, and at length a gangrene, and death in a very ſhort time.

The beſt method of curing this accident ſeems to be that which *Ambroſe Parey* relates he formerly uſed with ſucceſs in the

the cure of *Charles* IX king of *France*. For after the king had ſignified the pain he felt, the moment the lancet entered his arm, by crying out aloud, *Parey* ſuſpected that ſome nerve was wounded, and with reaſon, the arm ſoon beginning to ſwell, with moſt acute pain, and becoming quite ſtiff. Immediately, therefore, his majeſty's phyſicians with *Parey* directed a method of cure. In the firſt place *oil of turpentine*, mixt with *rectified ſpirit of wine*, being made warm, was dropt into the wound, then the whole arm was covered with a plaiſter of emplaſtrum diachalciteos, or the *vitriol plaiſter*, let down with *vinegar* and *oil of roſes*, over which the *expulſive* bandage was applied. Laſtly, to compleat the cure, the following cataplaſm was applied to the arm, till the pain went off entirely. Chap. 3.

Take of the flower of barley and the bitter vetch, each two ounces; the flowers of camomile and melilot, each two handfuls; freſh butter, an ounce and half; boil them in ſoap ſuds to the conſiſtence of a cataplaſm.

Tho' the arm continued ſtiff for near three months afterwards, yet by degrees it recovered its former ſtrength and motion.

The following alſo ſeems a proper method of cure. Inſtead of a mixture of *oil of turpentine* and *ſpirit of wine*, let *balſam of Peru*, or *Hungary water*, made warm, be dropt into the wound often in a day, and alſo applied to it, till the pain abates. *Simple diachylon*, or ſimple *red lead plaiſter*, may be ſubſtituted for the *vitriol plaiſter*. But the greateſt care muſt always be taken, here, not to leave the wound uncovered, whilſt theſe dreſſings are preparing. Some ſort of plaiſter, therefore, whatever it be, ſhould be immediately applied, and the whole arm wrapt round with compreſſes of linnen moiſtened in *oxycrate*. For by this means the inflammation is not only prevented, or mitigated, but the wound may be defended from the external air, or other pernicious matters. But in perſons who are full of blood and juices, it is proper, to prevent the inflammation and other threatening accidents, to take away a large quantity of blood immediately from any other limb. *Sculletus*, in his 87th *obſervation*, highly commends a certain unguent in punctures of the nerves, which he there deſcribes, and in the ſame place tells us that he has divided ſuch punctured nerves croſs wiſe with ſucceſs. See *Inſtit. chirurg. Laur. Heiſt. p.* 11. *Sect. I. Chap. XI. p.* 423.

The following remarks on this accident were communicated to me by Mr *Jones* of *Coventry*, an ingenious ſurgeon, who, in the courſe of this work, has obliged me and the publick with ſeveral excellent practical obſervations.

" *Sydenham*'s account of the ſymptoms is a very good one, " and may be depended on. But though, as he hints, the " ſwelling near the orifice is not ſo big (or eminent) as a ha- " zel-nut, unleſs an abſceſs forms there, yet there is generally " a ſwelling, or enlargement in the bend of the arm, and " below it too in the courſe of the bending muſcles that ariſe " from the internal condyle of the *os humeri*, and near " it, and generally ſome pain there alſo, though it ſeldom " goes far down the arm. But the chief pain and ſwelling " commonly extend from the orifice upwards, much in the

" courſe

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" courſe that this accurate writer deſcribes. A peculiarity " of this caſe is, that (no withſtanding the pain and ſwelling, " together with a *certain* inflammation) a redneſs of the ſkin " is hardly ever very manifeſt, eſpecially in fat perſons, till " an abſceſs is conſiderably advanced; which, however, ſel- " dom happens, and it is uncertain where it will fall. I have " opened ſome in the arm pit and near it, as well as near the " orifice and above it. As to what is quoted from the judici- " ous and indefatigable *Heiſter*, ſo far as it relates to the " puncture of the tendon from bleeding, I am obliged to diſ- " ſent from him, and to give a different account of the matter. " —It has happened (though I never was ſo unfortunate as to " occaſion one) that I have met with ſeveral caſes, where the " *biceps* tendon and its *faſcia* have been pricked, without the " inſtant intolerable pain, or the diſmal train of conſequences " which he aſſerts attends it. And as to the caſe of the king " of *France*, I think if he had been a peaſant he would have " had juſt reaſon to complain of the management of it. The " method of treating this accident conſiſts in curing the inflam- " mation, which generally is an eaſy matter. When it is firſt " perceived, the orifice ſhould be dreſt *ſuperficially* with a " pledget of digeſtive, and the application renewed twice in " twenty four hours, and the limb, ſo far as it is affected, " ſhould be covered with ſoft double linnen rags, moiſtened " with equal parts of olive oil and vinegar; or if any one likes " it better, a ſoft pultice may be applied in its ſtead, made of " oatmeal, oil and vinegar. Neither the mixture nor the pul- " tice need be much warmed; and if the accident could be " diſcovered directly, or the caſe for which the patient was " blooded did not forbid it, theſe applications would be more " properly uſed cold.

" After theſe dreſſings have been uſed two or three days, " the parts ſhould be well fomented, (for which purpoſe vi- " negar and water ſeem to be as proper as any thing) and the " other dreſſings applied, as before directed, with this differ- " ence however, that now they ſhould be laid on as warm as " the patient can bear them without the *leaſt pain*. This me- " thod may be continued till the patient is juſt cured, which " by proper management is generally accompliſhed in about " ten days, and often in leſs. If the forming of an abſceſs be " diſcovered, regard muſt be had to that, and the cure will " take up more time. Sometimes ſlight diſorders attend the " ſkin from acids lying conſtantly on it; in which caſe the vi- " negar muſt be occaſionally omitted, *&c.* I know of nothing " further neceſſary to be mentioned under the head of external " management, unleſs that the bandage which is uſed to keep " the dreſſings on, ought by no means to be in the leaſt degree " painfully tight; — that the arm be eaſily and intirely ſup- " ported; — and laſtly, that it be conſtantly kept bended, and " never ſuffered to be extended till the patient is well.

" As to the internal treatment, the patient ſhould be blooded " and take cooling purges, as occaſion requires. *Nitre* given " often is proper likewiſe, and a low diet quite neceſſary."

CHAP.

CHAP. IV.

Of the Baſtard Peripneumony.

1. A Fever, attended with ſeveral peripneumonic ſymptoms, ariſes every year towards the beginning, but more frequently at the cloſe of winter. It chiefly attacks ſuch as are of a groſs habit of body, and middle-aged perſons, but oftener thoſe who are more advanced in years, and too much addicted to ſpirituous liquors, eſpecially to brandy. For as the blood of ſuch perſons hath been loaden with phlegmatic humours collected in the winter, and is put into freſh motion by the approaching ſpring, a cough is hereby immediately occaſioned, whence theſe humours hurry to the lungs; and then if the patient happens to live irregularly, and drinks more freely of ſpirituous liquors, the matter occaſioning the cough grows thick, and ſtops the paſſages of the lungs, and the fever waſtes the maſs of blood (*d*). The riſe of the *baſtard* peripneumony.

2. At the beginning of the fever, (1) the patient grows hot and cold alternately, (2) is giddy; and (3) complains of an acute pain in the head when the cough is moſt troubleſome; (4) he vomits up all liquids, ſometimes with, and at other times without coughing; (5) the urine is turbid, and intenſely red; (6) the blood taken away reſembles pleuritic blood; (7) he breathes quick, and with difficulty: if he be adviſed to cough, his head achs, as if it would burſt, for ſo the Its ſymptoms enumerated.

(*d*) Not many have wrote of the *baſtard Peripneumony*, and it was known diſtinctly by few except our author; others having treated of it under the name of a *catarrh*.

The body is oppreſſed with phlegm during the cold, or winter ſeaſon, but upon the approach of heat in the ſpring and ſummer ſeaſon, there ſucceeds a ſudden ſolution of the humours, which are mixed in the veins, and carried to the right ventricle of the heart, and to the lungs, whence the lungs are ſurcharged with cold and pituitous, but not inflammatory blood; and hence a peripneumony always ariſes after ſevere cold weather in the ſpring.

Heat diſſolves the phlegm, which being afterwards mixed with the blood, and carried to the lungs, paſſes the ramifications of the pulmonic artery with great difficulty; and hence proceeds the cauſe of a *peripneumony* from humours collected in the body during the winter, and afterwards mixt with the blood. See *Boerhaave, Prax. Med. Vol. IV. de Perip. notha.*

patient

Sect. 6. patient generally expreſſes himſelf; (8) a pain of the whole breaſt accompanies the diſeaſe, and (9) a wheezing is heard by the attendants whenever the patient coughs, the lungs not being ſufficiently dilated, ſo that the vital paſſages ſeem to be cloſed by the ſwelling; whence the circulation is ſo intercepted, that there are no ſigns of a fever, eſpecially in groſs habits; tho' this may likewiſe happen from the abundance of the phlegmatic matter, whereby the blood is ſo ſurcharged, that it cannot riſe to a perfect ebullition.

Intentions of cure to be anſwered.

3. In order to the cure of this fever, I judge it proper, (1) to take away that blood which inflames the lungs, and endangers ſuffocation; (2) to open and cool the lungs by pectoral medicines; and (3) to abate the heat of the whole body by a cooling regimen. But as, on the one hand, the collection of the phlegmatic matter contained in the veins, and daily affording freſh ſupplies for the inflammation of the lungs, ſhould ſeem to indicate frequently repeated bleeding; yet, on the other hand, I learnt, from the moſt accurate obſervation, that this practice proved very prejudicial in feveriſh perſons of a groſs habit, eſpecially if they were paſt the prime of life; ſo that bleeding with frequency was equally contraindicated. I therefore had recourſe to frequent purging in its ſtead, which is properly enough ſubſtituted, where the patient hath an averſion to copious and frequent bleeding (*e*).

The method of cure particularized.

4. Accordingly I proceeded in the following manner; I directed bleeding in the arm in bed, and forbid the patient to riſe till two or three hours afterwards; becauſe bleeding, which in ſome meaſure weakens the whole body, may by this means be more eaſily borne; for the patient can better bear to have ten ounces taken away in bed, than ſix or ſeven when he ſits up. The following day I give this purging draught in the morning.

A purging draught.

Take of freſh pulp of caſſia, an ounce; liquorice root two drams; four figs; ſena, two drams and half; troches of agaric, a dram; boil them in enough water to leave four ounces of liquor when ſtrained, in which diſſolve an ounce of manna, and half an ounce of ſo-

(*e*) *Boerhaave* adviſes only a ſingle bleeding: but highly extols laxative glyſters, bathing, and bliſtering. See *Boerhaave, Prax. Med. Vol. IV. de Perip. notha.*

lutive

lutive ſyrup of roſes: mix the whole for a purging draught (*f*). Chap. 4.

5. The next day I uſually repeat the bleeding, and interpoſing a day, I exhibit the purging draught again, which is to be repeated every other day till the patient recovers. On the intermediate days of purging I adviſe the uſe of a *pectoral decoction*, *oil of ſweet almonds*, and the like remedies. In the mean time I forbid fleſh, and broth made thereof, but eſpecially all ſpirituous liquors; and inſtead of theſe I allow him a ptiſan made of *barley and liquorice boiled in water* for his common drink, or ſmall-beer, if he deſires it. The regimen.

6. This is the method of curing the *baſtard peripneumony*, cauſed by an abundance of phlegmatic humours collected in the blood, and, by reaſon of the coldneſs and moiſture of the winter, thrown upon the lungs; wherein both repeated bleeding and purging are indicated, otherwiſe than in a *true peripneumony*; which I eſteem to be manifeſtly of the ſame kind with the *pleuriſy*, with this difference only, that a peripneumony does more univerſally affect the lungs. And indeed both diſtempers are cured by the ſame method, namely, by bleeding chiefly, and cooling medicines.

7. Tho' the *baſtard peripneumony* in ſome meaſure reſembles the *dry aſthma*, both in the difficulty of breathing, and ſome other ſymptoms, yet it is ſufficiently diſtinguiſhed from it, as being attended with manifeſt ſigns of a fever and inflammation, which never appear in a *dry aſthma*; but they are much leſs conſiderable and apparent in the *baſtard peripneumony* than in the *true peripneumony*. Wherein the diſorder differs from a *dry aſthma*.

8. It muſt be carefully remarked, that when this diſeaſe attacks ſuch as have been great drinkers of bran-

(*f*) This purging draught is a very odd and inelegant preſcription, and withal an exceeding nauſeous medicine. Much neater, as well as more palatable forms are directed every day by moſt phyſicians; and no wonder, as the art of preſcribing is conſiderably improved ſince our author's time in point of ſimplicity, elegancy and agreeableneſs, and perhaps efficacy too.——Let me add therefore, here once for all, that tho' I don't chuſe to ſwell the notes with remarks and animadverſions on every one of his preſcriptions (which the ſkilful phyſician knows how to correct and adapt to his intention, and likewiſe to vary as the circumſtances require) yet there are ſeveral ſcattered up and down in his works, againſt which the ſame objections might with equal reaſon be made.

dy

Sect. 6. dy and other like ſpirituous liquors, it is by no means ſafe to quit them of a ſudden, but they muſt be left off gradually; for ſo ſudden a change makes way for a dropſy: and this ſhould be made a ſtanding rule in all other diſeaſes ariſing from the ſame cauſe. Since I have mentioned brandy, I will obſerve, by the way, that it were indeed to be wiſhed, either that it was wholly forbid, or at leaſt uſed only to recruit the ſpirits, and not to occaſion a ſtupefaction; or that it was totally prohibited to uſe it internally, and only allowed to be applied externally by ſurgeons in fomentations, to digeſt ulcers, or to heal burns. For, in the laſt caſe, it excels all other applications hitherto known, as it preſerves the *cutis* from putrefaction, and on this account ſpeedily finiſhes the cure, without waiting for *digeſtion*, which runs thro' its ſtages very ſlowly. For this purpoſe let a piece of linnen, dipt in *brandy* or *ſpirit of wine*, be immediately applied to the parts ſcalded with hot water, burnt with gun-powder, or the like, and renew the application between whiles, till the pain ceaſes, and afterwards apply it only twice a day (*g*).

Spirits of wine excellent in burns.

CHAP. V.

Of the Rheumatiſm.

The rheumatiſm how cauſed, and when it ariſes.

1. THIS diſeaſe happens at any time, but eſpecially in *Autumn*, and chiefly affects ſuch as are in the prime of life. It is generally occaſioned by expoſing the body to the cold air, immediately after having heated it by violent exerciſe, or ſome other way. It begins (1) with a chilneſs and ſhivering, which are ſoon

Its ſymptoms.

(*g*) This is only to be underſtood of ſlight burns, in which caſe *oil of turpentine* is a good remedy, as is alſo a decoction of *oxycrate with ſalt*, applied warm to the part, and often renewed. The approaching the part to the fire, and holding it as long as the patient can bear it, is very uſeful here, as it not only reſolves the ſtagnant blood, but likewiſe prevents the riſe of bliſters, and other bad ſymptoms. See *Heiſt. Inſtitut. Chirurg. P. I. lib.* iv. *Chap. XV. p.* 331.

The firſt common, eaſy, and ſucceſsful application of the *London* ſurgeons to burns, is oil of olives, or linſeed oil, warm. And I can affirm that ſpirit, or brandy, is alſo an admirable remedy, and falls little ſhort of deſerving the great character that *Sydenham* has given it in theſe caſes.

ſucceeded

ſucceeded (2) by heat, reſtleſſneſs, thirſt, and the other concomitants of a fever; (3) in a day or two, and ſometimes ſooner, there ariſes an acute pain in ſome or other of the limbs, eſpecially in the wriſts, ſhoulders, and knees; which, ſhifting between whiles, affects theſe parts alternately, leaving a redneſs and ſwelling in the part laſt affected. (4) In the beginning of the illneſs the fever and the abovementioned ſymptoms do ſometimes come together; but the fever goes off gradually, whilſt the pain continues, and ſometimes increaſes, occaſioned by the derivation of the febrile matter to the limbs; which the frequent return of the fever, from the repulſion of the morbific matter by external remedies, ſufficiently ſhews. Chap. 5.

2. This diſeaſe, when unattended with a fever, is frequently taken for the *gout*; tho' it differs eſſentially therefrom, as will eaſily appear to thoſe that are thoroughly acquainted with both diſeaſes; and hence it is perhaps that phyſical authors have not mentioned it, unleſs indeed we eſteem it a new diſeaſe (*b*). But however this be, it is at preſent very frequent, and tho' when the fever is gone off, it ſeldom proves fatal, yet the violence of the pain, and its long continuance, render it no contemptible diſeaſe. For, in caſe of wrong management, it frequently remains not only ſeveral months, but ſome years, nay even during life; tho' in this caſe it is not equally painful, but has its periodical

Often taken for the gout.

A ſtubborn, but not a dangerous diſeaſe.

(*b*) In the *rheumatiſm* the muſcles, together with their common membrane, and the tendons where they are inſerted into the bones, are affected with a violent pain and ſpaſms in the limbs and other parts of the body; but in the *gout* the tendinous nervous ligaments, whereby the bones are joined together, inaſmuch as they unite with the *perioſteum*, are more vehemently affected. But as in a beginning gout the pain is ſeated more in the ſurface of the ligaments; ſo in an obſtinate one, the vitiated humour, which occaſions the pain, is more deeply ſeated in the joints. There is alſo this difference between the gout and rheumatiſm; the gout returns with greater frequency, gives more pain, laſts longer, and is harder to be cured; but the rheumatiſm ſometimes ſeizes a perſon only once or twice during his life, and does not laſt ſo long, and is more eaſily cured. The pain likewiſe often differs in the two diſeaſes, for in the rheumatiſm it is more tenſive, heavy, joined with cold, without any remarkable tumour and redneſs; but in the gout it is tearing, pungent, and as it were threatens the burſting of the part affected, which appears to be much ſwelled and red. *Hoffman. Tom.* II. p. 317.

returns,

Sect. 6. returns, like the gout; and the pain may poſſibly go off ſpontaneouſly, after it has been of very long ſtanding. But in the mean time the patient is deprived of the motion of his limbs during life, the joints of the fingers being contracted inwards, with ſtony concretions as in the gout, which appear more in the internal parts of the fingers than the external, whilſt the appetite may be very good, and the general health not amiſs.

Another ſpecies of this diſeaſe

3. There is another ſpecies of this diſeaſe, tho' it is not generally eſteemed of this kind, which may properly be called a *rheumatic lumbago*. It is a violent fixt pain of the loins, reaching ſometimes to the *os ſacrum*, and reſembling a nephritic paroxyſm; only the patient does not vomit. For, beſides the intolerable pain near the kidneys, the whole conduit of the ureters, even to the bladder, is ſometimes affected with the ſame, tho' in a leſs degree. And I have formerly been led into an error hereby, as imagining it to ariſe from ſome gravel lodged in thoſe parts; whereas, in reality, it proceeds from the peccant and inflamed matter of the rheumatiſm, which affects only thoſe parts, leaving the reſt of the body free. Unleſs this acute pain be removed in the ſame manner as the former ſpecies, it continues as long, and proves equally violent; ſo that the patient cannot lie in bed, but is forced either to leave it, or ſit upright therein, and be perpetually bending his body backwards and forwards.

Both the kinds cauſed by inflammation.

4. Since both the kinds of this diſeaſe ſeem to ariſe from inflammation, as appears from their concomitants juſt mentioned, and eſpecially by the colour of the blood taken away, which exactly reſembles that of perſons in a pleuriſy, which is univerſally allowed to be an inflammatory diſeaſe; ſo I judge that the cure ought to be attempted only by bleeding, the heat of the blood being in the mean time abated by cooling and thickening medicines, along with a proper regimen (*i*).

5. Accord-

(*i*) In order to the cure of this diſtemper, we are to conſider whether it be recent, and proceeds from a fulneſs of blood, or whether it has been of ſome ſtanding, and proceeds from a collection of foul ſerum; and according to theſe circumſtances our indications are to be directed.

Bleeding in the beginning is the ſpeedieſt remedy in the former caſe: but in the latter it is carefully to be avoided, eſpecially in weakly and cold conſtitutions, and in perſons in years.

Chap. 5.

5. Accordingly as ſoon as I am called, I order ten ounces of blood to be immediately taken away from the arm of the ſide affected, and preſcribe a cooling and incraſſating julap, nearly after the following manner. How to be treated.

Take of the diſtilled waters of lettice, purſlain, and water-lilly, each four ounces; ſyrup of lemons, an ounce and half; ſyrup of violets, an ounce; mix them together for a julap, of which let the patient drink at pleaſure; or of the emulſion above ſet down in the cure of the pleuriſy. A cooling julap.

To eaſe the pain, I order a cataplaſm, prepared of the *crumb of white bread, and milk tinged with ſaffron*, or a cabbage leaf to be applied to the part affected, and frequently renewed (*k*). With reſpect to diet, I injoin a total abſtinence from fleſh, and even the thinneſt fleſh broths; ſubſtituting in their place, *barley-broth*, *water-gruel*, *panada*, and the like. I allow only ſmall-beer for drink, or, which is more proper, a ptiſan prepared of *pearl barley*, *liquorice*, *ſorrel roots*, &c. boiled in a ſufficient quantity of water: and I adviſe the patient to ſit up ſome hours every day, becauſe the heat which proceeds from lying always in bed, promotes and increaſes the diſeaſe. The regimen.

6. The next day I repeat the bleeding in the ſame quantity, and in a day or two after, as the ſtrength will allow, I bleed again; then interpoſing three or four Bleeding how often to be uſed.

Mild diaphoretics, mixed with nitre, given frequently in moderate doſes, do ſingular ſervice in both caſes: gentle laxatives are alſo extremely proper; and warm bathing in the decline of the diſeaſe.—In the cold rheumatiſm nothing excels bliſtering. Opiates are neceſſary if the pain be very violent.

(*k*) Embrocating the part affected with a mixture of oil of olives and vinegar, made warm, is no contemptible anodyne application in this caſe.—And ſometimes an emollient fomentation may be advantageouſly applied to the ſwelled parts. However, in general, it may be affirmed that there is little neceſſity for any of theſe applications to the ſwellings from an acute and inflammatory rheumatiſm. Such things are often uſed rather for the ſake of amuſing and contenting the patient, than in expectation of their doing any conſiderable good.

But if there remains a ſtiffneſs and numbneſs of the part, occaſioned by the long continuance of the pain, let it be frequently fomented with an emollient and reſolvent fomentation, and embrocated with warm neat's foot oil; or uſe warm bathing, and exerciſe it gently, increaſing the motion by degrees, as it becomes more pliable.

Sect. 6. days, as the ſtrength, age, conſtitution of the patient, and other circumſtances indicate, I bleed a fourth time, which is generally the laſt, unleſs too hot a regimen has preceded, or heating remedies have been exhibited without neceſſity. But the uſe of opiates requires more copious bleeding; and therefore, tho' the pain be ever ſo violent during the whole courſe of the diſeaſe, yet when I intend to effect the cure ſolely by bleeding, I judge it highly neceſſary to refrain from opiates, becauſe the diſeaſe is fixed thereby, and does not yield ſo readily to bleeding, ſo that where ſuch medicines are given too frequently, bleeding muſt in conſequence be oftener repeated than is otherwiſe neceſſary. Beſides, in the height of the diſeaſe, they do not anſwer the expectations we have conceived of them.

Inconveniencies attending the uſe of opiates.

7. Whilſt the abovementioned remedies and regimen are carefully continued, I inject glyſters made of *milk* and *ſugar*, between times, on the intermediate days of bleeding (*l*); earneſtly recommending the exact obſervance of theſe directions, for at leaſt eight days after the laſt bleeding; and then I preſcribe a gentle purging potion to be taken in the morning, and in the evening a large doſe of *ſyrup of white poppies* in *cowſlip-flower water*; whereby a check is put to the tumultuary motion of the blood, which might otherwiſe endanger a relapſe. This being done, I allow the patient to return by degrees to his cuſtomary way of living, in relation to diet, exerciſe and air; but at the ſame time caution him to refrain, for a conſiderable time, from wine and all ſpirituous liquors, ſalt or high-ſeaſoned fleſh, and in general from all food of difficult digeſtion.

Purging when proper.

8. After having repeated bleeding, as above ſpecified, the pain is greatly abated, tho' it does not go quite off; but as ſoon as the ſtrength returns, which bleeding had

(*l*) It is not eaſy to conceive the reaſon why the author ſhould particularly order glyſters, rather than lenients by the mouth; which in the preſent practice are commonly and ſucceſsfully given every day, and even cooling purges are adminiſtered in this manner from the beginning with all deſirable ſafety and utility.——The beſt phyſicians give *nitre* plentifully in the inflammatory rheumatiſm, which is indeed an excellent medicine in this caſe, and deſerves to be warmly recommended. And in the decline of this diſorder, and in the chronic rheumatiſm, they preſcribe *nitre* and *volatiles* mixed, freely, and *bliſtering*.

greatly

greatly impaired, the ſymptoms will vaniſh, and the patient recover perfectly, eſpecially upon the approach of the following ſeaſon of the year, which will be more conducive to recruit the ſtrength, than that wherein he was firſt attacked with the diſeaſe. Chap. 5.

9. But tho' this, or a ſimilar method, ſeaſonably uſed in the beginning of the diſeaſe, does generally prove ſucceſsful; yet it frequently happens, when the patient hath been unſkilfully treated by a contrary procedure, he is ſeverely afflicted during life with flying pains, which are ſometimes violent, and at others more gentle; whereby the unſkilful are eaſily deceived, and they are commonly reckoned ſymptoms of the ſcurvy. And here by the way, to ſpeak my ſentiments freely, I ſhall add, that tho' I do not at all doubt that the *ſcurvy* is to be met with in theſe northern countries, yet I am perſuaded it is not ſo frequent as it is generally ſuppoſed to be; for moſt of thoſe diſorders we term *ſcorbutic*, are the effects of approaching ills, not yet formed into diſeaſes, and not having hitherto aſſumed a certain form of appearance; or they are the remains of ſome diſeaſe imperfectly cured, whereby the blood and juices are vitiated. Thus, for inſtance, in thoſe bodies wherein a matter ſuited to produce the gout is newly generated, but not yet thrown upon the joints, there appear various ſymptoms, which occaſion us to ſuſpect the *ſcurvy*, till the formation and actual appearance of the *gout* remove all doubt concerning the diſtemper.

Miſchiefs of a contrary method.

The *ſcurvy* leſs common than it is ſuppoſed to be.

10. Neither are we ignorant that as many ſymptoms, reſembling the ſcurvy, afflict gouty perſons after the fit of the gout is over; namely, when an unſeaſonable uſe of evacuations, or the advanced age of the patient, or ſome other cauſe hath obſtructed nature, ſo as to have rendered her unable to throw off all the gouty matter upon the joints; which being retained, and yet of no uſe, vitiates the maſs of blood, and occaſions many dangerous ſymptoms. And this is to be underſtood not only of the gout, but alſo of a beginning *dropſy*. Tho' it is proverbially ſaid, *that where the ſcurvy ends the dropſy begins*; yet this maxim is only to be underſtood in this ſenſe, that as ſoon as the *dropſy* ſhews itſelf by manifeſt ſigns, the preconceived opinion of the *ſcurvy* falls to the ground. And the ſame may be maintained of ſeveral other chronic diſeaſes, which are either yet

Sect. 6. growing in the body, and accordingly have not aſſumed any certain form of appearance; or of thoſe which are partly conquered, but not totally cured. And in reality, unleſs this be granted, the name of the *ſcurvy* (as it does at this day) will obtain univerſally, and comprize moſt diſeaſes. Whereas if we make an accurate ſearch into the ſecret cauſes of every diſeaſe, and ſtrip it of the diſguiſe of thoſe irregular ſymptoms which ſerve to conceal it, we ſhall ſoon diſcover its ſpecies, and eaſily reduce it to its proper claſs. Moreover, the method whereby theſe diſeaſes are to be cured, muſt not be ſuited to thoſe irregular ſymptoms, but to the individual diſeaſe, of whatever kind it be, as if it were perfectly formed, and actually exiſted.

Frequent bleeding improper in an inveterate *rheumatiſm*

11. But it is here to be obſerved, that when the *rheumatiſm* hath taken deep root by a continuance of ſome years, it is improper to repeat bleeding at ſuch ſhort intervals, as in the beginning of the diſeaſe; and better to interpoſe ſome weeks between every bleeding. By this means the morbific matter will either be quite expelled, or at leaſt in ſo great a degree, that the remains of it may be carried off entirely, by an iſſue made in one of the legs, and exhibiting a proper quantity of ſome volatile ſpirit every morning and evening in canary (*m*).

A *ſcorbutic rheumatiſm*

12. But tho' there is a remarkable difference between the true *rheumatiſm* and the *ſcurvy*, as intimated above, it muſt nevertheleſs be owned that there is another ſpecies of the *rheumatiſm*, which is near a-kin to the *ſcurvy*; for it reſembles it in its capital ſymptoms, and requires nearly the ſame method of cure; and therefore I call it a *ſcorbutic rheumatiſm* (*n*). The pain ſometimes,

(*m*) In an obſtinate rheumatiſm, accompanied with an impoveriſhed ſtate of blood, there is not a better remedy than the *Peruvian bark*, given between the fever and rheumatic fits, which frequently attack the patient towards evening. It has often cured, when nothing elſe would.

(*n*) *Hoffman* alſo obſerves that there is a *ſcorbutic rheumatiſm*, in which the whole maſs of the lymph and ſerum is vitiated with foul, excrementitious, ſulphureous, ſaline, ſharp particles, which occaſionally manifeſt themſelves by different kinds of eruptions; it proceeds from unwholeſome, hard, ſalt diet, an idle and ſedentary life, the common uſe of a heavy, vapid air, and long continued grief; and hence the inhabitants of ſea-ports are generally moſt ſubject to it.

Diluent and demulcent remedies taken freely, and continued a long time, are chiefly proper here: mineral waters drank with

times affects one, and ſometimes another part, but it does rarely occaſion a ſwelling, as in the other ſpecies, neither is it attended with a fever. It is alſo a leſs-fixed pain, and accompanied with irregular ſymptoms: ſometimes it affects one limb, and ſometimes another, ſometimes it only attacks the internal parts, and cauſes ſickneſs, which goes off again upon the return of the pain of the external parts. In this manner the patient is alternately afflicted, and the diſeaſe laſts a long time, like thoſe diſtempers which are eſteemed moſt chronic. It chiefly attacks the female ſex, and men of weak conſtitutions; ſo that I ſhould have concluded it ought to be referred to the tribe of hyſteric diſorders, had not repeated experience taught me that it would not yield at all to hyſteric remedies. Chap. 5.

13. Such likewiſe as have gone thro' a long courſe of the *Peruvian bark* are ſubject to this diſeaſe, which by the way is the only ill effect I have ever obſerved from the uſe of this medicine. But however it be, this diſeaſe, whether it proceeds from this or any other cauſe, is eaſily conquered by the uſe of the following remedies, which I ſhould have concealed had I not preferred the good of mankind to my private intereſt: for by the help of theſe alone, I have cured ſeveral who were afflicted in the manner I have deſcribed, when repeated *bleeding*, *cathartics*, a *milk diet*, the *teſtaceous powders*, &c. availed not at all.

The ſcorbutic electuary.

Take of the conſerve of garden ſcurvy-graſs, two ounces; conſerve of wood ſorrel, an ounce; compound powder of wake-robin, ſix drams; ſyrup of oranges, enough to make the whole into an electuary; two drams of which is to be taken three times a day, for a month, drinking after it three ounces of the following diſtilled water.

The ſcorbutic water.

Take of garden ſcurvy-graſs, eight handfuls; of water-creſſes, brook-lime, ſage and mint, each four handfuls; the peels of ſix oranges; nutmegs bruiſed, half an ounce: infuſe them in ſix quarts of mum, and draw off only three quarts for uſe in a common ſtill.

with milk, along with a convenient regimen, are likewiſe of great efficacy in curing this ſpecies of the diſeaſe.

Sect. 6. The doſe of the compound powder of wake-robin muſt by no means be diminiſhed (*o*).

CHAP. VI.

Of the eryſipelatous Fever.

When the *eryſipelatous fever* ariſes, and whom it chiefly affects.

1. THIS diſeaſe affects every part of the body, but eſpecially the face, and it happens at all times of the year, but chiefly at the cloſe of ſummer, at which time it frequently attacks the patient whilſt he is abroad (*p*). (1) The face ſwells of a ſudden, with great

(*o*) In a *rheumatiſm*, or beginning *viſcidity* of the juices (ſays Dr *Cheyne*) where the *ſize* and *viſcoſity* is uniform, and almoſt equally diſperſed over the whole maſs, or is conſtantly flitting, and not fixed to particular parts (which is what is commonly called a flying *gout* or rheumatiſm) the *reſin* or gum *guaiac*, either alone, (in liberal doſes) or joined to the *mercurials ſine ſtimulo*, with a cool, ſoft, low diet, either vegetable, or of white meats, with little or no fermented liquors, will do great matters, as I have often experienced. For on bleeding (and frequent ſmall *phlebotomies* ought to be interſperſed) though the blood be ſizy, with a thick *buff*, and the *ſerum* yellow or dirty, theſe medicines and the *diet*, ſome time continued, will infallibly alter it, or ſheath its *ſalts*, make its curd more thin and *florid*, and its *ſerum* of a leſs dark colour, rebate the violence of the pains, and bring natural ſleep, eaſe, and chearfulneſs, as I have viſibly and ſenſibly ſeen, and is a conſtant and undeniable *fact*, eſpecially if the corruption be not too deep, and the conſtitution has ever been tolerably good and firm, and life not too far ſpent. But the effect will be more readily obtained, if *vomits* and *mercurial* purges, as of *calomel* with *reſin* of *jalap*, be interſperſed, as the ſtrength of the patient will permit. *See his method of cure in diſeaſes of the body and mind*, p. 156.

(*p*) *Heiſter* obſerves that the *eryſipelas* is an inflammation which ariſes in the *epidermis*, or ſcarf ſkin, and in the fat contiguous thereto, and ſometimes ſpreads very conſiderably, with redneſs, heat, and pain. As ſoon as the part affected is preſſed with the finger, it whitens remarkably; but upon taking off the finger becomes red, as before. It oſteneſt attacks the arms and feet, ſometimes alſo the neck, head, ſhoulders, or face, ſometimes the noſe and other parts. It moſtly begins with chilneſs and ſhivering; whence there immediately ariſes ſuch an heat, as is uſually felt in burning fevers: and hence it is called both by the antients, and the people of the lower *Saxony*, *ignis ſacer*, or St *Anthony*'s fire.

It proceeds from the ſame cauſes as all other inflammations: but chiefly from ſudden cold ſucceeding a great heat or ſweat; obſtructed perſpiration; drinking ſome ſtrong liquors, and ſurcharging

great pain and redneſs, and (2) abundance of ſmall pimples appear, which, upon the increaſe of the inflammation, often riſe up into ſmall bliſters, and ſpread conſiderably over the forehead and head, the eyes in the mean time being quite cloſed by the largeneſs of the tumor. The country people term it a *blaſt*, or *blight*; and in reality it differs little from thoſe ſymptoms which accompany the wounds made by ſtings of bees, or waſps, excepting only that there are puſtules. And theſe are the ſigns of the common and moſt remarkable ſpecies of the *eryſipelas*. Chap. 6.

2. But whatever part is affected by this diſeaſe, and at whatever time of the year it comes, a chilneſs and ſhivering, unleſs they preceded a day or two before, as it ſometimes happens, generally attend this inflammation, with thirſt, reſtleſſneſs, and other ſigns of a fever. As the fever in the beginning occaſioned the pain, ſwelling, and other ſymptoms (which increaſing daily ſometimes terminate in a gangrene) ſo in the courſe of the diſeaſe, theſe ſymptoms greatly conduce to the increaſe of the fever, till both are taken off by proper remedies.

Another ſpecies of an *eryſipelas*.

3. There is another ſpecies of this diſeaſe, tho' it happens leſs frequently. This attacks at any time of the year, and is moſtly owing to too free an uſe of ſubtile attenuating wines, or ſome ſimilar ſpirituous liquor. It begins with a ſlight fever, which is immediately ſucceeded by an eruption of puſtules, almoſt over the whole body, reſembling thoſe occaſioned by the ſtinging of nettles, and ſometimes they riſe up into bliſters, and ſoon after diſappear, and lie concealed under the ſkin, where they cauſe an intolerable itching, and after gentle ſcratching come out anew (*q*). Its ſymptoms.

4. In

charging the ſtomach; and, laſtly, a remarkably hot and ſharp blood: all theſe things being ſo conſtituted that they eaſily thicken the blood, and cauſe it to ſtagnate. *See his Inſtitut. chirurg. P.* 1. *Lib. IV. cap. VI. p.* 290.

(*q*) Practitioners generally divide the *eryſipelas* into two kinds; the *true* and *ſimple*, and the *baſtard* and *ſcorbutic eryſipelas*. The former readily yields to proper internal and external remedies, and is only ſeated in the ſurface of the ſkin; but the latter is more chronic, and by reaſon of the foulneſs of the juices lies deeper, is hard to be cured, and eaſily degenerates into malignant ulcers. This laſt, therefore, is again ſubdivided into that which is attended with ulceration, and that without, of which the former is more dangerous, often proves of long continuance, and difficultly admits of being healed.

Sect. 6.

The *eryſipelas* how to be treated.

4. In order to the cure I conceive (1) that the peccant matter which is mixed with the blood, muſt be evacuated

Moreover the *eryſipelatous fever* is ſometimes *idiopathic*, or an original diſeaſe; ſometimes *ſymptomatic*, and a ſecondary diſeaſe. A ſymptomatic *eryſipelas* likewiſe frequently ſucceeds an *anaſarca*, the *aſcites*, and an inveterate yellow and black jaundice, and ſuddenly deſtroys the patient. It is alſo often complicated with wounds of the nervous parts, eſpecially of the *cranium* and its membranes, and fractures of the bones, in which caſes there is danger. *Hoffman. Med. rat. ſyſt. tom.* II. *p.* 98.

Under the ſame head he obſerves, with reſpect to the prognoſtic; that when the *eryſipelas* comes out ſuddenly, and with little commotion, in a good habit of body, and neither attacks a principal part, nor the nervous parts, it is little dangerous, but that by means of a freer perſpiration, and the exhibition of proper remedies, the ſwelling ſinks by degrees in a day or two, the heat and pain vaniſh, the roſy colour is changed into a yellow, the *cuticula* burſts, and ſcales off, and the diſeaſe is happily terminated. Moreover it ſometimes exhibits a manifeſt mark of health; other diſeaſes, eſpecially a *convulſive aſthma*, and a *convulſive colic*, having been taken off by an *eryſipelas* ſucceeding them. But where it is large, deeply ſeated, in a remarkably foul habit of body, and attacks an exquiſitely ſenſible part, it is not void of danger. For either the redneſs occaſions a lividneſs and blackneſs, and ſoon degenerates into a fatal mortification, or the inflammation does not admit of being diſcuſſed, but ſuppurates, and cauſes ulcers of a bad kind, fiſtulas, and a gangrene. In foul habits, and in ſuch as are partly ſanguine and partly phlegmatic, the *eryſipelas* leaves behind it a large tumor of the foot, ſo that the ankle appears to be three times bigger than it naturally is, and this ſwelling is very difficultly removed. But thoſe who die of this diſeaſe, generally periſh by a fever, which is moſtly joined with a difficulty of breathing, ſometimes with a *delirium*, ſometimes with drowſineſs, and death generally happens within the *ſeventh* day.

It is rendered exceeding dangerous by improper treatment, and frequently mortal. I have known the *eryſipelas* ſtrike in after taking a vomit, and a ſtrong purgative, whence an inflammation of the ſtomach, and death have followed. Bleeding likewiſe has ſometimes ſtruck it in, and rendered it wandering with much greater inconvenience. I have alſo obſerved that after being repelled in the leg, by a topic made of *camphire, red lead, and bole*, it has been ſucceeded by a high fever, an intolerable pain of the ſtomach, a great difficulty of breathing, bilious vomiting, loſs of ſtrength and appetite, which have not gone off, till the *eryſipelas* had been invited back to its former ſeat by a bliſter, and antiſpaſmodics and mild ſudorifics given inwardly. And I certainly know that an *eryſipelas* of the head, having been treated by repellent, cooling, binding, or too ſpirituous applications, and camphorated liniments, has brought on a *vertigo*, lethargic diſorders, a quinſy, *delirium*, and palſy of the tongue; which evils have frequently proved

fatal

vacuated in a proper manner, (2) the ebullition of the blood checked by cooling remedies, and laſtly (3) that the matter now ſecreted from the blood be invited out and diſcuſſed (*r*). To anſwer theſe ends, as ſoon as I am called, Sect. 6.

fatal to perſons in years, and ſcorbutic habits. Cooling, and oleous applications. ſuch as are made of lead, ſpirituous liniments, and thoſe containing much camphire, equally occaſion the *eryſipelas* to terminate badly, and make it degenerate into ulcers of a bad kind; as appears from *Hildanus. Cent. I. obſ.* 82. *Moinichen, obſ. II. p.* 245. *Timæus a Guldenklee, lib.* VI. cap. XXIII.

(*r*) The intentions of cure, according to *Hoffman*, are, (1) by no means to depreſs the fever, unleſs it be too high, and if too low to raiſe it; (2) to ſoften the ſubtile, cauſtic matter lodged in the nervous parts; and (3) to reſolve the inflammatory ſtagnation of the putrid and cauſtic lymph in the external parts, and make way for its perfect expulſion.

It is a ſtanding rule in practice, he obſerves, that in acute and eruptive fevers, the body is always to be kept in a gentle breathing ſweat, that ſo an equable motion of the blood may be continued to the ſurface thereof, and the excrementitious matter, continually carried with it, expelled. Hence this is likewiſe juſtly to be obſerved in the *eryſipelas*, as well with reſpect to the whole body, but chiefly to the part affected, whereby the pain is mitigated, and the diſcuſſion powerfully promoted.

The utmoſt caution is required in the uſe of externals, to prevent their doing miſchief, either by ſtriking in the *eryſipelas*, or changing it to an ulcer. Beſides, as moſt perſons have a peculiar idioſyncraſy, or a certain ſpecific and individual ſenſibility, which principally prevails in the ſkin, as a nervous part; ſo for this reaſon alſo greater circumſpection is required in applying topics in diſorders of the ſkin, every particular perſon not being able to bear all kinds of applications. For I have often obſerved in an *eryſipelas* of the breaſt, upon applying a very mild plaiſter, which had been experienced a hundred times in others, that the inflammation and pain in a ſhort time have rather been increaſed thereby, which, upon taking it off, have immediately abated. Hence it is ſafeſt to apply only paregoric ſpecies, made of *flowers of camomile, elder, and melilot, liquorice root, and bean flour*, in form of a bag, or powder.

But if, notwithſtanding the uſe of efficacious internal and external diſcutients, the ſwelling remains, the redneſs begins to go off, and a blueneſs to come on, the pain be more deeply ſeated, and ſeems to extend to the *perioſteum*, the *eryſipelas* tends to ſuppuration. Then, therefore, we are to have recourſe to ſuch things as promote ſuppuration, yet ſo as at the ſame time to check the putrefactive corruption. *Simple diachylon*, with an addition of a ſufficient quantity of *camphire* and *ſaffron*, or *Barbette's lead plaiſter with ſoap*, covering it with balſamic epithems, which prevent corruption, are very uſeful applications. When the matter lies deep, and poſſeſſes but a ſmall ſpace, the tumor is to be opened with a lancet, and the matter to be diſcharged ſucceſſively, but not all at once. But leſt the abſceſs, eſpecially

Sect. 6. called, I direct a ſufficient quantity of blood to be taken away from the arm, which generally reſembles the blood of pleuritics. The next day I give my common purging potion, and exhibit a paregoric draught at bed-time, in caſe it has operated briſkly, *e. g. ſyrup of white poppies* in *cowſlip flower water*, or ſomething of the ſame kind. After purging, I order the part affected to be fomented with the following fomentation.

The emollient fotus. *Take of the roots of marſhmallows and lillies, each two*

eſpecially in glandulous places, ſhould, after the diſcharge of the matter, degenerate into a fiſtulous and malignant ulcer, a balſamic liquor ſhould be injected, made of *tincture of the flowers of St* John's *wort*, *eſſence of balſam of* Peru, *myrrh, and ſome drops of ſpirit of turpentine.*

When the *eryſipelas* is very large, and deeply ſeated, and threatens a mortification, which is known by the colour inclining to a browniſh red, and the continuance of the ſymptoms after the expulſion, then, beſides ſuch internals as check inflammation and putrefaction, eſpecially *nitre*, with a ſmall quantity of *camphire*, ſpirituous and ſtrengthening externals, made *of lime-water, camphorated ſpirit of wine, wine vinegar with litharge*, mixed alſo with *eſſence of ſcordium*, and myrrh, are frequently to be applied to the part affected; pieces of linnen ſeveral times doubled being dipt therein.

Bleeding in the *eryſipelas* is ſometimes hurtful, ſometimes ſerviceable. If an eryſipelatous fever attacks plethoric perſons, or ſuch as are accuſtomed to drink ſpirituous liquors, bleeding in the arm is proper in the firſt ſtage of the diſtemper: for by this means a freer circulation is occaſioned, and the expulſion of the matter to the ſkin promoted. It is ſo much the more advantageous if the *eryſipelas* ſeizes the head, as it is then preventive of the dangerous ſymptoms. Sometimes inſtead of bleeding it is adviſable to apply cupping glaſſes between the ſhoulders. But always after bleeding care ſhould be had to keep up a free and equable perſpiration.

In a *ſcorbutic eryſipelas*, of long ſtanding, ſuch medicines as purify the blood, gentle laxatives, and ſudorifics are to be uſed; purging at firſt for ſome days, and afterwards exhibiting ſudorifics and diuretics for ſome time, and repeating them alternately a number of times. And the patient's common drink ſhould be a ſmoothing decoction, made of mucilaginous roots and woods, along with bitters, eſpecially *ſuccory and dandelion roots, and raiſins.*

To prevent the return of this diſorder, which is dangerous; the beſt method is, after having prepared the body by bleeding, or laxatives, or both, as there is occaſion, to go through a courſe of ſome proper mineral water, under a convenient regimen. But where this cannot be complied with, bleeding, eſpecially ſpring and autumn, ſeaſonable purgation, and ſuch medicines as cleanſe the blood, along with a proper regimen, as to diet, exerciſe, &c. are commodiouſly ſubſtituted in its ſtead.

ounces;

ounces; the leaves of mallows, elder, and mullein, of each two handfuls; the flowers of melilot, the tops of St John's *wort, and the lesser centaury, of each one handful; linseed and fenugreek seed, each half an ounce; boil them in enough water to leave three pints, strain off the liquor, and when it is used add two ounces of spirit of wine to every pint thereof. Let the part affected be fomented twice a day with soft flannels dipt in this fomentation hot, and wrung out, and, after fomenting, bathe it with the following mixture.* Chap. 6.

Take of spirit of wine, half a pint; Venice *treacle, two ounces; long pepper and cloves, reduced to powder, of each two drams; mix them together; cover the part affected with brown paper, moistened with this mixture (s).* The mixture.

5. More-

(s) The present practice does not authorise so hot and fiery a medicine in this case; nor, in the course of my reading, have I met with so warm a one prescribed by any other author: it should rather seem to increase the pain and inflammation than mitigate them, at least in a simple *erysipelas*. *Heister* recommends *digestive powders*, made of *flowers of elder*, *liquorice root*, *prepared chalk*, *ceruss*, and *myrrh*, mixed together in equal quantities, with the addition of a little *camphire*, to be applied warm to the part, included in blue or blotting paper, or a piece of linnen. To this he adds Mynsicht's *powder against the erysipelas*, observing that it is not only frequently used by the apothecaries, but highly effectual. Amongst the liquid medicines he observes that *camphorated spirit of wine*, alone, or mixed with *saffron and treacle*, and applied warm, blotting paper, or linnen compresses being dipt therein, is eminently serviceable here; and, on his own experience, tells us that *lime water, and camphorated spirit of wine*, mixt together, and applied in the same manner, is an excellent remedy. See *Heist. Institut. chirurgic. p.* I. *lib.* iv. *cap.* vi. *p.* 292.

I once saw an instance of as violent and extensive an *erysipelas*, as, perhaps, ever happened. The case was this.——A middle-aged person, of a hot and bilious constitution, and somewhat inclined to corpulency, having for some time lost the use of his arm, from what cause I do not remember, was advised to apply a stimulating warm fomentation, and a warm nervous liniment thereto, in order to recover its motion. But soon after using these remedies, which availed not at all in relieving the complaint, an *erysipelas* arose in the part, and from thence gained one shoulder, and one side of the face, and afterwards extended all over one side of the neck and trunk, both before and behind. The parts affected were so exceeding tender and painful, as not to abide the most emollient and anodyne fomentation that could be contrived, and a high fever with great thirst and restlessness accompanied the disorder: which however yielded, sooner than was expected, to repeated bleeding,

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The regimen.

5. Moreover, I order the patient to ſup only barley-broth, water-gruel, and eat roaſt-apples, to drink ſmall-beer, and to refrain from bed ſome hours every day. By this method the fever and other ſymptoms are generally ſoon taken off; if not, I repeat bleeding, and ſometimes it is neceſſary to bleed a third time, interpoſing a day between each bleeding, that is, if the blood be greatly vitiated, and the fever high. On the intermediate days of bleeding, I order a glyſter made of *milk* and *ſyrup of violets*, and a cooling julap made of the *diſtilled water of water lillies*, &c. as delivered in the cure of the *Rheumatiſm*, to be taken in a proper quantity every hour. But a ſingle bleeding, and a purge generally effect the cure, provided they be uſed in time. The ſame method is to be uſed in that ſpecies attended with itching and a redneſs, and reſembling the ſtinging of nettles; only, external applications are leſs neceſſary here.

Some other eruptive diſorders require a different treatment.

6. I ſhall obſerve here, by the way, that though not only this diſeaſe, but the greater part of ſuch as affect the ſkin, and are attended with ſome ſort of eruption, in caſe they are of the chronic kind, readily yield to this method, and accordingly go off in a ſhort time by repeated bleeding and purging; yet there are others that require a very different treatment. For neither the evacuations juſt mentioned, how frequently ſoever repeated, nor teſtaceous powders exhibited to ſweeten the blood, at all avail when a noxious, recrementitious matter lies deep in the ſkin, and cannot be removed but by ſuch remedies as ſtrengthen the tone of the blood, and are conſequently proper to open the obſtructions of the pores: and therefore in the *violent itchings*, and inveterate eruptions of the ſkin, of that kind, I have had recourſe to the following method with ſucceſs.

The method deſcribed.

The ſudorific bolus.

Take of Venice *treacle, half a dram*; *electuary of the egg, a ſcruple*; Virginian *ſnake-root, finely powdered, fifteen grains*; *oriental bezoar, five grains*;

bleeding, gentle purging, diluting liquors drank freely, nitrous medicines, and emollient cataplaſms, often renewed, made chiefly of *elder bark*, boiled in *milk*, with the addition of a ſmall quantity of *ointment of elder*.

It was hoped that the conſiderable inflammation, which happened here, would have rouzed the natural heat of the arm, and in ſome meaſure reſtored its former motion, but nevertheleſs it remained as motionleſs as ever.

ſyrup

ſyrup of candied citron, enough to make them into a bolus; which is to be taken every morning, and at bed-time, for one and twenty days, drinking after it ſix ſpoonfuls of the following julap. Chap. 6.

Take of the diſtilled water of carduus benedictus, *ſix ounces; plague and treacle water, of each two ounces; ſyrup of cloves, an ounce: mix them together.* The cordial julap.

7. The patient ſhould ſweat an hour or two every morning after taking the medicine, or rather promote a gentle breathing ſweat in bed, for the ſame ſpace of time, by covering himſelf with a greater quantity of clothes than uſual. This courſe being over, if the eruption ſtill continue, let the parts affected be anointed with the following liniment.

Take of the ointment of ſharp-pointed dock, two ounces; pomatum, an ounce; flowers of ſulphur, three drams; oil of rhodium, half a ſcruple: mix them together for a liniment. The cleanſing liniment.

But the medicines above preſcribed muſt by no means be uſed before ſufficient bleeding and purging have been uſed; which, tho' they do not effect a cure uſed alone, are however preventive of a fever, which might otherwiſe ariſe from the uſe of ſuch hot medicines (*t*). To be preceded by bleeding and purging.

8. There

(*t*) An eryſipelas is undoubtedly an inflammatory diſorder, and may generally be *ſafely* cured by bleeding, purging, nitre, &c. and ill conſequences ſeldom enſue (under this treatment of it) by freely uſing ſuch outward applications to the part affected as are cooling and lie eaſieſt upon it. But notwithſtanding this, there is ſomething in the nature of this diſorder that forbids theſe means being univerſally laid down as the method of cure, and outward applications are often very prejudicial, ſo that great ſkill and caution are requiſite to make a proper choice of them. I am not fond of theories, but in this caſe I ſuppoſe there is a ſevere humour in the blood, which nature endeavours to diſcharge by the ſkin, and hence it is that the cold air, cold applications, and bleeding and purging undiſtinguiſhingly have proved fatal to ſome; and perhaps, when it affects the head, face, or trunk, greater caution is neceſſary.

The pulſe, fever, and other ſymptoms ought to be our guide in determining, when and how often to bleed the patient, and what quantity of blood to take away, and the ſame in reſpect of purging: and by the bye, cuppings, and frequent bleedings in ſmall quantities, are better, in ſome turns and circumſtances, than taking away blood in the common manner.

The patient ſhould always be kept in a perſpiring way, and the parts affected particularly warm, to prevent a ſudden and prejudicial ſinking of the ſwelling, &c. And if this happens, a bliſter

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An uncommon eruption, and its cure deſcribed.

8. There is another kind of eruption, tho' leſs frequent, wherein no evacuations avail. This, tho' it ſometimes appears in other parts, generally affects the breaſt, and fixes itſelf in ſome certain place; it riſes very little, if at all, higher than the ſkin, and appears like a broad ſpot, or a kind of branny ſcurf, of a yellowiſh colour. Whilſt this ſpot keeps out, the patient continues pretty well, but when it vaniſhes, as it frequently does, a ſlight ſickneſs ſucceeds, the urine becomes more turbid, and of a deeper red, but ſomewhat inclining to yellow. This diſorder, after uſing general evacuations, is to be treated in the ſame manner as the *ſtubborn itch* abovementioned; only it muſt be remembered that the uſe of wine, and fleſh of eaſy digeſtion, muſt by all means be indulged, all coolers being rather detrimental than ſerviceable. In this manner is this laſt kind of eruption cured; but ſometimes it proves ſo inveterate, as only to yield to a long continued courſe of chalybeat waters *(u)*.

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a bliſter ſhould be immediately applied to the part, if it will properly and conveniently admit it; and if the pulſe ſinks at the ſame time, warm ſudorifics, and volatile medicines ſhould be adminiſtered, and more bliſters laid on. But, if, on the contrary, the pulſe and fever continue very high notwithſtanding the fall of the ſwelling, bleeding muſt be uſed *pro re nata*, and a purge likewiſe given, eſpecially if it affects the brain; in which caſe bliſters ſhould be applied alſo. A gentleman, who by the cold air ſuddenly ſtruck in the eryſipelas of his face, and had all the ſymptoms of an inflamed brain, and was in the moſt imminent danger, appeared to be ſnatched from death, by bleeding him in the jugular, and, beſides that, applying two large bliſters to both ſides of the neck, bleeding in the arm, and giving him a ſtrong purge; all which was done in the ſpace of an hour.

If the parts affected threaten a mortification, they ſhould be fomented and treated accordingly; — and indeed an emollient fomentation, and warm milk is generally (if not always) uſed with entire ſafety and ſucceſs. — But I purpoſely chuſe to ſay little of outward remedies, becauſe I am of opinion they do not greatly contribute to the cure; tho' I have often known the ointment of elder uſed to the comfort of the patient, and without injury.

(u) Amongſt the peculiar kinds of the *eryſipelas*, there is one which few of the moderns are acquainted with, and the antients have alſo taken little notice of: it is called by *Pliny*, *zoſter*, and by us *zona*. It appears with dangerous ſymptoms, and ſurrounds the body, juſt above the navel, like a girdle, and is generally ſeveral fingers broad, and attended with very violent heat, and an eruption of ſharp puſtules, burning like fire. It

CHAP. VII.

Of the Quinſey.

1. THIS diſeaſe comes at any time of the year, but eſpecially between ſpring and ſummer; it chiefly attacks the young and ſanguine, and alſo red-haired perſons (*x*). It begins (1) with a chilneſs and ſhivering, When the *Quinſey* happens, and whom it chiefly attacks.

is a pernicious diſorder, and ſometimes proves fatal. But that is the moſt malignant of all the kinds, which comes out under the breaſt, and in the parts near the heart, or in the hands, and other very ſenſible parts, in old perſons, of a very foul habit of body, after a great loſs of ſtrength, and ſometimes alſo in malignant and peſtilential fevers: it ſoon becomes livid, and at length black, and death ſpeedily enſues. *Platerus* deſcribes this ſpecies in the ſecond vol. of his works, p. 23. under the name of the *broad ſpot*. *Langius* in his 110th epiſtle ſhews how dangerous the *Zone* is, by two inſtances: and *Tulpius* in his *Medicinal obſervations, book 3d. chap.* 45. deſcribes a diſorder, which ſeems to be the ſame with this, under the name of a *herpes exedens* of the *præcordia*. It has been conquered in fourteen days, by mild diaphoretics taken internally, and *oil of eggs* applied to the part affected.

(*x*) *Hoffman* defines this diſorder; "an inflammation of "the throat, accompanied with a burning pain, ſwelling, redneſs, a difficulty of breathing and ſwallowing, along with "a fever, ariſing from a ſtagnation of the blood, or a viſcous, "ſharp ſerum in the blood, or lymphatic veſſels, and not void "of danger."

In order to gain a juſt knowledge of this diſeaſe, its ſeat is chiefly to be noted; which is in the throat, eſpecially in thoſe parts which form the *pharynx* and *larynx*, and theſe are very numerous, and of great uſe and ſenſibility. For inſtance, the root of the tongue, with the *os hyoides*, the paſſages of the noſtrils which open into the mouth, the upper part of the *œſophagus*, the internal and external muſcles of the *pharynx* and *larynx*, which are thirteen in number, the large and ſmall glands of the *tonſillæ*, the muſcles which move the jaws, and the fine ramifications of the blood, and lymphatic veſſels, and nerves.

According, therefore, as the inflammation attacks any of theſe parts, it is more or leſs violent, and acquires alſo different names. The moſt antient, general diviſion of the quinſey is, into the internal and external kind, or the manifeſt and latent kind. The former is ſeated in the internal nervous and muſcular teguments of the throat; and therefore no tumor and inflammation are perceived externally in the neck, nor in the mouth, but an internal heat, and an acute fever, and, in caſe it be very ſevere, a difficulty both of breathing and ſwallowing, and much danger accompany it. But the external ſpecies rather

Sect. 6. ing, (2) a fever ſucceeds, and (3) immediately after a pain and inflammation of the *fauces*, which, without ſpeedy

ther extends towards the eyes, and chiefly poſſeſſes the external muſcular and glandulous parts, the almonds, the root of the tongue, and the *uvula*; and is alſo more eaſily reſolved.

The moſt violent and dangerous kind of the *Quinſey*, particularly conſidered with reſpect to the part affected, is that which is ſeated in the internal muſcles of the *larynx*, and in which no redneſs appears outwardly, either in the fore or hind part of the neck, but a burning pain afflicts the patient internally, and not only a loſs of ſpeech is occaſioned by the contraction of the *larynx*, but likewiſe a difficulty of reſpiration, and ſometimes a total ſtoppage thereof, and in ſo ſhort a time, that it has been often been obſerved to prove mortal in *twenty four* hours, or on the *third* day. This ſpecies is called by the *Græcians*, *cynanche*. But that which they term *ſynanche* poſſeſſes the internal muſcles of the *pharynx*, and is equally unattended with any viſible external ſwelling and redneſs, but accompanied with a greater difficulty of deglutition, than of reſpiration, and liquids are often violently diſcharged thro' the noſtrils. The inflammation, which attacks the external muſcles of the *pharynx*, is called by the antients *paraſynanche*, but that which attacks thoſe of the *larynx*, *paracynanche*.

It is divided by practitioners into the *true*, or *acute*, and the *baſtard* quinſey. The true *quinſey* ariſes from a ſtagnation of the blood, but the *baſtard* one from an inflammatory collection of ſerum, rather than of blood, in the throat, and internal parts of the neck. The former is an acute diſeaſe, and always attended with chilneſs and a fever; but the latter has a lymphatic and catarrhal fever joined therewith, rather than an acute one. Again, in a *true quinſey*, there is not only a burning pungent pain perceived in the internal parts of the throat, but the tongue appears turgid with blood, and of a duſky red, the face is likewiſe red, the temporal arteries beat ſtrongly, and ſometimes faintings ſucceed: and if it be very violent, a great difficulty of breathing, exceeding anxiety, reſtleſſneſs, and a coldneſs of the extremities accompany it: hence it requires ſpeedy relief, and is conſiderably dangerous. But a *baſtard quinſey* is partly free from theſe violent ſymptoms, and partly attended with milder ones; and there is alſo leſs danger to be apprehended, provided it be properly treated. The quinſey may be further divided into a *dry and very burning one*, and a *moiſt* or *very mucous one*. The former proceeds from the blood, and is joined with a very acute fever, as we remarked of the true quinſey; but the latter is rather chronic, attends catarrhal fevers, and is very common in cachectic and ſcorbutic habits, and furs the tongue, and lines the throat with a thick, clammy *mucus*, and is alſo accompanied with a ſtinking breath.

All theſe ſpecies of the *quinſey* deſerve to be diſtinguiſhed from other diſorders of the throat. The *true* and *dry quinſey* is not to be taken for that mucous inflammation of the mouth and *æſophagus*, which is uſually called, *prunella alba*; for in this the tongue and all the parts of the throat are lined with a white

ſpeedy relief, hinder deglutition, and prevent breathing thro' the noſe, whence ſuffocation is endangered from the inflammation and tumor of the *uvula*, *tonſillæ*, and *larynx*. This diſeaſe is extreamly dangerous, and ſometimes kills the patient in a few hours, namely, when a large quantity of the febrile matter is thrown upon the abovementioned parts, and the approaching violent ſymptoms are not timely enough prevented by proper remedies. Chap. 7.

white *mucus*, the tongue is affected with painful fiſſures, or chaps, and a great heat is alſo joined with it, which extends even to the *præcordia*. This often happens in malignant fevers, and generally affords a bad prognoſtic, becauſe it indicates an actual inflammation of the ſtomach and *œſophagus*. Nor is every inflammation of the throat a quinſey; but that only which is attended with a fever, and a difficult reſpiration and deglutition.

The quinſey is alſo frequently *ſymptomatic*; for it happens in a diarrhoea and dyſentery, eſpecially if the diſcharge be unſeaſonably ſtopped, and alſo upon ſtriking in an *eryſipelas*, or wrong treatment of the gout by external remedies, and in the ſmall-pox, malignant and peſtilential fevers, with great danger of life.

It often prevails *epidemically*, which is to be aſcribed to ſome bad diſpoſition of the air, and it is then generally complicated with ſome malignancy. This happens after a long run of moiſt, rainy weather, in ſpring or autumn.

With reſpect to the prognoſtic, this diſeaſe is very dangerous, both on account of its being frequently joined with an acute fever, and endangering ſuffocation; which latter is chiefly to be apprehended when the muſcle called *thyroarithenoideus*, which is deſigned to cloſe the *larynx*, is affected therewith. It is a bad ſign when the ſwelling of the external parts ſuddenly vaniſhes, the ſymptoms rather increaſing than abating at the ſame time; for the diſtemper then flies to ſome other nervous parts, and ſeizing the brain, occaſions a *delirium*, with convulſions; or being tranſlated to the lungs, cauſes a mortal peripneumony, as *Hippocrates* teſtifies in the 5th ſection of his aphoriſms, the tenth aphoriſm. But when the troubleſome ſuffocation remits, and the pain and redneſs appear more outwardly, and vaniſh by degrees, it foreſhews that the diſeaſe will terminate happily. If otherwiſe, it degenerates into an impoſthume, or threatens death. If into an impoſthume, and the matter be diſcharged into the *bronchia* and lungs, the event is very precarious, as *Foreſtus* teſtifies, *lib.* 14. *obſerv.* XXIV. If it threatens death, this is portended by a frothing at the mouth, a conſiderable ſwelling, and a duſky redneſs of the tongue, a coldneſs of the extremities, great contraction of the *præcordia*, and anxiety, along with a hard, convulſive, intermitting pulſe. A ſymptomatic quinſey is adjudged dangerous, and can ſeldom be conquered, by reaſon of the weak ſtate of the body, and the virulence of the matter. See *Hoffman. Med. rat. ſyſtem. tom.* IV. *p.* I. *p.* 389. *and* 395.

Sect. 6.

The curative method delivered.

2. In order to the cure I immediately bleed plentifully in the arm, and preſently afterwards in the veins under the tongue; and then I order the inflamed parts to be beſmeared with *honey of roſes*, ſtrongly acidulated with *ſpirit of ſulphur*; and preſcribe the following gargariſm to be uſed, not in the common way, but to be held quietly in the mouth till it grows warm, and then ſpit out; and this to be repeated between whiles.

The gargarism.

Take of the diſtilled waters of plantain, red roſes, and frogſpawn, of each three ounces; three whites of eggs, beat to a liquor; white ſugar, three drams: mix them together for a gargariſm.

I alſo order the emulſion deſcribed in the cure of the pleuriſy, or the like, to be taken daily.

3. I bleed again in the arm the next morning, unleſs the fever and difficulty of ſwallowing be in ſome meaſure abated, in which caſe I give a gentle purge; much experience having taught me that this is highly neceſſary and uſeful after bleeding. If the fever and other ſymptoms are like to be violent even after purging, which yet ſeldom happens, they are to be quieted by repeated bleeding, and applying a large and ſtrong bliſter to the back. During the whole courſe of the diſeaſe a cooling and emollient glyſter muſt be given every morning, except on the purging day.

The regimen.

4. I enjoin a total abſtinence from fleſh and broths made thereof, allowing only *barley-broth*, *water-gruel*, *roaſt apples*, and the like for diet; and *ptiſan* or *ſmall-beer* for drink. The patient muſt likewiſe ſit up ſome hours every day; for the warmth of the bed increaſes the fever and its concomitants, which I endeavour to conquer by this method. It is well worth obſerving, that the *quinſey*, which is only a ſymptom of a *ſtationary fever*, muſt be treated by the ſame method which the fever demands, and, accordingly, is either to be carried off by perſpiration and ſweat, or ſome other method which the original fev whereon it depends, requires (*y*).

5. There

(*y*) *Hoffman* obſerves that the treatment of this dreadful diſeaſe differs as the various kinds and cauſes thereof differ; to the juſt knowledge and removal of which the intention of the phyſician ought ſolely to be directed. When therefore there are manifeſt ſigns of a conſiderable ſtagnation of blood in the head, which not only augments the inflammation, but occaſions fatal ſymptoms, the phyſician's firſt and principal care ſhould be to derive

5. There are other fevers which ought to be enume- Chap. 7.
rated amongſt the *intercurrents*, which, by reaſon of their

derive the impulſe of the blood from the part affected, which is moſt commodiouſly done by opening a vein contiguous thereto. Bleeding in the jugular gives the moſt immediate relief: but if this cannot be conveniently done, a vein in the arm is firſt to be opened, and then the veins under the tongue. In caſe the diſorder proceeds from the ſtagnation of acrimonious humours in the nerves of the throat, and the coats of the *larynx*, and there be no manifeſt plethory, ſcarification in the neck and chin, or the application of leeches is rather indicated. And where a ſwelling, with a ſlight pain and inflammation, in foul and phlegmatic conſtitutions, affects the external parts of the neck, occaſioned by an abundance of viſcous *ſerum*, ſcarification in the neck and ſhoulders is to be preferred to bleeding. In the next place the body is to be opened, which alſo invites the humours downwards, and diſcharges them. Gentle laxatives in a liquid form agree beſt here; for inſtance, a decoction made of two ounces of *manna*, a dram and half of *nitre with antimony*, and ten ounces of *whey:* this decoction not only evacuates the humours, but ſmooths their acrimony and ſaltneſs. But if nothing can be taken by the mouth, let a glyſter be injected, made of *milk*, *honey*, *oil of ſweet almonds*, *common ſalt*, *and nitre*.

The ſuperfluous blood and foul humours being thus evacuated, care is to be had to reſolve and diſcuſs the blood, or ſerous fluid, ſtagnating in the veſſels, by proper internal and external remedies, and at the ſame time to mitigate the febrile heat. To this end are conducive the frequent uſe of diaphoretic and mild anodyne mixtures, and diluting liquors drank plentifully.

This diſeaſe is farther to be oppoſed with externals; of which ſome are to be uſed by way of gargariſm, and ſome to be applied to the throat and neck; that by theſe alſo the pain and inflammatory heat may be mitigated, the acrimony of the humours ſoftened, and the ſtagnating fluids diſſolved. In caſe of great heat and pain, I would not adviſe the injection of gargariſms with a ſyringe; it is ſufficient to waſh the mouth between whiles with a proper liquor, warm. *Rob, or ſyrup, of mulberries, ſyrup of red poppies, of violets, mucilage of quince ſeed, barley cream, nitre, ſal prunella, or dulcified ſpirit of nitre*, are advantageouſly uſed for this purpoſe; and may be varied according to the circumſtances, and mixed with milk, a decoction of *liquorice* or *figs*, or *water gruel*. A proper quantity of a mixture of *freſh oil of ſweet almonds, ſperma ceti, ſaffron, and ſyrup of violets*, given in water-gruel, and held a while in the mouth, is likewiſe of great ſervice in this caſe. The remedies which are moſt frequently applied to the throat and neck, are cataplaſms, prepared of paregoric and diſcutient ingredients boiled in milk, ſuch as the *flowers of elder, melilot, camomile and mullein, white lilly roots, figs, ſaffron, ſeeds of aniſe and fennel, and linſeed flour*, to which ſome add *ſwallows neſts*, and *album græcum*, as ſpecifics. Lenient and emollient plaiſters deſerve alſo to be commended for this purpoſe, ar *ſimple diachylon, melilot plaiſter*, let down with *oil of ſweet almonds*, or rendered

Sect. 6. their terminating immediately ſome other way, in ſome peculiar ſymptoms, are not uſually accounted fevers; tho' they were originally ſuch. And the diſorder, whence the diſeaſe takes its name, is only the ſymptom of the fever, which terminates at length therein. At preſent I ſhall only briefly treat of two of theſe, namely, *a bleeding at the noſe*, and *a ſpitting of blood*.

A bleeding at the noſe, and its ſymptoms, deſcribed.

6. A *bleeding at the noſe* happens at any time of the year, and chiefly afflicts ſuch as are of a hot and weakly conſtitution, and more frequently in the decline of life, than in youth. Some ſigns of a fever appear in the beginning, which goes off ſuddenly, making way for itſelf thro' the noſtrils; but there remains a pain and

more effectual by a mixture of *ſperma ceti*, *ſaffron*, and *camphire*.

In the uſe of externals, the different kinds of inflammations of the throat juſtly merit attention, and the remedies are to be accommodated to each particular ſpecies. Accordingly, in every painful and burning inflammation of the throat, the *julap of roſes with nitre*, and a ſmall proportion of *camphire*, is very beneficial. *Hartſhorn jelly* is alſo an admirable aſſiſtant here. But if the throat be dry, and burns, the tongue ſwells, and there be a difficult reſpiration and deglutition, the following linctus is proper.

Take whites of eggs, beat to a liquor, two ounces; roſe water, an ounce; ſyrup of pomegranates and mulberries, of each half an ounce; ſal prunella, twelve grains: mix them together.

And the neck and throat are to be anointed with the following unguent.

Take of oil of ſweet almonds, an ounce; oil of white poppies, two drams; camphire, half a dram: mix them according to art.

In a latent, internal, and very hot quinſey, the mouth is to be waſhed between times with only *milk* and *cream*, with an addition of *ſal prunella* and *ſyrup of red poppies*; and whey to be drank frequently. But in the inflammation of the *œſophagus*, which often happens in malignant fevers, at the ſtate, it is proper to give the following powder internally with an emulſion of ſweet almonds, and to hold ſome of it in the mouth.

Take of white ſugar, an ounce; nitre, a dram; camphire, three grains; make them into a powder.

The inflammatory pain, which proceeds from the ſtagnation of a ſharp ſaline *ſerum*, in the glandulous parts of the throat, near the ſeat of the *pharynx* and *larynx*, and is attended with redneſs, and a copious diſcharge of *ſaliva*, but not a fever, is beſt diſcuſſed in the beginning, by gargarizing the mouth and throat with *Rheniſh wine*.

When a copious, foul, ſerous humour falls upon the glands of the palate and throat, gentle laxatives, and detergent gargariſms, ſhould be frequently uſed.

heat-

heat of the forepart of the head. The blood flows for ſome hours, and then ſtops a while, and ſoon after breaks out anew; and this it does alternately, till at length the hæmorrhage ceaſes entirely, being ſtopped either by the uſe of remedies, or ceaſing ſpontaneouſly from the conſiderable loſs of blood; but there is danger of a relapſe every year, if the blood happens to be much heated by ſpirituous liquors, or any other way. Chap. 7.

7. In this caſe I endeavour to check the exceſſive heat and ebullition of the blood, whence the preternatural extravaſation proceeds, and to divert the force of it another way. For this purpoſe I bleed frequently and copiouſly in the arm, the blood always appearing like that taken away in a pleuriſy; I order a cooling and incraſſating diet, as *milk* boiled with thrice its quantity of water, to be drank cold, *roaſt apples*, *barley-broth*, and other *ſpoon-meats* made without fleſh, and likewiſe cooling and incraſſating julaps, with emulſions, as above preſcribed in inflammatory diſeaſes. I adviſe the patient to refrain from bed ſome hours every day, and not to omit taking a lenitive and cooling glyſter every day alſo; and an opiate may be exhibited every evening at bed-time, in order to check the commotion of the blood. But as hæmorrhages of this kind are frequently accompanied with an acrimonious lymph, which being mixed with the blood, increaſes its motion, and opens the mouths of the veſſels; beſides revulſions and cooling, I uſually give a gentle purge, even in the height of the diſeaſe, and an opiate in a larger doſe than ordinary after the operation is over, and when the ſymptom is intirely gone off, I give another purge. How to be treated.

8. As to external applications, a linnen compreſs, dipt in a ſolution of *ſal prunella* in cold water, and gently ſqueezed out, may be applied to the nape and both ſides of the neck, often in a day. And after general evacuations the following liquor may be uſed (z).

Take of Hungarian *vitriol, and alum, each an ounce; the phlegm of vitriol, half a pint; boil them together till the ſalts are diſſolved; filtre the liquor, when it is cold, and ſeparate it from the cryſtals which ſhoot between whiles; laſtly, to the remaining liquor add a twelfth part of oil of vitriol. Put up a tent dipt in* A ſtyptic liquor.

(z) See *Sect.* I. *Chap.* IV. *Par.* 48.

Sect. 6.

this liquor into the noſtril whence the blood flows, and keep it therein two days (*a*).

Linnen compreſſes dipt in this liquor, and applied to the part, will ſtop any external bleeding (*b*).

A *ſpitting of blood* deſcribed, and its cure.

9. A *ſpitting of blood*, which ſeizes weak perſons, of a hot conſtitution, and diſordered lungs, and young perſons rather than old, between ſpring and ſummer, nearly approaches the nature of the hæmorrhage juſt treated: this being a *fever* likewiſe, that loſes its name and eſſence, by the *criſis*, whereby it is terminated, with this difference only, that in a *bleeding at the noſe* the blood, being too much agitated, flows impetuouſly to the veins of the noſtrils, whereas in this hæmorrhage it hurries to the lungs. And as in the former diſorder a pain and heat in the forepart of the head continue to afflict the patient, during the flux of blood, ſo in this the breaſt is affected with pain, heat and weakneſs. This diſorder alſo requires almoſt the ſame treatment, only it will not bear purgation, which, eſpecially if it be repeated, endangers a conſumption. But frequent bleeding, a glyſter injected every day, and *diacodium* taken every evening, along with a cooling and incraſſating regimen, and medicines, will effect a cure (*c*).

10. And

(*a*) The following from the *Edinburgh* diſpenſatory is a much more judicious compoſition.

Take blue vitriol and alum, of each half a pound; water two quarts. Boil till all the ſalts are diſſolved; then filtre the liquor, and to every pint of it add a dram of oil of vitriol.

(*b*) It is ſomewhat ſtrange that our author ſhould ſo poſitively aſſert that his ſtyptic will ſtop any external bleeding. Few good ſurgeons ever make uſe of any other ſtyptic than dry lint, and all are trifling when by a wound of the external parts an artery of any conſiderable ſize is divided; for then recourſe muſt be had to the needle and thread, which infallibly ſecures it. All ſtyptics, except dry lint, though too commonly uſed in the country, are prejudicial to a wound.

(*c*) In this caſe the blood is always coughed up (and that *moſt eaſily*) from the lungs, and the blood taken away from the arm is greatly inflamed, in proportion to which and other ſymptoms, bleeding muſt be repeated. This diſorder often requires the loſs of a conſiderable quantity of blood, a ſtrict low diet, diluents, *nitre*, &c. for want of which, particularly large bleedings, it not unfrequently terminates in a conſumption. Paſſionate people are moſt ſubject to it.

Our author in this, and ſeveral other diſeaſes, recommends *diacodium*, but it muſt be remembered, once for all, that it is ill truſting to it; becauſe this medicine can hardly always be made

Chap. 7.

10. And theſe are the particulars I have hitherto obſerved, concerning that numerous tribe of diſeaſes, which is divided into different ſpecies, and comprehended under the *generical* name of *fevers*, and of the ſymptoms thereon depending; in which I have ſollicitouſly endeavoured not to intrude my own inventions and imaginations on the world, but, with a candid and honeſt mind (and conſequently attached to no hypotheſis) have given the hiſtory of the diſeaſes themſelves, and their natural concomitants, and ſubjoined the method of cure with equal caution and truth. And if an earneſt deſire of diſcovering and eſtabliſhing a more certain method of curing diſeaſes, has led me to ſtrike out a new road, it is hoped that none of the learned will accuſe me, either of contemning their judgment, and truſting too much to my own, or a love of novelty; ſince the ſucceſs which has attended my enquiries, has hitherto much encouraged me, and the experience of my ſucceſſors will undoubtedly vouch for my veracity and honeſty.

The obſervations hitherto delivered quite practical.

11. In reality, this deſtructive tribe of diſeaſes, which afflicts mankind daily, and deſtroys at leaſt two thirds of the human ſpecies, excepting ſuch as die of a violent death, is not to be oppoſed in an indolent manner. The continued violence of theſe diſtempers, and the daily deſtruction of robuſt and young perſons eſpecially, notwithſtanding all the helps which the ſpecious methods, ſo confidently delivered by theoretical authors, have hitherto afforded, gave me little ſatisfaction when

Fevers deſtroy two thirds of mankind.

made of the ſame ſtrength, whence its effects muſt conſequently be uncertain and precarious: for which reaſon the *Thebaic tincture* is to be preferred, where opiates are neceſſary. The judicious *Lewis* has a valuable note on this ſyrup, which confirms the above remarks, and is therefore well worth tranſcribing and inſerting in this place. "Notwithſtanding the "pains which ſeveral writers (ſays he) have beſtowed upon "this favourite ſyrup, it ſtill remains liable to ſeveral objecti-"ons; for if it be regarded as an opiate, it will be ſubject "to great variations in point of ſtrength. The difference of "ſeaſons will make the poppy heads more or leſs ſtrong, ſo "that the ſame weight of heads ſhall not yield at all times "the ſame quantity of extract. Other circumſtances likewiſe "will occaſion the ſame alteration. If therefore a ſyrup of "this kind be really wanted in the ſhops, it may be more "ſcientifically compoſed of the extract of opium and ſugar, "and is obſerved in *Pharmacop. reformat.* p. 133."—*See his* Edinburgh *diſpenſatory, p.* 156.

Sect. 6. I first considered these matters; for I clearly perceived that those trifling disquisitions were so little conducive to the cure of diseases, that such as had recourse to these refuges were not more safe, notwithstanding the pretensions of their dogmatic authors, than such as neglected the assistance of art, and trusted wholly to nature.

12. If therefore I have contributed in some measure to lessen the difficulty and danger that frequently occur in the cure of these diseases (as without breach of modesty I may presume I have) I have gained my end in part, and enjoy the pleasing reward of my labours well spent in promoting the good of mankind. These are nearly all the principal discoveries I have hitherto made, or at least all those that I could reduce to any method, with relation to fevers, and the symptoms thereon depending, to the thirtieth of *December*, 1675, when I finished these essays.

An

An EPISTLE *of* ROBERT BRADY, *M. D. Maſter of* Caius *Coll ge*, Cambridge, *and Regius Profeſſor of Phyſic there, to Dr* SYDENHAM.

Learned Sir,

NO phyſician but yourſelf has hitherto attentively conſidered the force of the air, and its influence on the human body, the manner of its acting in preſerving life, the great ſhare it has in the fermentation, alteration and circulation of the blood, and in performing animal motion. Neither have phyſicians or naturaliſts ever ſearched diligently and accurately into its natural temperature and manifold changes; which *conſtitutions* you have judiciouſly delineated *(d)*.

In reality, as the air inſinuates itſelf into all, even the remoteſt parts of the body, it muſt needs communicate the changes it undergoes from the ſubſtances wherewith it is impregnated to the blood and juices; and hence any particular depravity of the blood, generally, ariſes from ſome certain ill conſtitution of the air. You have, therefore, wiſely formed your medicinal obſervations of the hiſtory and cure of *acute diſeaſes* agreeably to the various *conſtitutions* of years, and their ſeaſons; for the impreſſions of the air upon the blood and juices, and eſpecially upon the ſpirits, which perhaps are formed of air, are manifeſt in theſe; and I am perſuaded that the nature of fevers, as deduced from obſerving the temperature of the air in thoſe years wherein they prevailed, conſtitutes the moſt uſeful, if not the only, method of eſtabliſhing a ſure baſis for practice. Let me intreat you, therefore, if you have any obſervations relating to the fevers of the immediately preceding years, to publiſh them, by which means you will highly promote the good of mankind.

In *Sect.* I. *Chap.* V. of your work, you have briefly treated of the uſe and manner of giving the bark. I know ſome eminent phyſicians, who give it in a large

(d) However truly this might be then ſaid of our author, yet ſince his time the ingenious Dr *Arbuthnot* has given us a valuable treatiſe on air: and *Boerhaave* and *Hoffman* have treated largely of it, both philoſophically and medically: and *Bernerus*, another learned foreign phyſician, has wrote a judicious eſſay on it, intitled, *Exercitatio de uſu Aëris mechanico in corpore humano*, printed at *Amſterdam* in 1723; to which we refer our readers for abundant ſatisfaction on this intereſting ſubject.

quantity,

quantity, and repeat it frequently; and others who prepare extracts and infuſions of it, and make the infuſions into emulſions, julaps, *&c.* affirming that by this means they can certainly cure intermittents, and likewiſe ſome continued fevers. It is doubtleſs an excellent remedy in intermittents, and I have uſed it twenty years ſucceſsfully in a variety of forms and preparations. If, however, you have experienced any particular or better method of giving it, pray publiſh it.

In the cure of the rheumatiſm you have propoſed frequent and copious bleeding as neceſſary *(e)*: I ſhould be glad to know if it will not yield with equal certainty to ſome gentler method. But whilſt you employ your time in theſe ſtudies, you will be grievouſly cenſured and calumniated by envious and malicious men, who will no more ſpare your name and reputation on this occaſion, than they did formerly, tho' by uſing you ſo ill they incur the diſpleaſure of the candid and ingenuous part of mankind, who generally treat ſuch ſlanderers with contempt.

And, in reality, if they would be acquainted with a hiſtory of fevers, their eſſences, cauſes, differences, and true method of cure, derived from a long courſe of experience, they muſt neceſſarily follow you as their guide, as there is ſcarce any other way of coming at this knowledge, except that which you have diſcovered.

Be not deterred, therefore, from purſuing your enquiries, deſpiſe the raillery of the ſuperficially learned, and aſſiſt the candid part of mankind: you have pointed out the way, and if your endeavours diſpleaſe, it lies upon thoſe who cenſure them to ſhew us a better.

I take my leave, worthy Sir, with aſſuring you, that your compliance with my requeſt will oblige the whole faculty, and, amongſt the reſt,

Your moſt obliged Friend,

Cambridge,
Dec. 30. 1679. R. BRADY.

(e) See *Sect.* VI. *Chap.* V. *Par.* 4.

Dr

Dr SYDENHAM'S *Answer to Dr* BRADY: *containing the History of the epidemic Diseases from the Year* 1675 *to* 1680.

Dear Sir,

1. IF I have in the least contributed by my observations to improve the methods of cure in diseases, it doubtless becomes me in particular to communicate them, more freely than other men, to those who desire it; for as I am satisfied that my knowledge does not exceed that of others, it can do me no prejudice to publish such trite and inconsiderable remarks. If, therefore, I have made any beneficial discoveries in physick, and better ascertained the methods of cure in distempers, the imparting them does not entitle me to the same praise, as it would do others, who can easily imagine the vast satisfaction it would afford me, who have had the gout these thirty years, and been a long time severely afflicted with the stone, to be informed of a method that would give me relief. The author's modesty.

2. But few persons are endow'd by Almighty God with such qualifications, as may make them serviceable to mankind in this case, and it can only be successfully accomplished by those whose abilities are superior to mine. Nevertheless I have always thought it a greater happiness to discover a certain method of curing, even the slightest disease, than to accumulate the largest fortune: and whoever compasses the former, I esteem not only happier, but better and wiser too. For can a person give a stronger proof of his benevolence and wisdom, than by endeavouring always to promote the publick good, rather than his private interest, as he makes so small and inconsiderable a part of the whole? For, to use the expression of *Cicero*, that great master of thought and diction, and genius of his age, I may say of mankind; *As the laws prefer the good of the whole to that of particulars, so a wise and good man, who knows his duty, and obeys the laws, consults the good of mankind more than his own or any single person's (f).* And in reality, as it is the part of a wicked man to destroy his fellow-creatures, so it is the duty of a good man to preserve The duty of eminent men.

(f) CIC. *de fin. bon. & mal.*

them,

them, and inſtruct others how to ſave them from death even after his own deceaſe. Nor can any thing be more inhuman and deteſtable, than to inſinuate a diſregard and unconcern for whatever misfortunes may happen to mankind after our death.

The author complains of injurious treatment.

3. But, not to inſiſt upon theſe particulars at preſent, I muſt own, I think myſelf obliged to communicate to you the diſcoveries I have made relating to the diſeaſes you inquire after, however trifling they may ſeem. I muſt likewiſe return you thanks for the reſentment you are pleaſed to expreſs of the ill treatment I have received from ſome perſons, whoſe cenſures I ſhould have eſcaped, if the blameleſs conduct of a perſon, who has injured no man in words or actions, could have ſecured me. But ſince this has been occaſioned by no fault of mine, nor I hope ever will, I am determined to give myſelf little concern for the failings of others, being convinced that all that is incumbent on me is to act like an honeſt man, and diſcharge the office of a good phyſician to the beſt of my ability.

Epidemics to be firſt treated of, and in what manner.

4. I will therefore deliver the obſervations I have made concerning the diſeaſes you enquire after in your letter. And, firſt, I will treat of the preſent epidemic intermittents; in doing which I conceive it may be proper to run thro' thoſe years methodically, but briefly, which ſucceeded that wherein I concluded my hiſtory of the *acute diſeaſes*, which had prevailed for fifteen years preceding, and juſt to recapitulate ſome particulars relating to their cure, that have already been taken notice of. By this means we ſhall more clearly perceive at what time, and by what degrees, the preſent reigning conſtitution of fevers crept in.

The diſeaſes of 1676 the ſame with thoſe of the three former years.

5. The year 1676 gave riſe to the ſame tribe of diſeaſes, as were generated by the conſtitution laſt mentioned, in our obſervations above deliver'd, *viz.* thoſe of 1673 (in the autumn whereof it firſt began) 1674, and 1675. But this conſtitution being in its decline, the diſeaſes that appeared were milder than ordinary, and not ſo epidemic, notwithſtanding the peculiar diſpoſition of this year, with reſpect to the manifeſt qualities of the air, in which it differed conſiderably from the preceding years; for the heat of the ſummer, and the cold of the winter, were much greater than in moſt years within our remembrance. And yet, as ſo great a

diſſimilitude

diſſimilitude of ſeaſons gave riſe to ſimilar diſeaſes, it is plain from hence that the ſecret temperature of the air favours their production more than its manifeſt qualities (*g*). But it muſt be owned that the ſame diſeaſes, with reſpect to ſome certain ſymptoms, depend ſometimes on the manifeſt diſpoſition of the air, as appears from the *meaſles* and *cholera morbus* of this year, of which I ſhall briefly treat.

The *meaſles* laſted long this year.

6. Thus, the *meaſles* that appeared in the beginning of the year, tho' it was not very epidemic, was remarkable for its longer duration; for whereas it began as uſual in *January*, increaſed till the vernal equinox, and then abating gradually, almoſt went off at the ſummer ſolſtice, it continued this year till near the autumnal equinox, occaſioned perhaps by the ſummer's heat, whence it gained force, ſo as to laſt longer; yet nevertheleſs it required no new method of cure.

A very violent *cholera morbus* raged at the cloſe of ſummer.

7. At the cloſe of ſummer the *cholera morbus* raged epidemically, and being rendered more ſevere by the extraordinary heat of the ſeaſon, was accompanied with more violent and inveterate convulſions, than I had hitherto obſerved. For not only the *abdomen* (which is uſual in this caſe) but all the muſcles of the body, and eſpecially thoſe of the arms and legs, were affected with terrible ſpaſms, ſo that the patient would ſometimes leap out of bed, and writhe himſelf all manner

(*g*) Perhaps our author aſcribes too much, here and elſewhere, to the *ſecret temperature of the air*, which probably has a great ſhare in the production of contagious diſeaſes; but how it influences thoſe of another ſpecies has not hitherto plainly appeared. Whereas, on the contrary, the *manifeſt* or *ſenſible qualities of the air*, ſuch as its heat, cold, dryneſs, moiſture, *&c.* have evidently a conſiderable power over epidemic diſeaſes, the ſymptoms whereof ſeem to take their riſe, ſuffer great variations, and are ſatisfactorily accounted for from the preceding, or the then reigning manifeſt diſpoſition of the air, or both jointly. The different ſeaſons of the year, the variation of the winds, the ſituation of places, the nature of the waters, and the manner of living of the inhabitants are alſo to be conſidered in this view, as theſe eminently contribute to the riſe and courſe of epidemic diſeaſes. For proof of this the reader may conſult Dr WINTRINGHAM's *commentarium noſol.* HUXHAM *de aer. & morb. epidem.* HILLARY's *account of the principal variations of the weather, and the concomitant epidemic diſeaſes, at* RIPPON, &c. *during the ſpace of eight years; which is added to the ſecond edition of his eſſay on the* SMALL-POX. RAMAZZINI *conſtitut. epid. Mutinenſ.* HOFFMAN. *med. rat. ſyſt.* &c.

of

of ways, in order, if poſſible, to mitigate their violence.

It required ſtronger opiates than ordinary.

8. But tho' this diſeaſe admitted of the uſual method of cure, yet ſtronger *opiates*, and a more frequent repetition of them than ordirary, were manifeſtly indicated. To exemplify this obſervation: I was called to a perſon at this time, who was reduced to the laſt extremity by the abovementioned ſymptom, attended with exceſſive vomiting, cold ſweats, and a ſcarce perceptible pulſe; Dr *Goodal* accompanied me (whoſe name I can never mention, without calling to mind his probity and candour, his friendſhip for me, and his indefatigable endeavours to diſcover and cure diſeaſes;) I gave the patient twenty five drops of my *liquid laudanum* in a ſpoonful of *ſtrong cinnamon water*, for as there was a very great inclination to vomit, I was apprehenſive that a larger quantity of the vehicle might occaſion the medicine to be vomited up, as it often happens in ſuch caſes. I waited near half an hour, and finding the medicine too weak to ſtop the vomiting, and take off the convulſions, I was obliged to repeat it, and increaſe the doſe proportionably, till theſe obſtinate ſymptoms were at length quieted; obſerving however to give it at ſuch intervals, that I might be able to conjecture what effect the laſt doſe would have, before I exhibited another. The convulſions, notwithſtanding, being apt to return upon the leaſt motion, I ſtrictly enjoined that the patient ſhould be kept very ſtill for a few days, and take the abovementioned medicine between whiles in a ſmaller quantity, even after his recovery, in order to prevent a relapſe: and this method had the deſired ſucceſs.

Exemplied in a caſe.

The author's reaſons for giving *laudanum* copiouſly.

9. Nor ought I to be accounted too bold for exhibiting *laudanum* ſo plentifully, ſince experience will clearly ſhew, that in diſorders where opiates are indicated, *viz. violent pain*, *vomiting*, or an immoderate *looſeneſs*, and great hurry *of the ſpirits*, the doſe of the medicine, and its repetition in point of frequency, muſt be proportioned to the urgency of the ſymptom. For ſuch a doſe as may conquer a ſlight ſymptom, will be rendered ineffectual by a more violent one; and what would otherwiſe endanger life, will in ſuch a caſe be a means of preſerving it.

Prevented by ſickneſs from ob-

10. Theſe are the diſeaſes that prevailed this year, being the ſame, as I have already intimated, with thoſe of

the

the three preceding years. But I can give no account of those that raged in the following year, *viz.* in 1677. For at the beginning of it I made bloody urine upon the leaſt motion, and was ſoon after attacked with the gout, which did not affect my limbs ſo much as my bowels, where I had violent pain; and theſe diſorders were ſucceeded with a decay of ſtrength, a loſs of appetite, a ſwelling of the legs, and other equally dangerous ſymptoms; ſo that death would then have been welcome to me. My ill ſtate of health at this time confined me within doors for three months, and afterwards obliged me to go into the country for my recovery, and make almoſt as long a ſtay there. I came back to town in autumn, when my friends informed me that there ſtill remained a few intermittents here and there, moſt of which had firſt ſeized the patients in the country; but having been prevented from attending the ſick by my own indiſpoſition, I can give no account of the diſeaſes of this year. Preſerving the diſeaſes of 1677.

11. The conſtitution of the following year, namely of 1678, being entirely changed, ſo eminently favoured *intermittents*, that they again became epidemic, whereas from 1664 to this time, including the ſpace of thirteen years, they were in a manner extinct in town, except only that they ſeized a few *ſporadically*, or were by accident brought with them out of the country. And they will not continue in this ſtate, but will ſpread much more, till this conſtitution of the air whence they proceed comes to its height. For tho' only a few of theſe *intermittents* aroſe in the ſpring, yet they prevailed ſo much over all other diſeaſes at the decline of ſummer and beginning of autumn, as to be the ſole epidemic diſeaſes. But in the winter they yielded by degrees to the *ſmall-pox*, and the other reigning epidemics, till the return of the ſeaſon peculiar to them. *Intermittents* aroſe, and became epidemic in 1678.

12. To proceed now to deliver what we have learnt by diligent obſervation, relating to the nature and cauſes of theſe fevers. Firſt then it is to be noted, that tho' *quartans* were more frequent formerly, yet now *tertians* or *quotidians* were moſt common, unleſs the latter be entitled *double tertians*; and likewiſe that tho' theſe *tertians* ſometimes began with chilneſs and ſhivering, which were ſucceeded firſt by heat, and ſoon after by ſweat, and ended at length in a perfect intermiſſion, returning *Tertians* and *Quotidians* moſt frequent.

turning again after a fixed time, yet they did not keep this order after the third or fourth fit, eſpecially if the patient was confined to his bed, and uſed hot cardiacs, which increaſe the diſeaſe. But afterwards this fever became ſo unuſually violent, that only a *remiſſion* happened in place of an *intermiſſion*; and approaching every day nearer to the ſpecies of continued fevers, it ſeized the head, and proved fatal to abundance of perſons.

Dangerous to attempt their cure by *ſudorifics*.

13. As to the cure, I have learnt by many years experience that it is dangerous to attempt to remove *tertians* and *quotidians* by *ſudorifics*; eſpecially when they are recent, and have aſſumed no certain ſhape; for they then nearly approach to continued fevers. And tho' it is well known that as ſoon as the ſweat breaks out, the reſtleſſneſs and other ſymptoms preſently go off, and a perfect intermiſſion ſucceeds, and conſequently that it ſhould be ſomewhat promoted, or at leaſt not hindered, when the fit is going off, yet it is manifeſt that if ſweat be forced beyond the due degree, the intermittent becomes a continued fever, and life is endangered: I conceive the reaſon of this to be, that ſo profuſe a ſweat (ſince it exceeds the quantity of the febrile matter, already ſo attenuated by the heat of the fit, that it may now be expelled by deſpumation) after it has carried off ſuch a part thereof, as is ſufficient to produce a ſingle fit, waſtes the reſt in inflaming the blood. Upon conſidering, therefore, the inefficacy of this method, and the inconveniencies attending other evacuations, as bleeding and purging, both which, by weakening the texture of the blood, prolong the diſeaſe, the *Peruvian* bark afforded me the ſureſt hope; of which I can truly ſay, notwithſtanding the prejudice of the vulgar and a few of the learned, that I never found, or could reaſonably ſuſpect, any ill conſequence follow its uſe; unleſs that ſuch as have taken it a long time are ſometimes ſeized with a *ſcorbutic rheumatiſm*, as I have before remarked in treating of the *Rheumatiſm* (*b*). But this diſorder ſeldom proceeds from this cauſe, and, when it does, readily yields to the remedies there preſcribed.

The *bark* not only good in intermittents

14. And, in reality, if I were as certain of the continuance of its effects, as I am of the innocence of the *bark*, I ſhould not ſcruple to prefer it to all the medicines hitherto known; ſince it is not only excellent in

(*b*) *Sect.* VI. *Chap.* V. *Par.* 13.

this

this diſeaſe, but likewiſe in thoſe of the *uterus* and ſtomach: ſo little reaſon is there to complain of its unwholeſomneſs.

15. But I conceive the bark has been condemned, chiefly, for the following reaſons. (1) Becauſe the many terrible ſymptoms, which accompany intermittents of a long ſtanding, where not a grain of the bark has been given, are immediately aſcribed to it, upon taking but a ſingle doſe of it. (2) Becauſe it cures the diſeaſe by a ſecret virtue, and not by any ſenſible evacuation, many perſons conclude that the morbific matter, which ought to have been expelled, is retained in the body by its aſtringency, and ready to occaſion freſh diſturbance; the diſeaſe not being entirely carried off. But ſuch perſons do not ſufficiently conſider, that the ſweats happening at the decline of the fit have expelled all the morbific matter that was collected on the well days, ſo that only the ſeeds of the diſeaſe remain, to be ripened in time; and that the *bark*, by cloſely purſuing the retiring fit, and cutting off the ſupplies of the illneſs, cannot be a means of retaining the morbific matter in the blood, which is now exiſtent there only in *embryo*; and conſequently is not to be eſteemed productive of thoſe fits and obſtructions which are commonly judged to proceed from its uſe. Why it has been exclaimed againſt.

16. But how does it appear that the *bark* cures *intermittents* by its aſtringency? In order to prove this, other aſtringents, poſſeſſed of the ſame virtue, muſt firſt neceſſarily be produced; I have tried the ſtrongeſt ineffectually. Beſides, the *bark* cures even where it purges, which is ſometimes the caſe. Upon the whole, therefore, they act the wiſeſt part, who confine their enquiries to their abilities. But if any body will delude himſelf and imagine that he is poſſeſſed of other faculties than ſuch as either help him to underſtand natural religion, which teaches that God, the creator and governor of all things, is to be worſhipped with profound veneration, as he juſtly merits; or moral philoſophy, that he may practiſe virtue, and make himſelf an uſeful member of ſociety; or, laſtly, the medical, mathematical, and mechanical arts, which are ſo uſeful to the purpoſes of life: let him, firſt, deduce an hypotheſis from natural philoſophy, that will enable him to explain the cauſe of but a ſingle ſpecific difference of things in It does not appear to cure by its aſtringency.

nature. For inſtance, let him account for the univerſal greenneſs of graſs, and why it is never of any other colour, and the like. And if he can do this, I will readily embrace his ſentiments; but if not, I ſhall not ſcruple to affirm, that all the diligence and caution of a phyſician ſhould be employed in inveſtigating the hiſtory of diſeaſes, and applying thoſe remedies which ſtand recommended by experience for the cure thereof; purſuing notwithſtanding that method which is founded on right reaſon, and not the reſult of idle ſpeculations. I will therefore briefly deliver what experience hath taught me, relating to the method of exhibiting the *bark*.

A ſhort hiſtory of the *bark*.

17. The *Peruvian bark*, commonly called the *Jeſuit's powder*, to the beſt of my remembrance, began to be eſteemed at *London*, for the cure of intermittents, and eſpecially *quartans*, about twenty five years ago; and indeed very deſervedly, as theſe diſeaſes were ſeldom cured before by any other method, or medicine; whence they were reputed the *opprobria medicorum*, and not without reaſon. But not long after it loſt its character, and was entirely diſuſed, for two cogent reaſons. (1) Becauſe being exhibited only a few hours before the coming of the fit, according to the received cuſtom of that time, it ſometimes deſtroyed the patient; which I remember happened to Mr *Underwood*, a citizen and alderman of *London*, and to captain *Potter*, an apothecary in *Black-Friars*. This fatal effect of it, tho' very rare, did, however, juſtly prevail with the more prudent phyſicians to refrain its uſe. (2) Becauſe tho' it ſeldom failed to free the patient from the fit, that would otherwiſe have come, yet the fit commonly returned again in a fortnight, eſpecially when the diſeaſe was recent, and not ſpontaneouſly abated by length of time. Theſe reaſons weigh'd ſo much with the generality, that they loſt all the hopes they had formerly conceived of this medicine; nor did they eſteem it ſo material to prevent the acceſs of a fit for a few days, as upon this account to endanger their lives by taking it (*i*)

18. But

(*i*) It is much to be queſtioned whether the fatal effect of the *bark* here mentioned by our author is really to be aſcribed to it; becauſe there are very few ſuch inſtances upon record, and we neither know nor have heard of any ſuch effect produced by it of late years. And in intermittents, the preſent practice

18. But having ſome years ſince thoroughly conſidered the extraordinary virtues of the *bark*, I was firmly perſuaded that *intermittents* could not be better cured than by this efficacious medicine, provided it were given with proper caution. For this reaſon I ſpent much time in ſtudying how to prevent the danger enſuing from its uſe, and the relapſe that ſucceeded in a few days, which were the two inconveniences to be avoided, and by means thereof to reſtore the patient to perfect health. The beſt medicine in intermittents.

19. (1) I conceived that the danger proceeded leſs from the *bark* itſelf, than from the unſeaſonable uſe thereof; for when a large quantity of febrile matter is collected in the body on the well days, the *bark*, if taken immediately before the fit, obſtructs the expulſion of the morbific matter in the natural way (namely by the violence of the fit) which being hereby improperly detained uſually endangers life. But I judged I could remedy this evil, and likewiſe prevent the freſh generation of febrile matter, by giving the powder directly upon the departure of the fit, ſo that a ſtop might be put to the next ſucceeding one; and by repeating it on the intermediate days, at proper diſtances, till the approach of a new fit; ſo that by this means the blood might be impregnated gradually, and conſequently ſafely, with the ſalutary virtue of the *bark*. How render'd more certainly effectual.

20. (2) As the relapſe, which generally happened in a fortnight, ſeemed to me to be occaſioned by not ſufficiently impregnating the blood with the virtue of the febrifuge, which, however efficacious, was not powerful enough to cure the diſeaſe at once, I judged that the beſt method to prevent a relapſe would be to repeat the powder, at proper intervals, before the virtue of the preceding doſe was quite ſpent, even tho' the *intermittent* appeared to be conquered for the preſent.

21. Theſe conſiderations led me to the following method, which I now uſe. When I am called to a perſon afflicted with a *quartan*, ſuppoſe on a *Monday*, if the fit is expected the ſame day, I refrain from doing any thing, and only give the patient hopes that he ſhall be freed from the next fit. And, in order to effect this, I exhibit the *bark* upon the two intermediate or well The method ſpecified.

tice acknowledges no more effectual, and ſafer medicine, indeed nothing comparable to it in the whole *Materia medica*.

days, namely, *Tueſday* and *Wedneſday*, in the following manner.

The febrifuge electuary.

Take of Peruvian *bark, very finely powdered, one ounce; ſyrup of cloves, or of dried roſes, enough to make it into an electuary; to be divided into twelve doſes, whereof let the patient take one every fourth hour, beginning immediately after the fit is gone off, and drinking after each doſe a draught of any kind of wine.*

Or, if pills be more agreeable,

The febrifuge pills.

Take of the Peruvian *bark very finely pulverized, one ounce; ſyrup of cloves, enough to make it into pills of a middling ſize; of which let the patient take ſix every fourth hour.*

But an ounce of the powder may be mixed with a quart of *claret*, with leſs trouble, and equal ſucceſs, and eight or nine ſpoonfuls of it given at the intervals abovementioned. I order nothing on *Thurſday* when the fit is expected, becauſe for the moſt part it does not come, the remainder of the febrile matter being deſpumated, and expelled the blood, by the uſual ſweats which terminated the preceding fit, and a collection of freſh matter being prevented by the repetition of the powder on the days between the fits (*k*).

22. But

(*k*) *Dr* Barker *in his enquiry into the epidemic fever*, after obſerving that by the common method of giving medicines in trifling and inſufficient doſes, good ones are but too often brought into diſrepute, the intention of the *phyſician* fruſtrated, and the patient's expectation diſappointed, acquaints us that *phyſicians* ran into this error formerly, with relation to the *bark*, through an over cautiouſneſs; and that *Sydenham* was the firſt that broke thro' this conſtraint, and ventured to give it in large doſes. I have a letter of his, (he adds) in manuſcript now before me, wherein he ſays, "I have had but few trials, but I "am ſure that an ounce of *bark*, given between the two fits, "cures, which the *phyſicians* in *London* not being pleaſed to "take notice of in my book, or not believing me, have given "an opportunity to a fellow, that was but an apothecary's "man, to go away with all the practice on *agues*, by which "he has got an eſtate in two months, and brought great re"proach on the faculty."———This letter was wrote in *October* 1677, which falls in ſo exactly with the time of *Talbor*'s firſt appearance, as a practitioner, (for we have an account of his being in *France* in 1679*) that *Sydenham* muſt certainly allude to him. And it appears from hence that *Sydenham* was the

* Geoffroy, materia medica, tom. II. p. 183.

perſon

The first quantity of the *bark* to be repeated 3 or 4 times.

22. But in order to prevent a relapſe, which was one of the inconveniences above recited, on the eighth day after taking the laſt doſe, I always ordered the ſame quantity of the powder, (*viz.* an ounce divided into twelve doſes) to be taken exactly as the former was. But tho' a ſingle repetition of the *bark* in this manner frequently cures the diſeaſe, yet the danger is not over unleſs the patient will be ruled by his phyſician, and repeat it thus a third or fourth time; eſpecially when the blood has been impoveriſhed by ſome preceding evacuation, or the body unadviſedly expoſed to the cold air.

To be given with *laudanum*, if it purges.

23. Now tho' there is no inherent purgative virtue in this medicine, yet a violent purging is frequently occaſioned thereby, from ſome peculiar *idioſyncraſy* in the conſtitution. In this caſe it is indiſpenſably neceſſary to exhibit *laudanum* therewith, to prevent its having this effect (which is manifeſtly as oppoſite to its own nature, as it is to this diſeaſe) and that it may be retained long enough to anſwer its end. Therefore I order ten drops of *laudanum*, to be given in a little wine, after every other doſe of the powder, if the looſeneſs continues.

The ſame proceſs to be uſed in *tertians* or *quartans*.

24. I follow the ſame method in other intermittents, whether *tertians* or *quartans*: for immediately after the fit is gone off, in both I adminiſter a doſe of the powder, and repeat it as frequently during the intermiſſion, as the nature of the diſeaſe will admit; but with this difference; that whereas a *quartan* can very rarely be cured with leſs than an ounce divided into proper doſes, a tertian may be ſo far conquered with ſix drams, as at leaſt to give a reſpite.

Tho' there be only a remiſſion.

25. But tho' *tertians* and *quotidians* after a fit or two may ſeem entirely to intermit, yet, as I have before obſerved, they afterwards frequently degenerate into a kind of continued fevers, and only come to a *remiſſion*

perſon who ſtruck out the method of giving an ounce of *bark* between the fits, inſtead of a dram, or two, which was the uſual doſe before that time; which method Sir *Robert Talbor* has generally hitherto had the credit of, and for which he was knighted by king *Charles* the ſecond.

It were to be wiſhed for the benefit of mankind, that *phyſicians* would imitate *Sydenham*'s practice more than is uſually done, in this particular, ſince there is no poſſibility of diſcovering, except by this means alone, how far the powers of medicines extend. *See p.* 112. *of the book above cited.* — *And* Cheyne's *method of cure in diſeaſes of the body and mind*, p. 163.

even on thoſe days that promiſed an *intermiſſion*; eſpecially when the patient has been kept too warm in bed, or been tormented with medicines to carry off the intermittent by ſweat. In this caſe, I have no other way left, but to ſeize the opportunity of the *remiſſion*, tho' it be ever ſo ſmall; and accordingly I give the powder immediately after the fit is gone off, as near as I can conjecture, and repeat it every four hours, as abovementioned, without waiting for a regular intermiſſion, becauſe otherwiſe the *alexiterial* virtue of the *bark* cannot be communicated to the blood in ſo ſhort an interval (*l*).

The more the intermittent tends to a continued fever, the more bark muſt be given.

26. And tho' the preſent reigning *intermittents*, after the ſecond or third fit, incline to *continued* fevers, yet they muſt be referred to the *intermittent* kind; and therefore I ſcruple not to order the *bark*, even in the moſt continued of this ſort; the repetition of which in the abovementioned manner will certainly remove the diſeaſe, provided the conſtant warmth of the bed, and the improper uſe of cardiacs, have not rendered it a *continued fever*; in which caſe I have frequently found the *bark* fail. Nor have I ever found the wine wherein the *bark* is adminiſtered, do the patient any harm, which might reaſonably be ſuſpected; bnt contrariwiſe the heat, thirſt, and other febrile ſymptoms generally went off, ſoon after taking a ſufficient quantity of it. But it muſt be noted here, that the nearer the *intermittent* approaches to a *continued fever*, either ſpontaneouſly, or from uſing too hot a regimen, the more neceſſary it is to exhibit a larger quantity of the *bark*; for I have ſometimes found that the *intermittent* would not yield to leſs than an ounce and half, or two ounces of the *bark*.

To be given in infuſion, where it can be taken in no other form

27. As ſome perſons can neither take the *bark* in powder, in an electuary, nor in pills, I give them an infuſion of it, made with two ounces of *bark*, groſsly powdered, and infuſed cold for ſome time in a quart of *Rheniſh wine*; which being ſeveral times paſſed thro' a fine ſtrainer, becomes ſo clear, as not to be diſagreeable to the niceſt palate. Four ounces of this infuſion, after it has ſtood ſome days, ſhould ſeem equivalent in virtue to a dram of the bark in ſubſtance; and as it is neither unpalatable, nor lies heavy upon the ſtomach, it may be taken twice as often as any other form of it, till the diſeaſe vaniſhes. 28. When

(*l*) See Par. 38. pag. 317. note (*t*)

28. When this diſeaſe has aſſumed no regular appearance, it is ſometimes attended with an almoſt continual vomiting, ſo that the bark cannot be retained in any form; in which caſe the vomiting muſt be ſtopt firſt, before it can be adminiſtered. For this purpoſe I order a ſcruple of *ſalt of wormwood* to be diſſolved in a ſpoonful of freſh *juice of lemons*, and taken ſix or eight times in the ſpace of two hours; and afterwards I give ſixteen drops of *liquid laudanum*, in a ſpoonful of *ſtrong cinnamon water*; and ſoon after, if the vomiting ſtops, the patient muſt begin with the bark. In caſe of vomiting, this muſt be ſtopt before giving the bark.

29. For children, who, by reaſon of their tender age, can ſcarce bear to take this remedy in any other form, at leaſt in a ſuitable quantity to effect a cure, I generally preſcribe the following julap (*m*). To be given in a julap to children.

Take of black-cherry water, and Rheniſh *wine, each two ounces*; Peruvian *bark, finely powdered, three drams*; *ſyrup of cloves, an ounce: mix them together for a julap. Let the child take a ſpoonful or two every fourth hour* (*according to his age*) *till the fits vaniſh, dropping into every other doſe, in caſe of a looſeneſs, one or two drops of liquid* laudanum (*n*). The febrifuge julap.

30. It muſt further be obſerved, that the intervals between the fits in *tertians* and *quotidians* are ſo ſhort, that there is not ſufficient time to impregnate the blood thoroughly with the febrifuge virtue of the bark: ſo that it is not poſſible that the patient ſhould ſo certainly miſs the next fit the firſt time of taking it, as it commonly happens in a *quartan*; for the medicine in theſe caſes will frequently not perform the expected cure in leſs than two days. The bark, in *tertians* or *quotidians*, does not always put by the fit the firſt time of taking it.

(*m*) The method of curing intermittents by glyſters, (a diſcovery aſcribed to *Helvetius*) was not known in our author's time; which, however, is not to be equally depended upon with that by the mouth. But in ſome caſes it becomes neceſſary to have recourſe to it, and it is often attended with ſucceſs. Grown perſons as well as children have been cured by it.

(*n*) As children are generally very averſe to taking medicines, it muſt always be remembered that they are to be made as palatable as poſſible, ordered in a proper form, and adminiſtered in as ſmall a quantity as is conſiſtent with efficacy.—— Few children will be prevailed on to take this nauſeous julap: I prefer a ſtrong infuſion of the *bark*, ſweetened with ſome agreeable ſyrup, which numbers will take readily enough, and being exhibited in a proper quantity certainly cures.

What to be done in caſe of a relapſe.

31. It muſt alſo be noted, that if the patient, notwithſtanding the obſervance of the cautions above delivered, ſhould relapſe, which happens ſeldomer in a *quartan* than in *tertians* or *quotidians*, it will become a prudent phyſician not to adhere too cloſely to the method of giving the bark at the abovementioned intervals, but to attempt the cure, as his judgment ſhall direct, by ſome other procedure; and here the *bitter decoction* is generally eſteemed a very powerful medicine.

The regimen in intermittents

32. With reſpect to diet and regimen, the patient muſt be allowed the uſe of all ſorts of ſolid or liquid aliments that agree with his ſtomach; fruit and cold liquors always excepted, becauſe they impoveriſh the maſs of blood, and are very apt to occaſion a relapſe. Let his food therefore be fleſh of eaſy digeſtion, and good juices, and let him uſe wine moderately for his common drink; by the ſole uſe whereof I have ſometimes recovered ſuch habits as have been in a manner fortified by the frequent return of the intermittent againſt the bark, ſo as never to yield to its ſalutary virtue. The patient likewiſe muſt not adviſedly expoſe himſelf to the cold air, till the blood has recovered its former healthy ſtate.

A caution concerning purging.

33. It muſt be noted here, that tho', in treating of intermittents heretofore, we recommended due purging after the diſeaſe was gone off (*o*), yet this practical caution is only to be underſtood of ſuch intermittents as either went off ſpontaneouſly, or were cured by ſome other medicine, and not by the bark. For when the cure is effected by this, cathartics are unneceſſary and hurtful; ſo powerfully does the bark, alone, relieve the fits, and the indiſpoſition they occaſion. Hence therefore all kinds of evacuations muſt be refrained; for the gentleſt purge, nay even a glyſter of *milk* and *ſugar*, will certainly endanger a relapſe, and perhaps reproduce the diſeaſe (*p*).

Theſe intermittents had ſymptoms reſembling a true *apoplexy*.

34. And here it is proper to mention that a very remarkable ſymptom did ſometimes ſucceed theſe intermittents in the firſt years of this conſtitution. For the fits did not begin with chilneſs and ſhivering, which were ſucceeded by a fever; but the patient was ſeized with the ſymptoms of a true *apoplexy*, tho' in reality,

(*o*) See *Sect.* I. *Chap.* V. *Par.* 41. *Pag.* 65.
(*p*) See *Par.* 38. *Pag.* 317. in the notes.

how

how nearly ſoever it reſembled this diſeaſe, it was nothing more than the effect of the fever's ſeizing the head; as plainly appeared from other ſigns, as well as the colour of the urine, which in *intermittents* is moſtly of a deep red (but not ſo red as in the *jaundice*) and likewiſe lets fall a *lateritious* ſediment. Now tho' in this caſe all kinds of evacuations ſeem to be indicated, in order to make a revulſion of the humours from the head, as is generally practiſed in the genuine apoplexy, yet they are to be wholly refrained, becauſe they are very prejudicial in the intermittents, whence this ſymptom originally proceeds, and conſequently endanger life, as I have obſerved. On the contrary, therefore, we muſt wait till the fit goes off ſpontaneouſly, when the bark (in caſe it could not be given ſooner) muſt be immediately exhibited, and carefully repeated in the intervals, till the patient be perfectly recovered.

Aged perſons ſometimes ſeized with a *diabetes*, from ill management.

35. It ſometimes happens, tho' very rarely, that the aged, after having been long afflicted with this diſeaſe, and weakened by improper bleeding and purging, are ſeized with a *diabetes*, tho' the intermittent be perfectly cured. For their blood being by this means ſo impoveriſhed, as to be utterly unable to aſſimilate the juices received into the maſs, they paſs off crude and undigeſted by the urinary paſſages, and, in conſequence of the large quantity of urine which is voided every time they make water, the ſtrength is gradually impaired, and the ſubſtance of the body in a manner waſhed away. The indications of cure in this caſe, and in every *diabetes*, however occaſioned, are (1) to enrich and ſtrengthen the blood, and (2) to ſtop the preternatural diſcharge by urine.

How cur'd.

The reſtringent electuary.

For inſtance, *Take of* Venice *treacle, an ounce and half; conſerve of orange peel, one ounce*; diaſcordium, *half an ounce*; *candied ginger and nutmeg, of each three drams:* Gaſcoign's *powder, a dram and half*; *of the outward bark of pomegranate, the root of* Spaniſh *angelica, red coral prepared, and the troches of* Lemnian *earth, each a dram*; *bole*-armoniac, *two ſcruples*; *gum* arabic, *half a dram*; *ſyrup of dried roſes, enough to make altogether into an electuary: of which let the patient take the quantity of a large nutmeg in the morning, at five in the afternoon,*

ternoon, and at bed-time, for the ſpace of a month, drinking after each doſe ſix ſpoonfuls of the following infuſion.

The bitter infuſion.

Take of the roots of elicampane, maſterwort, angelica, and gentian, of each half an ounce; the leaves of Roman *wormwood, white horehound, the leſſer centaury, and calamint, each one handful; juniper berries, an ounce; when theſe ingredients have been ſliced and bruiſed, as they require, pour upon them five pints of canary, and let them ſtand together in a cold infuſion, and ſtrain it as it is uſed* (q).

The patient's diet ſhould be food of eaſy digeſtion, as veal, mutton, and the like: he muſt forbear garden herbs, and fruits of all kinds, and drink *Spaniſh* wine at meals.

(q) The *diabetes* here ſhould ſeem to proceed from a poorneſs, joined probably with a viſcidity, of the blood and humours, weak *viſcera*, and a relaxation of the urinary paſſages. This being the caſe, it may perhaps give way to the medicines here preſcribed. But if it ſhould not, and the patient be ſtrong enough, give a vomit of *Ipecacuanha*, and afterwards proceed to the uſe of ſuch medicines as gradually attenuate and deſtroy the coheſion of the fluids, the chief of which kind are the preparations of *mercury*; and having continued theſe for ſome time, it will be proper to exhibit aſtringents, joined with deobſtruents, as bitters, ſpecies and chalybeates. Dr *Harris*, in a caſe of this kind, which is related at the end of his treatiſe *de Morb. acut. infant.* commends the following infuſion:

Take of rhubarb, half an ounce; white and yellow ſanders, each a dram; the leſſer cardamom ſeeds, half a dram; pour upon them a pint of canary, and let them ſtand together in a moderate heat, in a well-cloſed veſſel. Let the patient take ſix ſpoonfuls of the ſtrained liquor, three times a day.

The patient during the courſe of the cure ſhould uſe liquids very ſparingly, and avoid whatever may debilitate the ſolids, and breed viſcous juices.

Lime-water is by many reputed a kind of ſpecific in this diſtemper, and has often done great ſervice. ——Dr *Cheyne* ſays, that *chalkey* waters, as thoſe of *Briſtol*, and the lime-ſtone water by *Bath*, and ſuch as no doubt may be found in many places where there is plenty of lime-ſtone; *hartſhorn* drink, with *gum arabic*; *barley-water*, with *ſyrup of comfrey*, and all ſuch ſoft, cooling, *mucilaginous* drinks, which give a balſam and union to the parts of the blood; a *diet* of the ſame kind, *milks* of all ſorts, ſoft ſeeds, white young meats, no *fermented* liquors of any kind, and an electuary of cinnabar, bark, and rhubarb, with the *rob* of elder, being obſtinately and rigorouſly perſiſted in, will at laſt ſweeten, balmify, and unite the parts of the *blood*, in thoſe not far advanced in life.——*See cure of the diſeaſes of the body and the mind*, p. 174, 175.

36. That

36. That obſtinate and laſting diſeaſe, the *fluor albus*, may be cured nearly by the ſame method and medicines as the *diabetes* juſt mentioned; for the curative indications in both are the ſame, how much ſoever theſe diſeaſes may ſeem to differ. But in the cure of the *fluor albus* bleeding muſt be uſed once, and afterwards purging thrice with two ſcruples of the greater *pil. cochia*, before we proceed to ſtrengthening medicines; but no oftener during the whole proceſs, becauſe all kinds of evacuations deſtroy the virtues of ſtrengthening remedies (*r*). But this by the way. The *fluor albus* cur'd by nearly the ſame treatment.

37. And

(*r*) Bleeding, if the caſe requires it, ſhould be performed in the beginning; then, if the ſtomach be foul, let a gentle vomit of *Ipecacuanha* be given; proceeding afterwards to the uſe of laxatives, eſpecially. A warm bath, made of a decoction of marjoram, thyme, calamint, ſage, roſemary, camomile flowers, bay and juniper berries, *&c.* will be of admirable ſervice.

Hoffman recommends a courſe of mineral waters. An inveterate *fluor albus*, ſays this great man, proceeds from an acrimonious humour, generated by a too violent or frequent uſe of venery; or from a humour, introduced in the way of a communicated *taint*, which afterwards infects the glands of the *vagina*, ſo as not only to make them diſcharge their juice in plenty upon the adjacent parts, but the ſame juice, being alſo infected, eats and corrodes the fine fibres of the parts it paſſes over; and this occaſions ſharp darting pains, excoriations and *ulcers*; whence proceeds the matter of a *virulent flux*. From this account, which is taken from diſſections, it clearly appears, that, in order to waſh away, dilute, and weaken theſe infected juices, ſoften the hardened glands, ſtrengthen the fibres that are fretted and corroded, and unite them again with the other untainted parts, a courſe of *mineral waters* is highly proper. And tho' it be true, that whilſt the courſe is in hand, the flux will increaſe, yet when the courſe is over, there enſues a more certain and confirmed cure. But in order to this end, *balſamic remedies*, and a moderate decoction of the *drying woods*, are to be uſed in the drinking of them; by which means the cure may be ſurprizingly facilitated. *New exper. and obſerv. upon min. wat. tranſlated by Dr* SHAW, *p.* 126, 127.

I know from reaſon and experience, ſays Dr *Cheyne*, there is nothing ſufficient for a durable *extirpative* cure, but what will mend, attenuate, and ſweeten the whole maſs of the juices, and brace and ſtrengthen the ſolids; as total *milk* and *vegetables*, or *white meat* diet, air, exerciſe, with the mild *mercurials* and ſweeteners, and then gentle tighteners (ſteel and extract of the bark) with cold bathing, are alone ſufficient to perfect ſuch a cure in delicate conſtitutions in time. And this diſtemper generally affliſts the moſt lively, the moſt polite and amiable of the *ſex*, and almoſt always make them *infertile*. *Cinnabar*, natural and fictitious, *teſtaceous* powders, extract of the bark, *Japan* earth, and the like, made into powders or pills, with aſſes milk,

The bark beſt alone.

37. And theſe are the obſervations I had to communicate, in a ſummary way, concerning the uſe of the *Peruvian* bark; for my deſign was not to conſult the pomp of medicine. And in reality they who add any thing more to it than a vehicle which is neceſſary to carry it into the ſtomach, in my opinion, either do it ignorantly, or fraudulently, which every good man muſt needs deteſt, who, as a part of the community, would not be induced to commit ſuch a fraud for his private advantage. As to what remains, if my cotemporaries had vouchſafed to conſider what I publiſhed four years ago in my hiſtory of acute diſeaſes, (which, it is highly probable, I was acquainted with before that time) concerning the method of exhibiting the bark in the intervals of the fit, and the ſucceeding repetition of it, when the diſeaſe is gone off, perhaps the lives of many perſons had been ſaved; how much ſoever ſome men contemned my ſlender endeavours for the public good, and ſlighted the cautions there delivered in the following words, which briefly contain what I have here judged proper to enlarge upon, *viz.* (*s*).

How to be given.

38. "(1) The greateſt caution muſt be had not to "give it too early, namely, before the diſeaſe be in ſome "meaſure ſpontaneouſly abated; unleſs the extreme "weakneſs of the patient requires it to be exhibited "ſooner; for the adminiſtering it too ſoon may render "it ineffectual, and even fatal, if a ſudden check ſhould "be hereby given to the vigorous fermentation of the "blood in the act of deſpumation. (2) We muſt not "order purging, much leſs bleeding, to carry off a "part of the febrile matter, and render the bark more "effectual; for they both weaken the tone of the parts, "whence the diſeaſe returns ſo much the more ſpeedi-"ly and certainly, after the virtue of the bark is ſpent. "It were better, in my opinion, to impregnate the

milk, a cool diet of the white meats, and the weaker *acidulæ* for drink only, are what I have found moſt ſucceſsful. *See the book laſt quoted*, p. 184. 185.

Small doſes of rhubarb, with the teſtaceous powders, taken twice or thrice a day for ſome time, along with a proper regimen and cold bathing, have given great relief in abundance of caſes of this kind, and in ſome made a perfect cure. — And, in ſome, *Helvetius*'s ſtyptic powder made of *roch alum* and *dragon's blood*, has had ſurprizing good effects to my certain knowledge.

(*s*) See *Sect.* I. *Chap.* V. *Par.* 34. *Pag.* 61.

"blood

" blood with this medicine by degrees, and at diſtant " intervals from the fit, rather than endeavour to ſtop " it at once, juſt upon its coming; for by this means " the bark has more time to produce its full effect in, " and beſides, the miſchief is avoided that might hap- " pen by putting a ſudden and unſeaſonable ſtoppage " to the immediately approaching fit. (3) The bark " muſt be repeated at ſhort intervals, that the virtue of " the former doſe may not be entirely gone off before " another be given; and by repeating it frequently the " diſeaſe will at length be perfectly cured. Theſe rea- " ſons led me to prefer the following method of gi- " ving it.

" *Take of the* Peruvian *bark, one ounce; ſyrup of ro-* The febri-
" *ſes, two ounces; make an electuary thereof: take* fuge elec-
" *the quantity of a large nutmeg, every morning and* tuary.
" *night, on the intermediate, or well days, till the*
" *whole be taken; and let it be repeated thrice, in-*
" *terpoſing a fortnight between each time (t)*".

39. But

(t) I have often known (ſays Dr *Langriſh*) fatal effects from exhibiting the *bark* too ſoon, or where there has only been a *remiſſion* of the fever for a few hours*, without an abatement of the bad ſymptoms. And indeed, if we conſider that the *viſcera* are loaded with a heavy, pituitous, glutinous matter; that the capillary, ſanguine, and lymphatic arteries are ſtuft with ſizy blood and lymph, and that neither of theſe impediments are perfectly removed when there is only a remiſſion of the fever, it will evidently appear that the adminiſtration of the *bark* muſt neceſſarily be attended with the utmoſt danger: for to conſtringe the veſſels, and to leſſen the diameters of the ſecretory and excretory ducts, whilſt a *lentor* is exiſting in the blood and lymph, can ſeldom be attended with ſucceſs. Add to this, that if there be the leaſt ſuſpicion of an *inflammatory* ſtate of the blood, the *bark* is direct poiſon.

In long continued *agues* or *intermittent fevers*, which have baffled the *bark*, and many other medicines, I have met with more advantages from ſmall doſes of *rhubarb* and *calomel*, than from any other medicines I ever tried.

The modern practice of joining *rhubarb* with the *bark* is an excellent method in groſs and plethoric habits, or where there is the leaſt ſuſpicion of the *liver, ſpleen, meſeraic veſſels*, &c. being fouled or obſtructed.

The *cold-bath*, where age, or no inward weakneſs forbid it, is exceeding proper, eſpecially in the *ſummer ſeaſon*, to recover the loſt tone of the fibres, and to grind and comminute the viſcid ill conditioned juices, and to prevent catching cold. —*Modern theory and practice of phyſic*, *p.* 245, 246, 250, 252, 255.

* See p. 309. par. 25.

Vernal tertians how cured without the bark.

39. But tho' the bark is the beſt medicine, hitherto diſcovered, for the cure of theſe diſeaſes, yet I have known perſons in the prime of life, and of a ſanguine conſtitution, cured of vernal tertians by the following remedies. For inſtance; let the patient be blooded in the arm on the intermediate day, and ſome hours afterwards, upon the ſame day, give an emetic of the infuſion of *crocus metallorum*, regulating the time in ſuch manner that its operation may be over before the fit comes; and as ſoon as it is gone off, let him begin with the following electuary.

The ſtomachic electuary.

Take of the extract of wormwood, gentian, and the leſſer centaury, each two drams; mix them together; divide the whole into nine doſes, of which let one be taken every fourth hour, drinking after each doſe, of the bitter decoction without purgatives, and of white-wine, each three ounces (u).

In indigent perſons.

40. There is another method of curing theſe *tertians* in perſons of low circumſtances, who are unable to bear the expence of a long courſe of medicines (*w*). As,

Take

255. In confirmation of which the learned reader may conſult *Huxham de aere et morb. epidem.* p. 21 and 25.

Van Swieten greatly diſapproves of putting a ſtop to the immediately approaching fit by the *bark*; becauſe by checking the motion, which might otherwiſe remove the obſtruction near the ultimate branches of the arteries, the patient is frequently deſtroyed, of which there are ſome examples. And hence it is that this medicine (which is of its own nature ſalutary) comes to be blamed; whereas in truth the fatal effect ought in all reaſon to be aſcribed to the careleſsneſs of the preſcriber. *Comment. in Boerh. aphoriſm.* tom. II. p. 49.

(*u*) The following bolus has cured ſome, when every thing elſe had failed.

Take of the flowers of camomile in powder, half a dram; roch alum, five grains; of the ſimple ſyrup, enough to make them into a bolus, to be taken every three hours, in the intermiſſion.

(*w*) Our honeſt and benevolent author has expreſſed himſelf here ſo unguardedly, as to be liable to miſconſtruction; and ſeemingly in contradiction to the well known, and univerſally adopted rule of practice of curing diſtempers *ſpeedily, ſafely, and pleaſantly*. For according to this maxim, if *tertians* could be as certainly cured by the ſimple, eaſy, cheap method here ſuggeſted, I ſhould think a phyſician would be bound both in prudence and conſcience to keep cloſe to it, and not to put his patient to more expence, as well as the trouble of taking abundance of nauſeous medicines to no more beneficial purpoſe, than for the ſake of making a new experiment, gratifying ſome

whim

Take of Virginian *ſnake-weed, in fine powder, a ſcruple; white wine, three ounces: mix them together. Let the patient take it two hours before the fit comes, and being well covered with clothes, ſweat three or four hours afterwards, and let it be repeated twice in the ſame manner.* The ſweating draught.

41. In the following year, *viz.* 1679, theſe intermittents re-appeared at the beginning of *July*, and increaſing every day, proved very violent and deſtructive in *Auguſt*. But having already treated of theſe at large, I ſhall only obſerve that they gave way to a new epidemic, which proceeded from the manifeſt qualities of the air in *November*. Intermittents appeared anew in 1679.

42. For at the beginning of this month a cough aroſe, which was more epidemic than any I had hitherto obſerved; for it ſeized nearly whole families at once. Some required little medicine, but in others the cough occaſioned ſuch violent motions of the lungs, that ſometimes a vomiting and a *vertigo* enſued. On the firſt days of the diſorder, the cough was almoſt dry, and the expectoration not conſiderable, but afterwards the matter in ſome meaſure increaſed. In ſhort, from the ſmallneſs of the expectoration, the violence of the cough, and the duration of the coughing fits, it ſeemed greatly to reſemble the *convulſive* or *hooping cough* of children; only it was not ſo ſevere. But it was attended with a A cough aroſe in *November*.

whim of his own, or perhaps for other worſe conſiderations. If the ſole end in view be the patient's recovery, the ſhorteſt, eaſieſt, and leaſt expenſive means of procuring it, are doubtleſs the beſt; and the honeſt and humane phyſician will on no account ever quit it for another that has none of theſe reaſons of preference, and many valuable advantages.——Beſides, for what particular ſecret reaſon muſt the rich and noble be deprived of a benefit, a bleſſing I may call it which the pooreſt may enjoy? Their health to be ſure is equally dear, and the pain and tedioufneſs of ſickneſs, and the nauſeouſneſs of medicines are as ſenſible evils to the greateſt, as to the meaneſt of mankind, and the ſame their earneſtneſs to be cured by a method that joins diſpatch with pleaſantneſs.

A medicine, therefore, inſtead of being ſet lightly by for its cheapneſs and ſimplicity, ought to be the more eſteemed for theſe diſtinguiſhingly excellent qualities, eſpecially if at the ſame time its virtues are equal to thoſe of the moſt elaborate and deareſt compoſition.—The eaſier it is to be procured, the more generally ſerviceable it will prove; and the more thankful we ought to be to that good providence, which has been graciouſly pleaſed to make the beſt bleſſings the moſt common.

fever

fever and its uſual concomitants, in which particular it exceeded the convulſive cough, for I never knew that accompanied with thoſe ſymptoms.

Whence it affected numbers.

43. Tho' coughs are common at the beginning of winter, yet every body wondered to find them ſo very frequent this year; which I conceive proceeded chiefly from this cauſe: the month of *October* having been wetter than uſual, (for it ſeldom ceaſed raining) the blood, correſponding with the ſeaſon, drank in abundance of crude, watery particles, by reaſon that perſpiration was ſtopt upon the firſt coming of the cold, whence nature endeavoured to expel them, by means of a cough, thro' the branches of the pulmonary artery, or, as ſome will have it, thro' the glands of the windpipe.

Bleeding and purging ſervicable herein

44. When there is occaſion for medicine, I am ſure the cure is beſt attempted by evacuation, namely by bleeding and purging; for the redundant ſerous particles cannot be ſo commodiouſly expelled by any other method. as by theſe two evacuations, which greatly empty the veins.

Pectorals uſeleſs.

45. For as to *pectorals*, ſetting aſide their pleaſing the patient, I own I do not conceive how they can contribute to remove the cauſe of the cough; ſince their whole operation ſeems to conſiſt, either in thickening the matter when it is too thin to be expectorated, or in attenuating it when, by reaſon of its viſcidity, it comes up with difficulty. This I certainly know, that it is loſt time to give ſuch medicines, and that ſometimes the blood is ſo impoveriſhed by the retention of the ſerous particles which are prejudicial to nature, and further that the lungs, irritated by the violence of the cough, are ſo ſhaken by the great and almoſt continual motion, that a conſumption is often occaſioned thereby, from which the patient ſhould be freed by haſtening the cure.

Sudorifics unſafe.

Nor are ſudorifics much ſafer; for ſometimes they cauſe a *fever*, and ſometimes alſo the particles of the blood, which are eaſily inflamed, are ſo thrown upon the *pleura*, that a *pleuriſy* is occaſioned, which happened to great numbers in the courſe of this epidemic cough, and was very dangerous.

The cure particularized.

46. Accordingly I took away a moderate quantity of blood from the arm, and applied a ſufficiently large and ſtrong bliſter to the neck, in order to make a revulſion

vulſion of part of the peccant matter (*x*). Afterwards I exhibited a lenient cathartic every day, made of an infuſion of *ſena* and *rhubarb*, with *manna*, and *ſolutive ſyrup of roſes*, till the ſymptoms abated conſiderably, or a perfect recovery enſued: Or if draughts were diſagreeable, I directed two ſcruples of the greater *pil. cochia*, to be taken every morning at five o'clock, ſleeping upon them.

The *hooping cough* cured by the ſame treatment.

47. By this practice of veneſection and repeated purges, and by this only, is conquered the convulſive or *hooping* cough in children; an obſtinate diſorder, which ſcarcely any other method will ſubdue. What the ſkill of others may effect in this caſe, I am not able to ſay; but know that, for my own part, I have tried remedies of almoſt every other kind, and tried them in vain. It muſt be obſerved, that only the milder cathartics are to be uſed, and theſe given only by ſpoonfuls, with due regard to the age of the patient. Such gentle and gradual evacuations effect the cure, as I imagine, by eaſing the lungs, which, though they are not found in this diſtemper to contain much of any ſerous humor, yet are forced into theſe violent fits of coughing, by fervid and ſpirituous vapours, thrown upon them, at certain times, by the maſs of blood; and are therefore beſt relieved, by directing theſe vapours thro' the lower bowels, and breaking their force by a contrary direction (*y*).

48. But

(*x*) If the inflammation be conſiderable, it is much better to defer the application of a bliſter, till it is greatly abated by proper evacuations.

(*y*) As this diſorder will not always yield to the method that is here laid down, we ſhall deliver the treatment thereof, as it hath been approved by a long courſe of experience, by the accurate *Huxham*.

If there be a *plethora*, ſays he, or the expectorated matter be ſtreaked with blood, I always order bleeding, and eſpecially if the fever demands it, as it often does, or the face turns black with coughing: and ſometimes I repeat it, due regard being had to the ſtrength and age of the child. Soon after I give a gentle emetic of *ſyrup of peach bloſſoms, oxymel of ſquils, the infuſion, or decoction* of *Ipecacuanha*. For the cough, as *Walſch midt* obſerves, proceeds partly from the ſtomach; a fit of the *hooping cough* ſeldom ceaſing before the tough, tickling phlegm be vomited up; and there is frequently ſo large a quantity of it, that it is neceſſary to repeat the emetic a third, or fourth time.

The belly is likewiſe to be looſened between whiles by proper purgatives, as *rhubarb, alcaliſate mercury*, and *calomel*. By this means the mucous matters are carried off, ſo that they do

Bleeding to precede purging in the beginning of epidemic diſeaſes.

48. But in the firſt ſtage of epidemic diſeaſes, of whatſoever kind they be, great care muſt be had not to purge before bleeding (z). For the diſeaſes which ariſe from an epidemic conſtitution of the air, are either actually fevers, or upon the leaſt occaſion degenerate into fevers; ſo that a fever may eaſily be cauſed by the diſturbance raiſed in the blood and juices by the mildeſt purgative, and the heat ſucceeding it, which nature had otherwiſe expelled by the uſual evacuations of the morbific matter; as, for inſtance, by a *catarrh*, or an epidemic cough, of which we now treat, or by a *diarrhœa*, when the epidemic fever has a tendency to

not foul the chyle or the lacteal veſſels, by getting into the blood; for great coſtiveneſs is univerſally prejudicial, occaſioning a fever, or very conſiderably increaſing the difficulty of breathing. Nor is there need only of evacuations, but ſuch medicines alſo are to be exhibited, as ſtrengthen the nerves and ſtomach, and attenuate the viſcidity of the blood; and theſe intentions are admirably anſwered by *mercury* and the *bark*, joined with proper *ſtomachics*. The difficulty of breathing, and oppreſſion of the breaſt often require a ſolution of *gum-ammoniac*, an expreſſion of *wood lice*, or the like remedies; and ſometimes, to abate the violence of the cough, LE MORT's *aſthmatic elixir*, or *diacodium* may be given, which, indeed, is the beſt and ſafeſt opiate in this diſorder. But if the ſharp humor falls plentifully upon the *larynx*, or the lungs, it is neceſſary to make a revulſion thereof, by applying a bliſter between the ſhoulders.

This diſtemper readily yields to theſe remedies, which by a different treatment frequently proves very obſtinate, and can only be cured by time and changing air. The ſpecifics extolled by women, as far as I have obſerved, are mere trifles, not excepting *cup-moſs*, which, if ſerviceable, is only ſo on account of its aſtringent, and conſequently ſtrengthening virtue, ſomewhat reſembling the nature of the *Peruvian* bark. For this noble *Indian* drug does not only attenuate groſs humors, but ſtrengthens the whole nervous ſyſtem, and, operating in this manner by both theſe properties, cures intermittents. Moreover, the periodic return of this cough, which is often as certain as the fit of an intermittent, ſhews that this diſeaſe does not greatly differ from the nature of the convulſive or hooping cough; which ſeems ſtill more probable upon this account, that both theſe diſorders generally prevail in the ſame ſeaſon, ariſe from the ſame cauſe, and are cured by the ſame remedies. HUXHAM *de aere et morb. epid. p.* 76, 77.

(z) Our author has perhaps inculcated this caution in ſo many places of his works, becauſe ſeveral phyſicians were of opinion that bleeding is prejudicial, unleſs the firſt paſſages be previouſly purged, apprehending that the emptied veins might attract the vitiated humors therefrom, as may be ſeen in *Sennertus Foreſtus*, and ſome other medicinal writers. See p. 499. par. 9. *of the ſchedula monitoria*.

that

that diſcharge. The ſame may be ſaid of any other conſtitution of the air, that diſpoſes the body to ſome peculiar fever, which does not always actually happen, becauſe nature expels the morbific matter from the blood by ſome ſuitable evacuation. This I always maintain, tho' the preſent practice is to exhibit cathartics before bleeding, or, which is ſtill more dangerous, without bleeding at all.

The reaſons for it.

49. For tho' it may be objected, that by bleeding before purging the foul humours contained in the firſt paſſages are propelled into the empty veins, yet it is moſt certain, that the evacuation which precedes bleeding cannot make amends for the injury which the blood receives, from the tumult raiſed therein by the cathartic. And it muſt be owned, that a purge, taken immediately after bleeding, works much more gently, and heats and agitates the blood, leſs than it uſually does when exhibited before bleeding (*a*); and I am apt to think that numbers, and of children eſpecially, have periſhed for want of knowing this, or thro' a neglect of it.

Experience likewiſe in favour of it.

50. And this I have learnt from a long courſe of experience, which is the ſureſt guide in theſe caſes; and unleſs practice be regulated thereby, it were better to diſcard the art. For the lives of men are but too much trifled with; on the one hand by empirics, who are ignorant of the hiſtory of diſeaſes, and the method of cure, and only provided with receipts, and on the other hand by ſuch idle pretenders, as rely wholly upon theory: whence both together deſtroy greater numbers than the diſeaſes would if they were left to themſelves.

(*a*) This is true in fact; and to account for it, let it be remembered that all the excretions univerſally are regulated by the circulatory motion of the blood; the flowneſs or velocity whereof influences them in an eminent degree. For inſtance, if the circulation languiſhes thro' a fullneſs of blood, it is clear that this fluid will grow thick, and obſtructions be generated, whence it will not flow in ſufficient quantity to the emunctories, which upon this account will perform their functions in an irregular and ſluggiſh manner. But if bleeding be uſed, which empties the veſſels, the circulation is neceſſarily increaſed, whence the blood becomes more fluid, opens the obſtructions in the excretory ducts, and, flowing more plentifully to the emunctories, enables and ſtimulates them to diſcharge their contents.

Practice whereon to be founded.

51. But that method of practice, and that only, will relieve the patient, which deduces the indications of cure from the ſymptoms of diſeaſes, and afterwards confirms them by experience; by which means the great *Hippocrates* gained ſuch an extraordinary character. And if the art of medicine had been delivered by any perſon according to this method, tho' the cure of a diſeaſe or two might have been no ſecret to any of the common people, yet the whole art would then have required more prudent and ſkilful men than it now does, nor would it have loſt any credit thereby. For as the operations of nature, upon the obſervation whereof true practice is founded, are much more ſubtle than thoſe of any art, tho' eſtabliſhed upon the moſt likely hypotheſis; ſo, of courſe, the ſcience of medicine, which nature teaches, will exceed an ordinary capacity, in a much greater degree than that which is taught by philoſophy.

Exemplified in fevers.

52. We have a proof of this in fevers, which conſtitute two parts in three of the employment of phyſicians, and I appeal to any thinking perſon for the truth of what I aſſert. For is there an empiric, tho' ever ſo illiterate, who will acknowledge himſelf unable to cure a fever, if, according to the generally received opinion, only theſe two indications are to be regarded, (1) to expel the morbific matter by means of ſudorifics, and (2) to relieve the ſymptoms which ſucceed evacuations of this kind? For he is very ſure that VENICE *treacle*, GASCOIGN's *powder*, *plague-water*, and the like, given internally, along with a hot regimen, will force ſweat; which is all he propoſes in the cure of this diſeaſe, eſpecially if he has chanced to hear of the term *malignity*. And as to relieving the ſymptoms, *diacodium* is in readineſs to cauſe ſleep, in caſe of watchings, and a *glyſter*, when the patient is coſtive, and ſo of the reſt. But he cannot of himſelf diſcover, or judge by his preſcriptions, what kind of fever it is which he attempts to cure, if we only believe, as poſterity perhaps will, that there are various ſorts of fevers, moſt of which require their peculiar method of cure different from the reſt; and, further, that the ſame individual fever, of whatever kind it be, requires one treatment at the beginning, and another ſomewhat different thro' all its ſtages, as long as it continues.

53. Now if a perſon be ignorant of the natural hiſtory of the diſeaſe, which only can point out the true method of cure, how ſhall he be able to deduce the indications of cure from ſome leſs remarkable ſymptom, when he cannot judge whether it proceeds from his method of cure, or the diſeaſe itſelf? It would take up too much time, to enumerate the manifold and minute particulars, that muſt be attended to in the cure of this and other diſeaſes, which being ſo numerous, and ſo momentous to the preſervation of the lives of mankind, there will always be room for poſterity to add to thoſe obſervations, wherein the almoſt infinite variety of the operations of nature in the production of diſeaſes, with the indications of cure thence derived, are delivered. Nor will the publiſhing ſuch obſervations at all diminiſh, but rather add to the reputation of the art, which being rendered more difficult, only men of learning and ſound judgment would be eſteemed phyſicians. But theſe particulars by the way.

A *fever* aroſe from treating the *cough* unſkilfully

54. When the abovementioned *cough* was unſkilfully treated, it cauſed a *fever*, reſembling that which was ſo very epidemic, in the winter of 1675, the hiſtory whereof we have already delivered. But as this *fever* was only a concomitant and an effect of the *epidemic cough*, I cured it by the ſame method which I have delivered above for the cure of that *cough* (*b*), *viz.* by bleeding, applying an epiſpaſtic to the neck, and afterwards purging thrice. For tho' no time was fixt for the continuance of purging in a cough unattended with a fever; which, as I obſerved above, is to be continued till the ſymptoms be conſiderably abated, or the patient recovers; yet in the fever proceeding from the cough, purging for three days proved ſufficient to conquer it; as I have frequently obſerved in the conſtitution under conſideration.

How cur'd

Joined at the beginning with *defluxions* upon the *lungs*.

55. But it is to be noted here, that tho' this *fever* was accompanied with violent *defluxions* upon the *lungs* at the beginning, yet in a month or two afterwards, when the collection of ſerum was gradually expelled from the blood, the fever manifeſtly appeared to be of the ſame kind, tho' it was unattended with a cough; the blood not having yet recovered its healthy ſtate, ſo

(*b*) See *Sect.* V. *Chap.* V. *Pag.* 230. *Par.* 4.

that it did not require a different treatment from that which the cough accompanied.

Continued till the beginning of 1680.

56. This fever continued in the abovementioned manner till the beginning of 1680, when I wrote theſe obſervations; and as the year advanced, intermittents aroſe, which remained without any alteration, till the beginning of 1685, when I was preparing the ſecond edition for the preſs. And tho' they are leſs epidemic in this city now than they were during the firſt four years, and likewiſe milder, yet they rage as violently in other places as they formerly did. For the general conſtitution ſtill favours intermittents ſo much, that I can affirm that I have not hitherto met with a continued fever, unleſs it proceeded from wrong management, or was one of thoſe *intercurrents*, which generally happen every year: ſo powerfully does this conſtitution tend to produce intermittents. And doubtleſs the force thereof muſt be weakened, before that which I call the *depuratory continued fever* can become epidemic. For in the intermittent ſpecies, nature ſeems to operate with too much haſte and violence, running thro' the ſtages of the concoction and deſpumation of the morbific matter too ſoon: which happens otherwiſe in the depuratory fever, wherein the ſigns of the concoction of the febrile matter to be expelled, ſometimes by ſweat, or rather by a freer perſpiration, do not appear before the *thirteenth* or *fourteenth* day.

The depuratory fevers of 1661, 1662, 1663, and 1664, only the remains of ſome intermittents.

57. Theſe particulars being well conſidered, I doubt not that the epidemic *depuratory* fevers of the years 1661, 1662, 1663, and 1664, were only the remains of certain intermittents which had prevailed for a certain courſe of years before: but how long they prevailed I know not. For when the conſtitution which favoured intermittents became milder and declined, the fevers it afterwards generated were more humoural and earthy, whence the depuration of the blood went on by ſlow degrees; whereas thoſe in the firſt years of this conſtitution were produced by more ſubtile principles, and, being intermittents, generally finiſhed their courſe in a little time. Now, allowing this to be the caſe, it ſeems probable to me, that this depuratory fever will return as ſoon as the preſent conſtitution abates a little, and continue for a certain term of years, before the plague ariſes.

58. But

58. But throughout thoſe years in which this fever ſhall prevail (how many ſoever they may be) intermittents may at times appear, and perhaps prove epidemic for a ſhort ſpace, namely when ſome manifeſt temperature of the air ſhall contribute thereto. Whether the bark will cure this fever as certainly as it uſually does the preſent reigning intermittents, I cannot ſay: but if it be given in the plague, and the continued epidemics which will regularly follow this, we muſt expect the ſame effects from it, which we now find it produces in the *pleuriſy*, the *peripneumony*, *quinſey*, and the like inflammatory fevers, in which diſorders it not only does no ſervice, but is manifeſtly pernicious. But however this be, epidemics will ſucced each other hereafter, in the manner above delivered, provided nature does not deviate from the order it hath kept for theſe laſt twenty four years.—And theſe, Sir, are the principal obſervations I have made of the epidemic diſeaſes of the foregoing years.

The bark where likely to do miſchief.

59. As to the cure of the *rheumatiſm*, which you likewiſe deſire to be informed of, I have frequently regretted, as well as you, that it could not be accompliſhed without the loſs of a large quantity of blood by repeated bleeding; whereby the ſtrength is not only impaired for a time, but weak perſons are uſually more diſpoſed to other diſeaſes for ſome years; when the matter occaſioning the rheumatiſm afterwards falls upon the lungs, the latent indiſpoſition in the blood being put into action, by taking cold, or ſome other ſlight cauſe. Theſe reaſons induced me to ſearch after ſome other method of curing this diſeaſe, than ſuch repeated bleeding. And having well conſidered, that it ſeemed to proceed from an inflammation, as appears from the other ſymptoms, but eſpecially from the colour of the blood, which exactly reſembles that of pleuritics (*c*), I judged it might probably be as ſucceſsfully cured, by a plain, cooling, and moderately nouriſhing diet, as by repeated bleeding; and the inconveniencies likewiſe attending that method avoided. Accordingly, I found that a diet of *whey* uſed inſtead of bleeding had the deſired effect.

Miſchief of curing the *rheumatiſm* by copious bleeding.

Whey advantageouſly uſed in its ſtead.

60. I was called laſt ſummer to Mr *Malthus*, an apothecary in my neighbourhood, who was afflicted with a

Illuſtrated by a caſe.

(*c*) See *Sect.* VI. *Chap.* V. *Pag.* 272. *Par.* 4.

ſevere rheumatiſm, accompanied with the following ſymptoms. During the firſt two days he was attacked with a lameneſs in his hip, which was ſucceeded by a dull pain of the lungs, with a difficulty of breathing, which likewiſe went off in two days; then he was ſeized with a violent pain of the head, and ſoon after with a pain of the right hip, which was firſt attacked, and afterwards almoſt all the joints of the arms and legs were affected by turns, according to the nature of the diſeaſe. As he was of a weak and dry conſtitution, I was apprehenſive, that by taking away much blood, his ſtrength which was already declining, might be quite exhauſted; eſpecially, as the ſummer was ſo far advanced, that it was to be feared that winter would come, before he could recover his ſtrength impaired by frequent bleeding; aud therefore I ordered him to live upon whey only for four days, after which I allowed him white-bread, beſides the whey, for his common food, namely once a day, inſtead of a dinner, till he recovered. Contented with this ſlender diet, he perſiſted in it eighteen days, only towards the latter end I permitted him to eat white-bread at ſupper alſo. He drank a gallon of whey every day, which afforded him ſufficient nouriſhment. At the end of this term, when the ſymptoms were gone off, and he got abroad, I allowed him to eat fleſh; as boiled chicken, and other food of eaſy digeſtion. But every third day he lived upon whey only, till at length he recovered, and by this method eſcaped the inconveniencies I mentioned above, which had been very troubleſome ten years before, when frequently repeated bleeding was uſed by my order for his cure.

This method not to be contemned for its plainneſs.

61. If any one ſhould lightly eſteem this method, by reaſon of its inelegance and plainneſs, I muſt tell him, that only weak minds ſlight things becauſe they are common and ſimple; and that I am ready to ſerve mankind, even at the expence of my reputation. And I muſt add, that, were it not for the prejudice of the vulgar, I am certain that this method might be ſuited to other diſeaſes, which I ſhall not now enumerate. And in reality, it would be much more ſerviceable than the pompous garlands of medicines, with which ſuch as are ready to expire are crowned, as if they were to be ſacrificed like beaſts (*d*).

62. But

(*d*) The admirable and approved virtues of *whey* appeared ſo

62. But that the moſt common things may be ſo ordered by a ſkilful phyſician as to prove preventive of imminent death, will appear from the following obſervation; which, tho' it hath no relation to the diſeaſe under conſideration, is not quite foreign to my purpoſe. About two months ſince a perſon in my neighbourhood deſired me to viſit his ſervant, who had taken a large quantity of *mercury ſublimate*, being melancholy mad for love, as I afterwards heard. The poiſon had been ſwallowed near an hour when I came, and his mouth and lips were much ſwelled; he was extremely ſick, had a burning pain in the ſtomach, and was almoſt killed with heat. I ordered him to drink three gallons of warm water as quick as poſſible, and to take a large

Its excellency illuſtrated by a parallel inſtance, of a perſon who had ſwallowed poiſon.

ſo well deſerving notice to Dr *Hoffman*, that he wrote a diſſertation to recommend it to more general uſe. The antients, he obſerves, highly eſteemed it, and frequently uſed it in thoſe diſorders, which proceed from an acrimony of the juices, as ulcers of the lungs, bladder and kidneys, the leproſy, various eruptions of the ſkin, ulcerations of the fleſhy parts, and obſtructions of the *viſcera*, &c. They often preſcribed it to be taken in a large quantity, and continued for a conſiderable time; but with this caution and difference, that when only the firſt paſſages required cleanſing, it was to be drank more ſparingly, and only for a few days, but more copiouſly and longer in deeply-rooted and obſtinate diſeaſes.

The author recommends it in a *Hypercatharſis*, whether occaſioned by draſtic purges, or ſome kinds of poiſon, the ſcurvy, all diſeaſes proceeding from, or attended with an acrimony or foulneſs of the juices, hypochondriac and hyſteric complaints, and in the beginning of a dyſentery. He further tells us, that it is a ſafe and excellent laxative in all kinds of fevers, the ſmall-pox, meaſles, and all feveriſh diſorders, exhibited by itſelf, or with *manna*, *ſyrup of rhubarb*, *cream of tartar*, *ſal polychreſtum*, and the like diſſolved therein, as the caſe demands. He adapts the quantity to the circumſtances, directing a pint to be taken at ſeveral times in the morning, by perſons of a weak ſtomach, and a quart by thoſe of a ſtrong conſtitution; and ſometimes repeating it in the afternoon, but in a leſs doſe, and always limiting the time of the courſe to the duration and obſtinacy of the diſeaſe.

He obſerves, that if milk be ſuffered to ſtand till it grows ſour, or its whey be ſeparated by the admixture of an acid, it is much injured thereby, loſes its grateful ſweetneſs, and rather contracts an acidity, which renders it diſagreeable to the human body. To avoid theſe inconveniencies, therefore, he makes a whey in this manner: He evaporates a quantity of new milk, over a gentle fire, to dryneſs, keeping it conſtantly ſtirring, to prevent burning; then pouring as much water to the remainder, as there has been milk exhaled, he boils them together for a few minutes, and, laſtly, ſtrains off the liquor for uſe. *Diſſert. de ſalub. ſer. lact. virtut. ſparſim.*

draught

draught of the ſame after each time of vomiting; and as ſoon as it appeared, from the gripings, that the poiſon was going downwards, I likewiſe directed warm water alone, to be plentifully thrown up by way of glyſter, in order to waſh his bowels. The wretch complied, being now very deſirous to live, and drank ſeveral pints of water more than I had directed. He told his friends that were by, that the water which firſt came up was very acrid, by reaſon of its being ſaturated with the poiſonous ſalt; but that it was leſs acrid after every vomiting, till at length it became inſipid, and the gripes that ſucceeded were remedied by injecting water alone, glyſterwiſe. By this ſimple method the patient was recovered in a few hours, only the ſwelling of his lips did not immediately fall, and his mouth remained ulcerated; occaſioned by the particles of the poiſon, which came up with the water by vomiting; but theſe ſymptoms yielded in four days to a milk-diet. I preferred water to oil, (which is generally uſed by the unſkilful without ſucceſs) and all other liquors, becauſe being very thin, it ſeemed fitter to abſorb the particles of the poiſonous ſalt, than any other liquor that was thicker, or already impregnated with the particles of ſome other body.

The aged in a rheumatiſm not to be treated by a milk-diet.

63. But to return to the *rheumatiſm*: how ſuitable ſoever a milk-diet may be for young perſons, and ſuch as have lived temperately and by rule, it is notwithſtanding unſafe to treat the aged in this manner, and ſuch as have long accuſtomed themſelves to too free an uſe of wine and other ſpirituous liquors; for it injures their ſtomachs, and by conſiderably chilling the blood, diſpoſes to a dropſy. In this caſe therefore it is highly proper to uſe nearly the ſame method of cure, which I have already delivered (*e*): though ſince I wrote that, I have found by experience that it is better after the ſecond, or at moſt the third bleeding, to purge often, till the ſymptoms go off entirely, than to truſt to bleeding only. For purging being an aſſiſtant to bleeding in the cure of this diſeaſe, it will not be neceſſary to loſe ſo much blood; and beſides by this means there will be place left for opiates, which otherwiſe muſt be refrained, how ſevere ſoever the pain might prove, becauſe they fix the diſeaſe, and it does not yield ſo eaſily to

(*e*) See *Sect.* VI. *Chap.* V. *Pag.* 270. *Par.* 1.

bleeding.

bleeding. But the purgatives ſhould be of the milder kind, as *tamarinds*, *ſena*, *rhubarb*, *manna*, *and ſolutive ſyrup of roſes*; for ſuch as are made of *ſcammony*, *jalap*, and the like, occaſion great diſturbance, and increaſe the pain. And every evening after the purge has done working, let an ounce of *diacodium* be given ſomewhat earlier than ordinary.

A remarkable ſymptom accompanying intermittents.

64. It muſt be noted here, that during the preſent conſtitution I have met with a certain ſymptom, at one time reſembling the *rheumatiſm*, and at another a *nephritic pain*, in the violent pain in the loins; which, as it uſed to ſucceed intermittents, proceeded from a tranſlation of the febrile matter to the muſcular parts of the body. But this diſorder did not require a different treatment from the intermittent which it accompanied; for it is increaſed, and life endangered, by frequent bleeding, and any other evacuation. —I judged it proper to drop this ſhort hint concerning it, that no one might be miſled thereby.

65. To conclude, theſe, worthy Sir, are the particulars which I have learnt from diligent obſervation, relating to the diſeaſes which are the ſubject of your enquiries; and if they prove acceptable to you, or uſeful to others, I have gained my end: at leaſt I enjoy the ſatisfaction of having done my duty, by complying with your requeſt in the beſt manner I am able, who am ever

Your moſt devoted ſervant,

THO. SYDENHAM.

An EPISTLE *of Dr* HENRY PAMAN *to Dr* SYDENHAM.

Worthy Sir,

THE healing art hath been greatly improved by your compleat hiſtory of *acute diſeaſes*, founded upon diligent obſervation, and faithful experience; and written with an upright and honeſt view, and not to acquire riches or fame: for you are ſatisfied with having done your duty, and ſerving the preſent age to the beſt of your ability. I have hitherto concealed my deſires, but it may be you have long imagined what I am going to requeſt. He that commends your works, incites you to do ſomething which may ſtill add to your reputation. It is a moſt difficult taſk to treat of *acute diſeaſes*, becauſe they terminate ſo ſpeedily, that, unleſs they be ſeaſonably check'd, life is imminently endangered thereby; no medicines being afterwards powerful enough to prevent death. But you have enumerated their ſymptoms, and directed what is neceſſary to be done in every exigency. In effect, your eſſays on this ſubject are a finiſhed performance, and could admit of no addition, had not you promiſed us a treatiſe of *chronic diſeaſes*, which may be reſpited, and allow time for enquiry.

We have frequently converſed together concerning the *venereal* diſeaſe, of the infamous origin of which the *Europeans* ſollicitouſly endeavour to clear themſelves, and, to make its traces ſtill more obſcure, baniſh it to the remoteſt *Indies*. It is a fit puniſhment for the unbridled luſt of the laſcivious, and perhaps the cure is attended with greater difficulty, that the repentance may be proportioned to the crime. And he ſeems to have been touched with a ſenſe of humanity and ſin at the ſame time, who openly wiſhed that this foul diſtemper might be but once cured.

But as the treatment of it often falls to the ſhare of empirics, barbers, and ſuch unſkilful perſons, they either fraudulently or ignorantly prolong it for ſuch a length of time, to the great expence and greater affliction of the patient, that life becomes burthenſome to him thro'

the

the violence and tedioufneſs of the proceſs, and the diſeaſe a leſs evil than the cure.

I intreat you, therefore, as a friend, to fulfil your promiſe, and publiſh your remarks on this diſeaſe firſt, as an earneſt of the reſt. Inform us truly by what method and medicines it may be cured: for it is enough for the patient to be puniſhed by the Supreme Being, and not to be tormented more ſeverely by his phyſician. Such a work would be well received by many perſons; and I ſhould have ſome ſhare of the praiſe that will thence accrue to you, on account of your publiſhing it at the requeſt of,

SIR,

Your moſt obedient ſervant,

Lambeth-Houſe,
Feb. 12, 1679-80.

H. PAMAN.

Dr SYDENHAM's *Anſwer to* HENRY PAMAN, *M. D. Fellow of St* John's *College in* Cambridge, *publick Orator of that Univerſity; and Profeſſor of Phyſic in* Greſham *College; containing the Hiſtory and Treatment of the Venereal Diſeaſe.*

Worthy Sir,

1. THOUGH in civility to me you obligingly term my late treatiſe on *acute diſeaſes*, a finiſhed performance; yet ſo conſcious am I of my own inability and its defects, that I reckon I have only pointed out the way, by which men of greater abilities may inveſtigate the hiſtory and cure of theſe diſeaſes. The author's modeſty.

——*Let me ſharpen others, as the hone*
Gives edge to razors, though itſelf has none (*f*).

2. And, in reality, ſo various, uncertain and ſubtile, is nature's procedure in the production of theſe diſeaſes, that the oldeſt phyſician living is not able ſcientifically to deſcribe their different ſymptoms, and proper methods of cure. Such a work would afford ſufficient employment for any ten phyſicians ſucceeding each How nature acts in producing acute *diſeaſes*, hard to be diſcovered

(*f*) *Francis's Horace in* 12*mo. Vol.* IV. *Pag.* 249.

other

other for as many ages, and thoſe alſo men of eminent parts, indefatigable induſtry, and of very great practice, which may furniſh them with numerous obſervations: ſo far am I from having attained, or imagining I ever ſhall attain the art of phyſic.

Difficult to treat of *chronic diſeaſes.*

3. As to thoſe *chronic diſeaſes*, the hiſtory whereof I promiſed you to write, my thoughts are ſo taken up with it, that if I know my own mind, I don't ſo much wiſh to have my life prolonged for any other reaſon, as that of being ſerviceable to mankind in this way. But daily experience convinces me how difficult and hazardous an undertaking this is, eſpecially for me, whoſe abilities are unequal to the taſk; for among medicinal writers, excepting *Hippocrates*, and a very few others, we meet with little to aſſiſt us in our enquiries into ſo intricate a ſubject; the aſſiſtance and light which authors promiſe, being rather falſe than true lights, which tend to miſlead, and not to direct the mind in its reſearches after the genuine procedure of nature. Moſt of their writings are founded upon *Hypotheſes*, and the reſult of a luxuriant imagination; and the ſymptoms of diſeaſes (wherein their true hiſtory conſiſts) as deſcribed by them, appear to be deduced from the ſame ſource; and the method of cure, alſo, is derived from the ſame fictitious principles, and not from real facts, and thus becomes moſt deſtructive to mankind: ſo full of ſpecious reaſonings is every page of the writings of ſuch ſuperficial men, whilſt the directions of nature are overlooked. But notwithſtanding theſe obſtacles, if God prolongs my life, and I can find leiſure, I may perhaps put my abilities to the teſt. In the mean while, to convince you of my readineſs to ſerve you, I preſent you with this ſhort diſſertation on the *venereal diſeaſe*, as a ſpecimen of the whole; it being the only one I have yet prepared for the preſs.

The hiſtory and treatment of the venereal diſeaſe.

The cure of the *venereal diſeaſe*, why not to be concealed.

4. But in the firſt place I muſt obſerve that I have met with ſeveral, who either with a good intent, in order to deter the incontinent from their vicious practices, by the apprehenſion of the ſucceeding puniſhment, or to acquire the character of chaſte perſons themſelves, have not ſcrupled to aſſert that the cure of the *venereal diſeaſe* ought to be kept ſecret. But I cannot be of their opinion;

opinion; becauſe I conceive that there would be very little room left for charity, or doing good offices, unleſs the misfortunes which thoughtleſs perſons bring upon themſelves by their own fault, were to be alleviated with humanity and tenderneſs. It belongs to God to puniſh the offence, but it is our duty to aſſiſt the diſtreſſed, and relieve the diſeaſed to the beſt of our power, and not to make too ſtrict an enquiry into the cauſe of the evil, and irritate them by our cenſures. For this reaſon, therefore, I will deliver what I have obſerved and experienced in this diſeaſe; not that I intend to make men's minds more vicious, but to cure their bodies, which is my province.

5. The *venereal diſeaſe* was firſt brought from the *Weſt-Indies* into *Europe*, in the year 1493, for before that time the very name of it, as far as we can collect, was unknown amongſt us; whence this diſeaſe is generally reputed to be *endemic* in thoſe parts of *America* where we firſt planted our colonies (*g*). But to me it rather ſeems to have taken its riſe from ſome nation of the *Blacks* upon the borders of *Guinea* (*h*); for I have

Whence, and at what time brought to *Europe*.

(*g*) That the *venereal diſeaſe* was known neither to the *Greeks* nor *Romans*, ſhould ſeem probable from the ſilence of all their phyſicians for at leaſt two thouſand years, and its not having been mentioned by the antient hiſtorians, poets, and other old writers of both nations. And as a further proof of this aſſertion, we may urge the authority of all the phyſicians, who lived at the time of the firſt eruption of this diſeaſe, who in general agree, that it was firſt brought into *Europe* towards the cloſe of the fifteenth century; that in ſymptoms it differed from every other diſtemper, that had ever been known or obſerved; that the infection was propagated throughout *Europe* from the kingdom of *Naples*, where it firſt ſpread itſelf amongſt the *French* and *Neopolitans*; and laſtly, that it was imported to *Naples* by the *Spaniſh* ſoldiers, who ſerved under *Chriſtopher Columbus*, from the *Weſt Indies*. ASTRUC *of the venereal diſeaſe, the* Engliſh *tranſlation, vol. I. book I. chap. I.*

I cannot be of opinion, ſays Dr *Cheyne*, that either the *ſmall* or the *great* pox was originally a diſtemper peculiar and appropriated to any certain time or climate, or *endemial* any where, no more than the *itch*, *leproſy*, or *plague*. A particular *air*, *climate*, original *frame*, *manner* of living, *epidemical* vices, and the like, may vary the *ſymptoms*, exaſperate and increaſe the malignity and degrees of one diſtemper, called by ſuch a name, more than another; as particular ſpecies of plants differ by *culture*, *ſun*, and *ſoil*; but that they ſhould alter the particular nature and *ſpecies* of a diſtemper, by which it is diſtinguiſhed from all others, I think is unnatural, *unphiloſophical*, and abſurd.—*Method of cure in diſeaſes of body and mind*, p. 198.

(*h*) This notion is directly contrary to matter of fact; for it is certain that no *Blacks* were tranſported into *Hiſpaniola* before the

have been informed by ſeveral of our countrymen of great veracity, who lived in the *Caribbee* iſlands, that the ſlaves which are newly brought from *Guinea*, even before they land, and likewiſe thoſe that live there, are afflicted with this diſeaſe, without having known an infected woman; ſo that it frequently ſeizes whole families, both men, women, and children. And, as far as I can learn, this diſeaſe, which ſo frequently attacks theſe miſerable people, does not at all differ from that we call the *venereal diſeaſe*, with reſpect to the ſymptoms, *viz.* the pains, ulcers, *&c.* allowing for the diverſity of climates; tho' it goes under a very different name, for they entitle it the *yaws* (*i*). Nor does their method of cure differ from ours, for in both caſes a ſalivation raiſed by quickſilver carries off the diſeaſe; notwithſtanding what we ſay here of the excellent virtue of *guaiacum* and *ſarſaparilla* in thoſe places where they grow, which is judged to be nearly loſt in their long paſſage to us.

Called the *yaws* in ſome parts of *America*.

6. It ſeems probable therefore to me, that the *Spaniards*, who firſt brought this diſeaſe into *Europe*, were infected with it by contagion communicated from the *Negroes* which they purchaſed in *Africa*, in ſome part whereof this diſeaſe may be *endemic*: for the barbarous cuſtom of exchanging the natives with the *Europeans* for merchandize prevails in many places upon the borders of *Guinea*. However this be, this contagious diſtemper, ſpreading by degrees, ſo infected theſe parts, that if it had proceeded with the ſame rapidity wherewith it began, it would in a few ages have deſtroyed mankind, or at leaſt have made the world an hoſpital, and rendered its inhabitants entirely unfit for the diſcharge of every ſocial duty. But like vegetables, being tranſplanted from its native place to a foreign climate,

The *Spaniards* ſuppoſed to have got it by contagion.

Grows gentler daily in *Europe*.

the year 1503. But this diſeaſe was contracted by the *Spaniards* in *Hiſpaniola* in the year 1493, was carried into *Spain* the ſame year, or in the year following, and from thence into *Italy* in 1494, or 1495, where it infected the *French* and *Neapolitans*, and by them was ſoon after ſpread all over *Europe*. ASTRUC *of the ven. diſ. the* Engliſh *tranſlation, vol. I. book I. chap. XI.*

(*i*) This diſeaſe, ſays Dr *Turner*, in *Guinea* is called by the name of *yaws*, as I have heard from ſome ſailors, as alſo from the captain of a ſhip, who have frequently made that voyage, and as I have reaſon to believe from an inſtance or two, I may very probably communicate hereafter. *See his Siphilis, 4th edit. p.* 6, 7.

it

it flouriſhes leſs in *Europe*, languiſhes daily, and its ſymptoms grow gradually milder. For at the firſt appearance thereof, when a perſon was ſeized with it, it quickly infected the whole maſs of blood, occaſioning violent pains of the head and limbs, and diſcovered itſelf by ulcers in various parts (*k*). But it is an hundred years ſince it firſt manifeſted itſelf by a kind of *virulent gonorrhœa*, which ſort of appearance it yet retains, endeavouring to go off by this diſcharge; and it is attended with no other apparent ſymptom, except in ſome few perſons, who are ſeized in the beginning with a ſmall ulcer of the *pudenda*, commonly called a *ſhanker*, the virulence whereof, not being expellable by a *gonorrhœa*, immediately infects the blood.

7. This diſeaſe is propagated, either (1) by generation, whence it is communicated to the infant by one of the infected parents; or (2) by touching ſome ſoft part, by means whereof the virulence and inflammation are communicated to the body, in the following manner; as (1) by ſucking: thus the child may infect the nurſe by the fine pores of the nipples of the breaſt; or the nurſe the child by its tender mouth. (2) Children may gain the diſeaſe by lying in bed with infected perſons (*l*). How propagated.

For

(*k*) This will appear manifeſt by conſulting *Aſtruc*'s elaborate treatiſe on this diſeaſe; *vol. I. book I. chap. XII. XIII.*

(*l*) When the *venereal diſeaſe* firſt appeared in *Europe*, it was reputed *epidemic* and *contagious*; but it is now known by undubitable experience, and the unanimous conſent of phyſicians, that it can neither be contracted by an error in diet, the fault of the air, the abuſe of the non naturals, or any ſpontaneous corruption of the humours, but ſolely by infection, and the communication of it from one that is diſeaſed.

This communication is made (1) either by generation, the poiſon being tranſmitted by the parents, whilſt the tender body of the embryo is formed: or (2) by contagion, the diſtemper being tranſmitted from a diſeaſed perſon to a ſound one. The firſt I much ſuſpect, having never ſeen the *venereal diſeaſe* communicated from parents to their children; which has made me imagine that phyſicians have been ſomewhat too credulous in this affair, that if poſſible they might conſult the reputation of their patients, by aſſigning, if not the real, at leaſt a probable cauſe of their indiſpoſition, and by that means acquit them from blame. The ſecond is the moſt certain way of communication at leaſt; and this may be ſpread by three ways. (1) At a diſtance by an infected air; (2) by a diſeaſed ſubject; and (3) by an immediate contact. Now it appears both from reaſon and experience, that the *venereal diſeaſe* cannot be propagated by the firſt; and it does not ſeem to be plainly made out that it

For tho' grown perſons, whoſe fleſh grows firmer with age, can ſcarce be infected by this means without impure coition, yet the fleſh of children being of a ſofter and finer texture eaſily admits the infection; which I have known got by lying in bed with infected parents. (3) The touching of a ſoft part, eſpecially in impure coition, which is the moſt uſual way of gaining the diſeaſe (*m*); for the *penis* being turgid with ſpirits deſigned for generation, readily imbibes the infection, from a venereal ulcer, or puſtule in the *vagina*; both which lying hid in the body, the woman may nevertheleſs ſeem to be found; the venom being ſo detained by the moiſture of theſe parts, as to infect the blood very ſlowly, or, which oftener happens, being diluted, or in part expelled, by the menſtrual purgations.

What part firſt attacked thereby.

8. This infection, in my opinion, firſt attacks the fleſhy ſubſtance of the *penis*, which it corrupts, firſt occaſioning an inflammation, and afterwards, by degrees, an ulcer, from which the matter, that appears in a *gonorrhœa*, diſtils ſlowly into the *urethra*. I am inclined to believe this is the caſe, becauſe I have ſeen ſuch a virulent matter ouze from the porous ſubſtance of the

can be conveyed by the intervention of an infected ſubject; as by lying in the ſame ſheets, wearing the ſame clothes, drinking out of the ſame cup, and wiping the mouth and lips with the ſame towel: as there is cauſe to ſuſpect that the perſons who have aſſigned ſuch reaſons for acquiring the diſtemper, have contracted it by other means, which out of ſhame they have diſſembled. It is therefore moſtly, if not ſolely communicated by the immediate contact of one diſeaſed with ſome part of a ſound perſon; as (1) by coition; (2) by the breaſt; (3) by kiſſing; (4) by lying with a perſon infected; and (5) by introducing the finger or hand into the places contaminated by a venereal ulcer or flux, if there happens to be a hang-nail on the finger, or ſome little cut, or eraſement of the ſkin.

The two firſt of theſe ways of contagion are ſo well confirmed by many and certain experiments, that they cannot be called in queſtion; and abundance more are infected by theſe than by the three laſt; which is evidently confirmed by experience, as we have not above one or two inſtances of perſons infected by kiſſing, lying in the ſame bed, or handling the parts diſeaſed, whereas there are above a thouſand, who, in the ſame interval of time, have caught the diſtemper from the breaſt, and more eſpecially from carnal copulation. ASTRUC *of the venereal diſeaſe, the* Engliſh *tranſlation, vol. I. book II. chap. I.*

(*m*) It muſt be noted here, that if there is the leaſt excoriation or wound, a crack in the lip, a hang-nail or the like, this diſeaſe may be propagated thereby.

glans,

glans, and not diſcharged from the *urethra*, and there has been no ulcer, either in the *prepuce* or *glans* (*n*), But at length penetrating deeper, it uſually occaſions an ill-conditioned ulcer of the *proſtatæ*; which is frequently found in the bodies of ſuch as periſh by this diſeaſe (*o*).

9. This diſeaſe proceeds in the following manner. The patient, ſooner or later, (according as the woman with whom he has lain was more or leſs infected, and according as his conſtitution renders him more or leſs diſpoſed to receive the infection) is firſt ſeized with an uncommon pain in the parts of generation, and a kind of rotation (*p*) of the teſticles; and afterwards, unleſs the patient be circumciſed, a ſpot, reſembling the meaſles in ſize and colour, ſeizes ſome part of the *glans*, ſoon after which, a fluid like *ſemen* flows gently from it (*q*); which differing every day therefrom, both in colour and conſiſtence, does at length turn yellow, but not ſo deep as the yolk of an egg; and when this diſeaſe is more virulent and ſevere, becomes green, and is mixed alſo with an aqueous humour, copiouſly ſtreaked

The various ſymptoms of the firſt ſtate enumerated.

(*n*) That this is a miſtake in our admirable author I readily grant with *Aſtruc*, who, however, has paſſed too ſevere a cenſure upon him for it, in the following words.

They are miſtaken who think with *Sydenham* that the venereal poiſon in men firſt attacks the fleſhy ſubſtance of the *penis*, and having brought on an inflammation, and an ulcerous diſpoſition upon that part, by degrees inſinuates itſelf into the *urethra*, and ſupplies it with that corrupt matter, that drops from it in a *gonorrhœa*; which is ſo far from truth, that its abſurdity is now known to every barber ſurgeon.

This gentleman is of opinion that a *gonorrhœa* is ſeated in the ſeminary receptacles both in men and women; and from hence makes four different ſpecies thereof in both ſexes. ASTRUC *of the venereal diſeaſe, the* Engliſh *tranſlation, vol. I. book. III. chap. I. ſect. II.*

Boerhaave, in his preface to the *Aphrodiſiacus*, is of opinion, that the part which is firſt affected is the *membrana celluloſa*; and ſo are ſome eminent modern practitioners likewiſe.

(*o*) The author doubtleſs means upon diſſection, without which the *proſtatæ* do not come in view.

(*p*) What our author means by a *rotation* of the teſticles, is difficult to conceive, as the word conveys no determinate idea: however, as this ſymptom, whatever it be, is no very manifeſt diagnoſtic, and the diſeaſe is ſufficiently diſtinguiſhed without it, it is of little moment to enter into any farther enquiry about it.

(*q*) The diſcharge or running, at firſt, ſomewhat reſembles the whiteneſs of milk, or pure *pus*, and is much unlike the *ſemen*.

with blood (*r*). At length the puſtule or ſpot terminates in an ulcer (*s*), at firſt reſembling the *aphthæ* in the mouths of children, which ſpreads and eats deeper every day, and the lips grow callous and hard. But it muſt be obſerved, that this puſtule is ſeldom attended with a *gonorrhœa* in thoſe who have formerly had this diſorder, or whoſe *glans* is bare; the hardneſs and firmneſs which this part acquires by being expoſed to the air, and the frequent chafing of their linnen, rendering it leſs apt in ſuch perſons to receive the infection; and for this reaſon, thoſe that are circumciſed ſeldom have an ulcer of the *glans*, but only a *gonorrhœa* (*t*).

10. The *gonorrhœa*, or running, is ſoon ſucceeded by other ſymptoms; as (1) a great ſenſe of pain upon every erection of the *penis*, as if it were violently ſqueezed with the hand; this happens chiefly in the night, when the patient begins to be warm in bed, and I eſteem this painful conſtriction of the *penis* the diſtinguiſhing ſign in this ſtate of the diſeaſe. (2) The *penis* likewiſe bends, occaſioned by the contraction of the *frænum*, which being naturally ſtretched in every erection, cauſes violent pain (*u*). There is likewiſe (3) a heat of urine, which is ſcarce perceived in voiding it, but immediately after the patient feels an extreme heat throughout the whole duct of the *urethra*, eſpecially at its termination in the *glans* (*x*). And ſometimes (4) the *urethra* being excoriated by the continual flux of acrimonious matter, nature too haſty in generating new fleſh, ſubſtitutes a looſe, ſpungy fleſh, which growing every day larger and harder, forms *caruncles*, which obſtruct the urinary paſſages, ſo as at length to hinder the excluſion of the urine; and theſe caruncles alſo emit a certain *ichor*, which proceeds from the little ulcers adherent thereto, and greatly hinders the cure, occaſioning a tedious diſorder more to be apprehended

(*r*) This is not true in general, and does not happen once perhaps in a thouſand caſes.

(*s*) It never does, unleſs a ſhanker affects the part where the meaſle ſpot firſt appears.

(*t*) The reverſe is often true, *viz.* that they have *ſhankers* inſtead of a *gonorrhœa*.

(*u*) This and the former ſymptom are indiſcriminately term'd, by ſome writers, a *cordee*, or *priapiſmus*.

(*x*) This is ordinarily entitled a *dyſuria*.

than

than death itſelf (*y*). Moreover, (5) it often happens that the matter which ſhould have been diſcharged by the *gonorrhœa* is thrown upon the *ſcrotum*, either by violent exerciſe, or the uſe of aſtringents, and cauſes a violent pain and inflammation, with a conſiderable ſwelling ſometimes of one, and ſometimes of both the teſticles; the *gonorrhœa* in the mean time proceeding ſlowly, but the heat of urine remaining equally troubleſome. Theſe are the common ſymptoms of this diſeaſe in this ſtate of it.

Thoſe of the ſecond ſtate.

11. But when, by the continuance of the diſeaſe in thoſe parts, the virulence is communicated to, and by degrees corrupts the blood, or when the juices putrefy from the retention of the virulent matter in the body by the improper uſe of aſtringents, the *true pox* ariſes; in which (1) ſwellings, or buboes, often appear in the groin, and conſtitute the firſt degree thereof. (2) Then violent pains ſeize the head, and the limbs between the joints, as the ſhoulders, arms and legs, which attack by intervals, and keep no ſtated order, except that they generally come in the night as ſoon as the patient is warm in bed, and do not ceaſe till towards morning. (3) Scabs alſo and ſcurf of a yellow colour, like a honey-comb, appear in ſeveral parts of the body, by which mark they may be diſtinguiſhed from all others; and ſometimes they are very broad, and reſemble the leproſy, as it is deſcribed in the writings of phyſicians: and the more this ſcurf ſpreads, the eaſier the patient becomes (*z*). All the ſymptoms increaſe by degrees, and particularly the pain, which at length

(*y*) What *Sydenham* calls a *caruncle*, does not, in fact, take place till the running is almoſt, or totally ſtopped (though in ſuch caſes it is hardly poſſible to lay down any certain rule) and the reaſon of the thing as well as practice (*i. e.* the methods uſed to relieve it) ſhew that it is the *cicatrix* from the wound healed in the *urethra* which hinders the urine from coming freely away: —and therefore to relieve it a piece of cat gut made a little conical at the point, is introduced ſomewhat beyond the part where the obſtruction is, and always kept in, unleſs when the patient has occaſion to make water. This overcomes the conſtriction occaſioned by the *cicatrix* in the *urethra*, and by a continued uſe, entirely cures.—Poſſibly a fungous fleſh may ſometimes ariſe from the wound in the *urethra*, which our author calls a *caruncle*, but this ſeldom happens.

(*z*) Thoſe *venereal* eruptions which are ſmall and moſt frequently ſituated upon the temples or head, when they ſcale off, leave a mark nearly of a chocolate colour behind them.

becomes ſo intolerable, that the patient cannot lie in bed, but is forced to walk about his chamber in a reſtleſs manner till morning. Moreover, (4) from the ſeverity of the pain, hard nodes, called *exoſtoſes*, grow upon different parts of the ſkull, and the bones of the legs and arms; which reſemble the bony excreſcences upon the legs of horſes, uſually termed the *ſpavin*: and (5) theſe bones, from the continual pain and inflammation, do at length grow carious, and putrefy (*a*). (6) *Phagedenic* ulcers likewiſe break out in different parts of the body, which generally begin firſt in the throat, and by degrees ſpread thro' the palate to the cartilage of the noſe, which they ſoon conſume; ſo that the noſe for want of its ſupport falls flat. (7) The ulcers and pain increaſing every day, the patient, waſted away partly by the continued pain, and partly by the ulcers and corruption, leads a life far worſe than any kind of death, thro' the ſtench, corruption and ſhame attending it, till, at length, his limbs rot away one after another, and the mangled, breathleſs carcaſe, being odious to the living, is conſigned to the grave (*b*).

The author ignorant of the eſſence of this diſeaſe

12. As to what is termed the intrinſic and *eſſential* nature of this diſeaſe, I am as ignorant of it, except as it appears from the ſymptoms juſt enumerated, as of the eſſence of any plant or animal. But be this as it will, I am perſuaded, that the humour occaſioning this diſeaſe is of a very inflammatory nature, and ought

(*a*) The violence of the diſeaſe increaſing, occaſions a diſorder of the *perioſteum*, which has been falſely reckoned a diſeaſe of the bone itſelf, and called a node, or an *exoſtoſis*. When this complaint is quite recent, and the humour of no conſiderable bigneſs, a ſalivation frequently cures it. —— But if it be neglected, and ſuffered to proceed, the bone may become carious, and give much more trouble.

(*b*) This diſeaſe was not near ſo well known in our author's time as it is at this day; ſo that it need not be matter of great wonder, if he has failed in giving us ſo exact a deſcription of it, as he has done of all the reſt; which has laid me under the neceſſity of pointing out and ſupplying his deficiencies, as well as I was able.

And the method of treating it likewiſe has been ſo much improved within theſe few years, ſince our better acquaintance with the diſtemper, by its being unfortunately ſo common, that I could not diſpenſe with myſelf from making ſeveral practical remarks occaſionally, as I found it neceſſary, and endeavouring to correct ſome miſtakes in his practice; which, I am certainly informed, ſome, miſled by his deſervedly great character, have followed too cloſely, to their prejudice.

to

to be evacuated by ſuch means as experience ſhews to be moſt effectual; no immediate ſpecific being yet diſcovered, whereby it may be cured without any preceding evacuation. For neither *mercury*, nor the *drying woods*, are to be accounted ſpecifics, unleſs it can be proved by examples, that *mercury* has ſometimes cured the *venereal diſeaſe* without a ſalivation, or a *decoction of the woods* without a ſweat (*c*). Now having learnt by experience, that the common ſudorifics have been as effectual here, as a decoction of the woods, ſo I doubt not, that if a remedy could be found, either in the vegetable or animal kingdom, of equal efficacy with mercury in raiſing a ſalivation, it would have the ſame effect in curing the *venereal diſeaſe* (*d*). But as this diſeaſe,

Cauſed by a very inflammatory humour

(*c*) The intended quantity of mercury to raiſe a ſalivation, having been rubbed in often, makes a perfect cure, without occaſioning a ſpitting in any degree worth mentioning. For it is to be noted, that if the mercury operates by urine or ſweat very plentifully, though little or no ſalivation be raiſed, it cures the diſtemper as perfectly.

(*d*) Dr *Turner*, having given a ſhort hiſtorical account of *mercury*, has the following obſervation.

And thus far of this great and principal remedy, its uſe and abuſe in this diſtemper; which, however, our countryman Dr *Sydenham* would not allow to be properly a *ſpecific*, or in a ſtrict ſenſe *alexipharmic*, to the venereal poiſon; becauſe, ſaith he, it produceth its effects no other ways than by purgation, ſalivation, or other manifeſt evacuation; and that if any other medicine would excite a *ptyaliſm*, or ſpitting, it would be alſo a ſpecific thereunto. But I am apt to think the ſuffrage of the beſt practitioners, as to this particular, lies againſt him, as alſo matter of fact itſelf; for at this rate other purging medicines might ſubdue the *virus* of the diſeaſe as well as mercury, which is found quite otherwiſe: it being plain that by twice purging therewith, you ſhall gain more upon the malignity thereof, than by many more, without; and that the ſame is obſerved at ſome times to increaſe under other cathartics. *See his Siphylis, 4th edit. p.* 152, 153.

To this we may add what *Aſtruc* advances, which alſo invalidates our author's argument againſt mercury as a ſpecific.—We have long ſince learnt from experience, *ſays he*, which is ſuperior to any argument, that mercury, even tho' it brings on no ſalivation, ſhall notwithſtanding produce the ſame effects in the blood, as though a plentiful ſalivation had been raiſed, provided that it enters the blood in a due quantity; and therefore that it ſhall attenuate the fluids, ſcour the veſſels, reſtore the oſcillatory motions of the ſolids, remove the obſtructions, diſpel the venereal poiſon, and abſolutely extirpate the diſeaſe. *See his treatiſe of the venereal diſeaſe, vol.* 1. *p.* 227.

Deſault's method, which conſiſts in a continued courſe of

eaſe, when it is only a *gonorrhœa*, differs conſiderably from that which hath infected the whole maſs of blood, and juſtly deſerves to be intitled the *lues venerea*, ſo it requires a different kind of evacuation from that which is neceſſary in a confirmed *pox*.

The cure of a *virulent gonorrhœa*.

13. With reſpect therefore to a *gonorrhœa*, of which we firſt treat, the whole of the cure, as far as we have yet experienced, turns upon purging medicines; by means whereof the peccant matter is either evacuated, or the natural juices of the body drained off, which would otherwiſe feed the diſeaſe. But tho' both reaſon and experience intimate that it may be cured by any cathartic, provided it be frequently repeated, and continued for a conſiderable time; yet ſuch ſtrong purgatives, as powerfully evacuate bilious, but eſpecially watery humours, ſeem beſt for this purpoſe: and therefore I have ſometimes recovered perſons in low circumſtances by *jalap root* only. But as the diſeaſe is attended with a manifeſt inflammation, and the purgatives to be exhibited in order to the cure are likewiſe hot, a cooling diet muſt be directed throughout the whole courſe.

By purging

14. For this reaſon I generally preſcribe as follows:

Purging pills.

Take of the greater pil. cochiæ, *three drams*; *extract of* rudius, *one dram*; *roſin of jalap, and diagrydium, of each half a dram*; *opobalſamum, enough to make the whole into a maſs, each dram whereof is to be made into ſix pills.*

Four of theſe pills are to be taken every morning at four or five o'clock, (that the patient may ſleep upon them) for twelve or fourteen days running, or longer, namely, till the heat of urine, and the yellow colour of the running be greatly abated, after which I eſteem it ſufficient to purge every other day for another fortnight; and then the pills are to be taken only twice a week, till the running ceaſes, which commonly continues ſeveral days afterwards. For tho' it be ordinarily affirmed, that after the heat of urine, and the yellow colour of the

mercurial unction, checking the ſalivation when it riſes, by purgatives, and uſing a mercurial water for common drink, is alſo a proof that mercury will cure without ſalivating; of which he produces many inſtances. *Hoffman* alſo delivers a peculiar method of curing the *venereal diſeaſe* by mercury without raiſing a ſalivation. *Vid. Hoffm. Oper. tom.* 3 *p.* 321.

running

running are gone off, the *ichor* which appears, eſpecially in the morning, upon the top of the *penis*, from which a drop or two may be ſqueezed with the finger, proceeds only from the weakneſs and laxity of the parts, occaſioned by the long continuance of the contagious matter therein; yet the patient finds to his great prejudice, that this is the remains of the diſeaſe not thoroughly overcome; for tho' it be conquered in ſome meaſure, yet upon any ſlight occaſion, as by exceſſive drinking, any violent exerciſe or the like, it begins again, and the *gonorrhœa* returns, that is, if the purging be diſcontinued before the diſeaſe is perfectly cured (*e*).

15. If

(*e*) With reſpect to purging, it ſhould be obſerved that all rough and hot purgatives are to be forborn in weakly and broken conſtitutions, and eſpecially where the diſorder is attended with great heat and pain in making water; becauſe they exaſperate this painful ſymptom, by over-heating the patient. In this caſe therefore I direct a purging apozem to be prepared of *pearl barley, marſhmallow roots, the leaves of mallows, and fennel ſeeds*, boiled in enough water, to a pint and half, diſſolving a ſufficient quantity of *manna*, and GLAUBER's *ſalt* in the ſtrained liquor: to be drank warm, about five or ſix ounces at a time, at ſuch intervals that the whole may be taken in four or five hours.

On the intermediate days of purgation, I preſcribe powders to be taken every four hours, made of *nitre*, *camphire*, and *cochineal*, in a ſolution of *gum arabick in barley water*, ſweetened with fine ſugar. And when by this means the heat and pain in making water abate, I exhibit mercurial purges, if there be occaſion, and the habit be ſtrong enough to bear them, but with great caution; being abundantly convinced that they ſometimes do miſchief, however diſcreetly uſed.

For, as *Aſtruc* rightly obſerves, by the uſe of *mercurials* the ſtomach is weakened, and the ſtrength impaired, which is a thing of no ſmall moment; but, what is of much greater, the acrimony of the blood is thereby ſo increaſed, that the ulcers that lay concealed in the ſeminary receptacles, from the bad quality of the blood being increaſed, become more malignant, and are much more difficult to heal. I am ſure I have often ſeen, *continues he*, and I doubt not but ſeveral other phyſicians have ſeen the ſame, that *mercurials*, uſed even with caution, have brought on afreſh a *dyſuria* that was going off, and a running that was juſt finiſhed, reſtoring it to its virulency, as its yellow and green colour ſufficiently evidenced. *See his treatiſe of the venereal diſeaſe, vol. I. p. 278. Sect. 6.*

Our author's method of purging for ſo long a time with ſuch rough and heating cathartics, is a very improper one, often prolongs the running, and makes it of a bad quality, and muſt be exceeding prejudicial in any conſtitution. And what renders this violent method ſtill more ineligible is, that the preſent practice of the moſt judicious, which is attended with

general

Strong purgatives ſometimes requiſite.

15. If the *gonorrhœa* does not yield to this courſe of purging, it will be proper between whiles (eſpecially in ſuch as are not eaſily purged) to give ſome ſtronger purge inſtead of the pills; as the following potion, which having been taken only once, hath proved more effectual ſometimes in ſtopping a *gonorrhœa*, than the frequent repetition of lenient cathartics.

A ſtrong purging draught.

Take of tamarinds, half an ounce; the leaves of ſenna, two drams; rhubarb, a dram and half; boil them in a ſufficient quantity of water, to leave three ounces of the ſtrained liquor; in which diſſolve manna and ſolutive ſyrup of roſes, of each an ounce; ſyrup of buckthorn, and electuary of the juice of roſes, of each two drams; mix them together.

Or when the cure goes on ſlowly, exhibit eight grains of *turbith mineral*, only twice or thrice, at proper intervals, leſt it occaſion a ſpitting: and this is the moſt

general ſucceſs, ſhews that purging for any thing like ſo long a time as our author preſcribes, even with lenients, is needleſs and hurtful.

To the method of cure ſpecified in the note, it may not be amiſs to add that bleeding is very often neceſſary, and in caſe of conſiderable inflammation to be repeated; and that diluting copiouſly with ſmall liquors, (ſuch as whey, barley-water, almond-milk, *&c.*) for inſtance, at the rate of a gallon, or ſix quarts in a day, is highly ſerviceable; as this will keep the *urethra* moiſt and cool, and deſtroy the pungency of the acrid ſalts, and by this means prevent, or take off the heat of urine, which is often a very painful ſymptom in this diſeaſe.

If the patient cannot readily get down a purgative in a liquid form, an electuary may be made with *lenitive electuary*, *rhubarb*, *cream of tartar*, *a little balſam-capivi*, and enough *ſolutive ſyrup of roſes*; which will anſwer as well.

When all the inflammatory ſymptoms are gone, ſome rub in a little *mercurial ointment* for three or four nights ſucceſſively, and then purge it off, and order the warm bath occaſionally, if it can be conveniently uſed.

The cure may be concluded with pills, or an electuary made of *Chio turpentine*, *rhubarb*, &c. and waſhed down with *Briſtol*, *Pyrmont*, or *Spaw water*.

By this treatment the patient is never debilitated and ruffled, or left with an obſtinate gleet; which is almoſt always the conſequence of ſtrong purges, frequently repeated.

It is very ſeldom neceſſary to give *mercurials* internally in a ſimple *gonorrhœa*; but if we meet with patients that will be purged with them, the *mercurial* pill inſerted by the college in their late diſpenſatory, is perhaps preferable to any thing of the kind.

powerful

powerful remedy to conquer an obſtinate *gonorrhœa* (*f*).
Or the following pills may be given twice a week.

Strong purging pills.

Take of pil. ex duobus, *half a dram*; mercurius dulcis, *one ſcruple*; opobalſamum *enough to make them into four pills, to be taken betimes in the morning.*

Glyſters to be injected where internals cannot be taken.

16. But ſometimes the patient hath ſuch an averſion to repeated purging, that he cannot even endure the ſight or ſmell of the medicines. And ſometimes a peculiarity of conſtitution obtains, ſo that the ſtrongeſt purgatives avail not, whence a ſufficient evacuation of the peccant matter cannot be made; and whilſt we ſollicitouſly, but fruitleſsly endeavour to cure the diſeaſe by this means, it gains ground, and becomes a true *pox* in ſuch habits. In theſe caſes, therefore, recourſe is to be had to glyſters, which may anſwer both indications; (1) by evacuating the humour, and (2) making a revulſion from the part affected. Beſides, this method is ſometimes more expeditious than the former, but in my opinion it is not equally ſafe; for tho' the former be more tedious, as requiring longer time, there is notwithſtanding leſs danger of leaving a part of the contagious matter in the bowels, to cauſe freſh diſturbance afterwards: but this inconvenience may eaſily be prevented by exhibiting cathartics on the intermediate days, in order to aſſiſt the glyſters (*g*).

17. Where-

(*f*) There is not the leaſt occaſion for giving *Turbith mineral* in a ſimple gonorrhœa; and if it be attended with ſome ſymptoms, ſuch as ſhankers, *&c.* that ſhould ſeem to render it neceſſary, much ſafer *mercurials* may be uſed to as good purpoſe. It is remarkable, that our author here takes no notice of its emetic quality, tho' in the quantity he orders it, it is almoſt certain to operate pretty ſtrongly this way; and therefore requires at leaſt as copious dilution as other vomits.—However, be the intention of giving it what it will, the *Ipecacuanha* has been very frequently found to anſwer every way full as well, and is unanimouſly allowed to be a much gentler and ſafer emetic.

(*g*) This method of giving glyſters ſeems to have been peculiar to our author; no one beſides himſelf, ſo far as I know, having adviſed it; how it may anſwer I cannot ſay, having never met with a conſtitution that would not bear purgatives of ſome kind or other. But if this be the caſe, to what purpoſe is it to have recourſe to them on the intermediate days, in order to aſſiſt the glyſters; which, for want of operating, they cannot do, but ſhould rather ſeem to increaſe the evils, by occaſioning fruitleſs diſturbance?

Dr *Turner* obſerves, that the cure by glyſters, which were contrived

In what manner to be given.

17. Wherefore I proceed in this manner: I give the abovementioned pills, or others of a like kind, two or three mornings ſucceſſively, and then I order the following glyſter to be injected twice a day, *viz.* in the morning, and at five in the afternoon, till the ſymptoms go off; except that once or twice a week I exhibit a cathartic, omitting the glyſter that day.

The purgative glyſter.

Take of the electuary of the juice of roſes, ſix drams;
Venice *turpentine, diſſolved in the yolk of an egg, half an ounce; diſſolve them in a pint of barley water, and to the ſtrained liquor add two ounces of the univerſal electuary: mix them together for a glyſter.*

Every evening at bed-time I give twenty five drops of *opobalſamum*, or balſam of *Mecba*, dropt upon a piece of fine ſugar; this medicine being a kind of pure liquid turpentine, has the ſame virtues, and does great ſervice in ulcers of the *pudenda*; but where this cannot be had, the quantity of a hazel-nut of *Cyprus* turpentine may be taken in the ſame manner inſtead of it.

The regimen to be obſerved during the cure.

18. Whatever method of cure be uſed, the patient muſt, during the proceſs, refrain from ſalt and high-ſeaſoned meats, and all others of difficult digeſtion; as beef, pork, fiſh, cheeſe, roots, herbs, and fruit; inſtead of which I ſubſtitute mutton, veal, rabbit, chicken, and other light food: and order him to eat very ſparingly of theſe, that is, no more than is ſufficient to ſupport the ſtrength. I forbid wine of all kinds, and all ſpirituous, or aceſcent liquors, preſcribing for his common drink, milk boiled with thrice the quantity of water; only at dinner and ſupper he may be allowed a little ſmall-beer. To abate the inflammation, and heat of urine, I direct ſome cooling emulſion, prepared in the following manner, to be drank on the intermediate days of purging.

contrived for thoſe whoſe averſion to medicine is inſuperable, is by throwing up half an ounce, or ſix drams of the *terebinth. ven. cum ovi vitel. ſolut.* once a day, and ſometimes twice; if only once, it may be made more purgative with the *conf. hamech*, for the ſtronger ſort, or the *elect. de juc. roſ. diacatholicon lenitivum* for the weaker; but this method, ſays he, (unleſs the cure be promoted by giving ſome mercurial cathartic between whiles, and ſome balſamic alſo when the *virus* is taken off) is ſcarce to be confided in; nor have I known (unleſs very rarely) that it has anſwered the expectation. *See his Siphylis, p. 79, 80 4th edit.*

Take

Take of the ſeeds of melons and pompions, each half an ounce; the ſeeds of white poppies, two drams; eight blanched ſweet almonds; bruiſe them together in a marble mortar, pouring upon them by degrees a pint and a half of barley-water; and, laſtly, ſweeten the ſtrained liquor with a ſufficient quantity of fine ſugar. A cooling emulſion.

19. In a very ſanguine conſtitution, and when the diſeaſe is obſtinate, after having ſpent a month or thereabouts in a courſe of purging, I generally adviſe eight or nine ounces of blood to be taken away from the arm; but I am againſt bleeding ſooner, leſt the diſeaſe ſhould be more confirmed thereby (*h*). I do not depend much upon injections into the *urethra*, becauſe they ordinarily do much more miſchief than ſervice, either by their pungent acrimony, or ſtypticity: however, towards the declenſion, a ſmall quantity of *roſe-water* may be injected. Bleeding when to be uſed.

20. I do not know a better method than this of curing a *gonorrhœa*, eſpecially in ſuch as are eaſily purg'd; but in perſons of a contrary diſpoſition, tho' it never fails, yet it requires a long time to compleat the cure. In ſuch perſons therefore bleeding is to be repeated, and the purges muſt be made ſtronger, repeated oftener, and continued a longer time (*i*); or glyſters muſt be injected as abovementioned; purging being the principal remedy here. For it may be truly affirmed, with reſpect to this diſeaſe at leaſt, that whoever cleanſes well Purging to be perſiſted in longer in ſuch as are hard to purge.

(*h*) Wherever bleeding is proper, it ſhould ſeem beſt to begin with it, in order to guard againſt the inflammation and tenſion of the parts affected, and the painful heat of urine, which generally enſue; for experience ſhews that bleeding, ſo far from exaſperating the diſeaſe, always renders the ſymptoms milder, and of courſe facilitates the cure.

(*i*) We learn from experience that there are conſtitutions which reſiſt the operation of very ſtrong purgatives, but readily yield to mild ones; the great irritation cauſed by the former, drawing the bowels of ſuch perſons into violent ſpaſmodic contractions, which cloſe up the *anus*, whilſt the latter, by relaxing and gently ſtimulating at the ſame time, work in a kindly and effectual manner. This obſervation, therefore, has its uſefulneſs in practice; and is abundantly confirmed by ſome colics, where gentle cathartics anſwer the end, and in others where the ſtrongeſt, however neceſſary, avail not at all, nor indeed can be ſafely given, unleſs joined with an opiate, to abate the tenſion of the inteſtinal fibres, and by this means diſpoſe the bowels to obey their operation.

makes

Mineral waters bad in this distemper.

makes the best cure; provided no *mineral waters* be used, which by their astringent and too healing virtue shut up the remains of the disease in the habit, which should have been carried off, and so render it more confirmed, as I have found by experience. Hence I have frequently observed swellings of the *scrotum* succeed from drinking them, at the beginning, or height of the disease, and more dangerous symptoms, as *caruncles*, when they were drunk towards the decline: and this I positively assert, notwithstanding *mineral waters* are ordinarily and frequently directed in the present practice in this case (*k*).

Astringents and decoctions of the woods hurtful.

21. I am also well aware how much some practitioners boast of curing this disease in a shorter time, by remedies which bear a great name; but I have found, by repeated observation, that the matter which should have been expelled, being detained in the body by astringents, has proved highly detrimental to the patient, by frequently returning into the blood, and at length causing the *pox* (*l*). Nor is the decoction of the woods more effectual, tho' it is safer; for under a pretence of exhibiting specifics, the whole body, but especially the parts affected, already over-heated, are still more inflamed; and sometimes, as I have already observed, I have known the *gonorrhœa* return, which vanished a little before (*m*).

Purging to be refrained in case of a *phymosis*.

22. But it must be observed, that if the nut be totally covered by the prepuce, and the lips of it so swelled, hard and callous from the inflammation, that it can by no means be slipt back, it is a fruitless endeavour to attempt the cure of the *gonorrhœa* by purging, tho' the strongest cathartics be given, and repeated every day with this view; unless means be used at the same time to reduce the part affected to its natural state, by removing the hardness and swelling, which continu-

(*k*) In *some* constitutions, however, such mineral waters as that of *Neville Holt* in particular, do frequently prove very beneficial in stopping an obstinate gleet.

(*l*) It seldom happens that a clap can be perfectly cured in less than two months, unless in a peculiar happy constitution; and sometimes the cure will take up three months: the veracity of those boasters, therefore, who pretend to cure it in much less time, may very reasonably be questioned.

(*m*) See above, Par. 14.

ally

ally increaſe the *gonorrhœa*. For this purpoſe I direct the following fomentation. The manner of curing it.

Take of the roots of marſhmallows and white lillies, each an ounce and half; the leaves of mallows, mullein, elder and henbane, and the flowers of camomile and melilot, of each one handful; the ſeeds of flax and fenugreek, each half an ounce; boil them together in a ſufficient quantity of water, for a fomentation, to be applied to the part affected for half an hour, twice or thrice a day. An emollient fomentation.

After fomenting I order the part affected to be anointed, with freſh *linſeed oil*, and then apply the *mucilage plaiſter* ſpread on leather, to the ſwelled lips of the prepuce. But if the ulcer in the lips of the prepuce, or *glans*, by its conſtitution and calloſity, hinders the prepuce from ſlipping back with eaſe; beſides the fomentation abovementioned, I preſcribe the following liniment.

Take of the ointment baſilicon, ſix drams; the ointment of tobacco, two drams; red precipitate (waſhed in roſe-water, and levigated) half a dram; mix them together for a liniment; to be applied, upon lint, to the ulcers, after uſing the fomentation above directed (*n*). A digeſtive liniment.

23. But if, either from ſtopping the *gonorrhœa* too ſoon, violent exerciſe, or any other cauſe, the *ſcrotum* be greatly ſwelled, (which is now the ſeat of the diſ- A ſwelling of the *ſcrotum*, how remedied.

(*n*) A mixture of *red precipitate*, with ſome proper ointment or cerate, is a common and good dreſſing in *venereal* ulcers or *ſhankers*.

If the inflammation here be conſiderable, bleeding ſhould be uſed, and repeated as there is occaſion, and the body kept open with emollient glyſters, obſerving alſo a light diluting diet, if it be attended with a fever, which is often the caſe. *Barley-water*, mixt with *honey of roſes* made warm, ſhould be frequently thrown up between the *glans* and the ſkin, with a proper ſyringe, in order to waſh away the ſharp and noxious humours, which lie concealed under the prepuce; and an emollient cataplaſm, like that deſcribed by our author, is to be applied to the tumified part. But if the diſorder does not yield to this treatment, recourſe is to be had to the operation practiſed in theſe caſes, which conſiſts in dividing the prepuce; and is accurately deſcribed by *Heiſter* in his *Inſtitutions of ſurgery*, and *Aſtruc* in his treatiſe of the *venereal diſeaſe*, to which the reader is referred for further information in this particular. This latter recommends it as very neceſſary, that the *penis* in this caſe be kept tied up to the belly.

eaſe)

eaſe) I apply the abovementioned fomentation twice a day to the part affected; and if the pain and ſwelling do not abate, I cover the part with the common cataplaſm, prepared of *oxycrate* and *bean-meal*. While theſe external applications are uſed, I endeavour to promote the cure by cathartics and coolers, along with the diet abovementioned; and I ſcruple not to take away nine or ten ounces of blood from the arm of the ſame ſide with the teſticle affected, at any time of the diſeaſe, if the largeneſs of the ſwelling, and the violence of the pain require it (*o*): and here we finiſh our obſervations on a *gonorrhœa*.

The *venereal diſeaſe* to be cur'd only by *ſalivation*.

24. But if the diſtemper be got to ſuch a height, as to be juſtly entitled the *venereal diſeaſe*, or a *confirmed pox*, the procedure muſt be different from that above delivered; for the cure being more difficult, demands more powerful remedies; and in reality not an inſtance can be produced, ſo far as I know, where this diſeaſe hath been cured unleſs by a ſalivation with *mercury*; notwithſtanding what has been haſtily advanced by ſome learned, as well as illiterate perſons, to the contrary (*p*). Since therefore a ſalivation anſwers every purpoſe here, I need do nothing more than ſet down

(*o*) Dr *Turner* intitles this an *hernia humoralis*. It is ordidarily occaſioned by the ſudden ſtoppage of a *gonorrhœa*, or a latent pox. Bleeding is to be uſed in order to the cure, and repeated in proportion to the demand; the diet ſhould be ſparing and thin, and the body kept ſoluble by cooling laxative glyſters; and all ſtimulating, reſtringent, and balſamic medicines entirely forborn. The external applications preſcribed by our author, will certainly do ſervice, along with the method juſt laid down, remembering to ſupport the part with a convenient truſs.

Hoffman aſſures us that he hath ſometimes known ſuch tumors happily diſcuſſed, by only anointing the *ſcrotum* with a mercurial ointment; which could not be reſolved by the moſt powerful remedies, or even by mercury given internally. *See* Hoff. *op. tom. III. p.* 426.

The inflammatory ſwelling of the teſticle, (or more properly the *epididymis*) has been generally treated by vomits of *Turbith mineral*, and that very injudiciouſly; for till the ſwelling begins to go down any vomit is improper, and one of *Ipecacuanha* anſwers the purpoſe full as well as one of *Turbith mineral*, when a vomit is neceſſary: and indeed any emetic will produce the ſame effect, only this is uſually choſen becauſe it is the ſafeſt.

(*p*) See above (*d*) where the contrary ſeems to be fully proved.

what

what I have learnt from reaſon and obſervation concerning the raiſing and carrying it on.

25. And, firſt, I cannot even conjecture what ſome phyſicians mean by their frequent cautions about preparing the body duly by cathartics, digeſtive medicines, bathing, and the like; not to mention bleeding, which ſome eſteem the principal thing. For if we ſpeak frankly, the whole of the queſtion is reducible to this, *viz.* that ſince a ſalivation muſt be procured by a poiſon (for we have not hitherto diſcovered a ſafe and innocent medicine productive of this effect, and the diſeaſe cannot be cured without it) whether it is better to make uſe of it, when the body is in full ſtrength and ſpirits, and conſequently more able to bear it, or after it has been debilitated by bleeding and low diet? Doubtleſs, every judicious perſon would think it better to do nothing at all, than to do miſchief by ſuch unſeaſonable attempts. Beſides, it is manifeſt from experience, that a ſalivation is better borne by thoſe who have not been debilitated by evacuations, or any other way, than by ſuch as have been weakened before entering upon the courſe (*q*). No neceſſity of preparing the body for it.

26. Omitting

(*q*) Preparatory to raiſing a ſalivation by *mercurial unction*, (and the ſame holds good of the internal method) *Aſtruc* rightly adviſes that due attention be had (1) to the preſent ſtate of the patient, whether he be fit to bear *mercury*, (2) the choice of a proper ſeaſon of the year for ſuch a remedy; (3) the preparing the body in ſuch manner, that the diſorders of the patient's blood, if there are any, may be corrected, and the dangers which are to be feared from the uſe of *mercury* may be avoided; and laſtly (4) to the preparation of the ointment to be employed.

With reſpect to the firſt, the unction is to be refrained in perſons afflicted with acute, or very dangerous chronic diſeaſes, unleſs it be highly probable that the latter originally proceed from the pox. Neither is it to be uſed in thoſe who are very weak, and exhauſted, from whatever cauſe this ariſes, eſpecially if a plentiful ſpitting be intended; nor in women during the time of their menſtrual diſcharge. As to the ſeaſons of the year, ſpring or autumn is moſt ſuitable, and winter better than ſummer; but if the ſymptoms are very urgent, the courſe is to be begun immediately, with proper caution. Previous to the unction the patient, if plethoric, is firſt to be blooded, then to be purged gently with cooling laxatives, and to uſe the warm bath twice a day for five, ſix, or eight days, as it ſhall ſeem convenient; and during the whole preparative courſe his diet ſhould be ſparing, moiſt and cooling, and wine, venery, and all violent exerciſes of body or mind refrained. And if the

How to be conducted.

26. Omitting therefore this mischievous preparation, as soon as I am called, I prescribe the following ointment.

Take

pox be complicated with any other violent disorder, a more laborious method of preparation is necessary, adapted to the state of the patient. But there are some cases which will not even stay for the common preparatory method; to wit, if a carious bone in any of the limbs shall be fractured on a sudden, from a slight blow; if a deep *caries* in any of the bones shall penetrate to the *medulla*; if a hot, painful, inflammatory *exostosis* shall seem to tend to imposthumation. In these cases bleeding and purging, at most, being only premised, the *mercurial unction* must be instantly used, and in large quantities for the first or second time, if the symptoms shall seem to require a plentiful dose of *mercury*, to abate their fury. The violence of the disease being abated, we may then slacken our pace, and proceed more slowly, not only that the *mercury* by remaining in the blood may have the more force upon it, but also lest by too great haste some violent disorder should unhappily be brought on.

But if you except these few cases, *adds the author*, which indeed very rarely happen, I would advise you never to omit a diligent preparation of the patient, previous to the use of the *mercurial unction*, which I don't only apprehend to be useful, but absolutely necessary, not only to correct the disorders that are foreign to the pox, if any such lurk in the blood or the first passages, but also that the *mercury* may gain a more safe and easy admittance, to perform its good effects. Therefore, I think that *Sydenham*, who in other respects is a man of great authority, should by no means be listened to, when in his *Epistola responsoria de morbis venereis*, he asserts that these preparatory methods should always be omitted, as injurious to the patient, and that bleeding and a slender diet do nothing but mischief, by destroying the strength, and lowering the spirits. As if it was likely the patient's strength should be so much lowered by bleeding, and giving a purge or two in fifteen days, that he should be unable to undergo the exhibition of *mercury*; since on the contrary it is evident, by this method of preparing, (1) that the vitiated chyle of the first passages is carried off, (2) that the plethora of the vessels is lessened, (3) that the solid parts being relaxed, the way is made more easy for the *mercury* to perform its effects in the blood, for the attrition of the blood and humours. Lastly, for the excretion of the humours by the strainers of the mouth, intestines, skin and kidneys.

See Astruc *of the venereal disease, Vol. 2. Book 4. Chap. 6. sparsim.*

Hoffman commends *warm bathing* in the following terms. Warm bathing is likewise admirable for cleansing the mass of blood from the *venereal taint*; for there is not a more expeditious and appropriated way of discharging a matter, that, by its subtility and acrimony, lodges in, and preys upon the solid parts, and thus causes violent symptoms in the nervous system, than by the glands of the skin, which are the best and universal

Take of hogs lard, two ounces; quickſilver, an ounce; mix them together. A mercurial ointment.

I add no ſort of hot oil, or any thing elſe to it; becauſe the ointment is made worſe by all ſuch additions as check its operation, and no better if they no way improve it; and perhaps thoſe ingredients which are added under the title of *correctors*, do the ſame here (if they act at all) as experience ſhews ſuch things ordinarily do, when they are joined with cathartics, *viz.* occaſion gripings, and render their operation more difficult, from the enſuing ſtruggle between the antidote and the purgative, all the virtue of which latter conſiſts in being oppoſite to nature. I therefore order the patient to anoint his arms, thighs, and legs, with his own hand, with a third part of the abovementioned ointment, for three nights running, with care not to touch his arms-pits and groin; and the *abdomen* muſt be well defended from the ointment, by wrapping a piece of flannel round it, and faſtening it behind (*r*). After the

univerſal outlets of the body; whence the *venereal diſeaſe* is ſeldom totally eradicated, without the uſe of warm bathing. All experienced phyſicians know of how little ſervice, and yet how miſchievous that method of curing the venereal diſeaſe is, which turns upon the uſe of *drying decoctions*, and *mercurial preparations*; whether intended to ſweat or ſalivate; unleſs care be taken to diſcharge the malignant humours out of the body, particularly by the pores of the ſkin: we could produce numerous inſtances of caſes, where, after *mercurial ſalivations*, and the uſe of *mercurial preparations*, in the way of diaphoretics and purgatives, aſſiſted by ſudorific decoctions, the ſymptoms have been abated for a ſeaſon; but after a while unexpectedly returned, with greater violence, becauſe the taint was not thoroughly diſcharged; but part remaining behind, gradually prevailed, and acquired freſh force. But by nearly the ſame courſe of mercurials and drying decoctions, together with a proper uſe of *warm bathing*, at due intervals, the cure has been compleated, and the virulent matter entirely diſcharged from the very innermoſt ſeat of the nervous parts. *See new experiments, &c. upon mineral waters, tranſlated by Dr* Shaw, *p.* 184, 185.

(*r*) The *mercurial* ointment might, I believe, be rubbed in ſafely in any part of the body, and nothing is more common than rubbing it into the groin. And it muſt be rubbed in more or fewer times, as is found neceſſary. Perſons frequently require to be anointed ſix or ſeven times, and often more.—If the ointment does miſchief, its bad effects may, perhaps, as naturally, be accounted for from the too great quantity of *mercury* uſed, or the patient's catching cold, as from the manner of applying it.

third unction the gums generally swell, and the salivation rises; but if it does not appear in three days after the last unction, eight grains of *turbith mineral* may be given in a little *conserve of roses*, and after every evacuation, either upwards, or downwards, let him take a draught of warm posset-drink (*s*). When the salivation begins, the physician must attend with great exactness to the degree thereof, lest by inconsiderately using too many medicines, it be raised so high as to endanger the life of the patient. When it is got to a proper height, in which state the spitting generally amounts to two quarts in the space of twenty four hours; or if the symptoms go off, tho' the spitting be not so much, which generally happens in four days after it comes to the height, it will be necessary to change his linnen and his sheets, for others that have been worn some time since they were washed; because those he lies in, being fouled with the ointment, are apt to increase and keep up the salivation beyond the due time. But if the salivation abates before the symptoms vanish, it must be heightened by exhibiting a scruple of *mercurius dulcis*, at a time, occasionally.

A *looseness* happening, how checked.

27. Sometimes it happens, especially in such as are easily moved by purgatives, after the first or second unction, (*viz.* as soon as the mercury begins to affect the blood) that nature endeavours to throw it off by the intestines, whence not only mucous stools and gripings proceed, as in a dysentery, but the cure of the disease is hindered thereby, which is used to yield only to salivation. In this case, mercury must be entirely refrained, both externally and internally, till these symptoms are quite gone off; and the purging likewise, which generally happens before the salivation rises well, must be stopped by *liquid laudanum*, increasing the dose, and repeating it according to the urgency of the symptoms; or a dram and half of *diascordium* must be given between whiles, occasionally. Upon the stoppage of the looseness, the salivation, which scarce appeared before, usually goes on in a proper manner (*t*).

28. When

(*s*) There is no sort of necessity for giving *Turbith mineral* in this case; for more ointment, gradually applied, will answer much better.

(*t*) The giving astringents in the beginning of a salivation, to prevent a looseness, is very often prejudicial; and instead thereof,

28. When the patient appears to be recovering in all other reſpects, only his mouth continuing ulcerated, (which is the genuine effect of a ſalivation) the ſpitting, which abates now every day, muſt not be checked by purging, or any other method: for poſſibly after the pain is gone off, and the ulcers are dried up, a part of the morbific matter may remain in the habit, and occaſion freſh diſturbance, unleſs that moderate ſpitting be permitted which will ceaſe as ſoon as the patient, after his recovery, hath been a few times in the air. For this reaſon I eſteem it dangerous to carry off the remains of the ſalivation, which is juſt upon ceaſing ſpontaneouſly, either by *purging*, or by drying it up with a *decoction of the woods*; which methods, tho' commonly uſed under pretence of expelling the mercury out of the body, or correcting its malignity, do, without doubt, occaſion the frequent relapſes that happen in thoſe unfortunate perſons, who, after all their pains and expence, earneſtly long for health, and had certainly obtained it, if the ſalivation had been ſuffered to terminate ſpontaneouſly. It would therefore be more adviſeable to promote it, by exhibiting *mercurius dulcis* once a week, after the patient is entirely recovered, and goes abroad, (which I have ſometimes ordered to be done for ſome months) than to check it too ſoon (*u*).

thereof, gentle laxatives are both ſafe and occaſionally neceſſary, and are ſo far from greatly interrupting the ſalivation, that it proceeds more kindly by the uſe of them; inaſmuch as the patient, when thus treated, is freer from the ſeverity of pain which ſometimes attends the parts that are principally affected by a ſalivation.

(*u*) *Boerhaave* calls this an excellent rule of our author, and agrees with him in condemning *ſudorific decoctions*, obſerving that a relapſe need not be apprehended, if four, eight, ten or twelve grains of *mercurius dulcis* be exhibited once a week, according as the patient is found to be more or leſs difficultly moved. *See his prax. med. vol.* v. *p* 368.

But where the ſalivation has been ſufficiently copious, and continued a due time, lenitive purges ſhould ſeem proper to carry off the remains of the mercury, at the cloſe thereof; and daily experience ſhews that they are exhibited with all deſireable ſafety and advantage.

As the appetite is generally very ſharp after a ſalivation, great care ſhould be had, that the patient commits no exceſs in point of eating, and his food ſhould be light, and eaſy of digeſtion. Neither ſhould he venture into the open air too haſtily, eſpecially if it is the winter ſeaſon.

Purging sometimes necessary at the height of the salivation.

29. But tho' I don't like purging at the declension of the salivation, for the abovementioned reasons, it may, nevertheless, be indispensably necessary at the height; that is, when it hath been so far raised, by wrong management, as to endanger life, in which case it is not only safe, but requisite to lower it by a purge, to such a degree as suits the strength of the patient, after which it is to be left to itself (*x*).

But not after it is over.

30. If it be demanded, whether we should be satisfied with salivation only, without having recourse to cathartics, or any other medicines, which are usually administered after it is over; I reply, that besides what has been just mentioned, (which reason and experience confirm) I would fain know how it comes to be more necessary to purge after a salivation, than to salivate after purging; since purgatives, especially *scammony*, and such acrid cathartics, leave some remains of malignity behind them in the body, which notwithstanding we leave to nature, whereby at length they are overcome; namely, upon the patient's returning to his usual manner of living, exercise, and the free use of the air. Again, I should be glad to know why we try to expel the remains of the mercury by cathartics, whilst we not only neglect, but check the salivation, which is the genuine and almost the sole method whereby nature ordinarily does and should effect it? But such errors are to be ascribed to our limited capacity, which hinders our coming at the truth, that lies too far out of our reach, so that we take up with specious appearances instead of realities; and afterwards strengthen our groundless prejudices, to that degree by conversation, that at length we are for imposing our idle notions for demonstrations: which, in my opinion, is manifest in the instance under consideration.

Salivation and purging not easily borne by some subjects.

31. But tho' most persons may be cured by the abovementioned method (*y*), it must, however, be carefully noted, that some are possessed of such an *idiosyncrasy*, or peculiarity of constitution, both in respect of salivation and purging, (such as are not easily moved by cathartics, being likewise hard to salivate) that it will

(*x*) In such a case bleeding is likewise often indispensably necessary, besides purging with lenients. And in exceedingly sharp and violent pain about the jaws, throat, and head, a blister to the back frequently gives unspeakable relief.

(*y*) See *Par.* 26. *p.* 354.

scarce

ſcarce cauſe an ulceration of the gums, much leſs raiſe a degree of ſputation adequate to the diſeaſe. In theſe caſes, therefore, the phyſician muſt, above all things, beware of obſtinately and unſeaſonably endeavouring to raiſe a ſalivation, whilſt nature reſiſts, and will by no means bear ſuch an evacuation; for want of underſtanding which matter rightly, ſome have deſtroyed abundance of perſons. For in ſuch conſtitutions the perſiſting obſtinately in the uſe either of external or internal medicines for this purpoſe, inſtead of anſwering the end, occaſions gripings and bloody ſtools; nature endeavouring to carry off the poiſon of the mercury this way; or elſe a pain of the ſtomach, ſickneſs, cold ſweats, and other terrifying ſymptoms enſue, ſo that the patient is brought to death's door, and perhaps killed thereby (*z*).

32. In

(*z*) Tho' it be a caſe that does not frequently happen, yet it is certain from undoubted experience, that mercury ſhall ſometimes in a great meaſure loſe its effect, tho' adminiſtred in due form, method and doſe, and, fruſtrating the expectations both of doctor and patient, ſhall not produce any ulcers in the mouth, or a few only, and ſuch as are cutaneous and ſlight; nor raiſe any ſalivation, or at leaſt a very ſmall one, and more like a ſpitting than a ſalivation. It is ſtrange, indeed, that a medicine, which uſually raiſes ſuch violent ſtorms, ſhould ſometimes lie ſo ſtill and quiet in the body; but, if I am not much miſtaken, it may be accounted for from one or other of the following cauſes:

(1) If the ſkin be thick, compact, and abound with too turgid veſſels, ſo as not to be eaſily pervious to the entering mercury, and by that means admits it but in a very ſmall quantity.

(2) If the blood be naturally dry, and, tho' attenuated by the mercury, ſupply but a ſmall portion of lymph, and ſuch as ſhall ſcarce ſuffice to keep up the ſalivation.

(3) If any other evacuation, for inſtance, by ſweat, urine, ſtool, *&c.* be more copious than uſual, and the lymph be diverted another way, where it meets with a freer and eaſier paſſage; in this caſe the ſalivation muſt be leſſened, if not wholly ſuppreſſed.

(4) If the ſalival glands be either naturally or diſeaſedly denſe, compact, hard, or ſcirrhous, and ſo give a difficult and ſlow paſſage to the ſalival lymph that is to flow thro' them.

(5) If thro' any natural or vicious conſtitution of the blood, the *ſaliva* flowing into the mouth be rendered ſo thick, viſcous and tough, as to be void of acrimony, and incapable of eroding the muciferous veſſels of the mouth.

(6) If the mouths of theſe veſſels be not wide enough to imbibe the poiſon lurking in the *ſaliva*, or if they imbibe it in ſo ſmall a quantity, that it ſhall have little or no effect upon the receptacles of the *mucus*.

How such are to be treated.

32. In such cases, therefore, tho' the physician may repeat the unction, and the *turbith mineral* again, when the salivation does not rise in four or five days after the last unction, (interposing some days between each unction) yet it greatly behoves him not to be so resolutely bent to raise a salivation, as to continue to force it in spite of nature (*a*). In my opinion therefore this method is to be followed: as soon as a sickness at stomach, or gripings succeed, medicines must be immediately restrained, till these symptoms are quite gone off; for by the frequent repetition of many powerful medicines to raise a flux, when nature opposes it, a dysentery will certainly follow the gripings, and the sickness at stomach terminate in death. Whereas, on the contrary, by going on gently, and taking time, exhibiting, for instance, a scruple of *mercurius dulcis* once or twice a week, alone, or with a dram of *diascordium*, in case of a tendency to a looseness, a cure will be obtained. For tho' the salivation does never rise to the height, yet an extraordinary sputation will be occasioned, accompanied with a fetid smell, which is the concomitant of a genuine salivation: whence it is manifest that the blood and juices have undergone that peculiar putrefaction, or alteration, whatever it be, which either causes, or proceeds from a salivation (*b*). By this method

(7) If there be little or no sympathy between the inward parts of the mouth and the salival glands. For thus, neither the irritation or exulceration of the mouth are, in any wise, likely to raise a salivation. And if any one should be surprized at us for admitting this variation in sympathies, I would have him consider that sympathies are subject to no rules, but are different in different persons, and that this is frequently the cause why some persons vomit with more or less difficulty from the use of an emetic, shed tears from smoke, sneeze from snuff, *&c.* *See* Astruc *of the ven. dis. vol.* 1. *p.* 225, 226.

(*a*) Instead of tormenting the patient with so rough and churlish a medicine as the *Turbith mineral*, when the salivation advances slowly, it would be much easier to him, and answer the end as well, to make use of a little more of the *mercurial ointment*.

A salivation has been raised by *calcined mercury*, commonly called *mercurius præcipitatus per se*, joined with an opiate, (which is generally thought to rarefy the blood) when every thing else has failed.

(*b*) If the looseness appears to be quite symptomatic, and does not relieve an oppression at the breast, or any bad symptom that affects the patient, it is prudent to stop it by the *e-*

lectuary

thod all the ſymptoms of the diſeaſe will be conquered, provided it be continued a proper time.

Salivation not curative of the *pox*, when it is joined with a *gonorrhœa*.

33. It muſt however be obſerved, that tho' a ſalivation excels every other remedy in curing a *confirmed pox*, yet it is not able to conquer a *gonorrhœa*, when joined therewith, for this diſorder continues after the former is perfectly cured; ſo that from hence it is reaſonable to conclude, that *mercury* is poſſeſſed of no ſpecific virtue *immediately* curative of the *pox*, tho' perhaps it may be entitled a ſpecific *mediately*, inaſmuch as it cures the diſeaſe by the help of a ſalivation, which however is almoſt as abſurd, as to term a lancet a ſpecific for the pleuriſy (*c*).

The method to be uſed in this caſe.

34. But to reſume our ſubject; when the *pox* and a *gonorrhœa* meet in the ſame perſon, the cure of the latter is to be attempted either before or after the ſalivation, tho', in my opinion, it is effected with more ſafety and eaſe after the flux is over; for being joined with the pox, it yields with greater difficulty, but having been in ſome meaſure conquered by the preceding ſalivation, it is ordinarily cured with leſs trouble: purging, however, muſt abſolutely be refrained as long as the ſalivation continues in the ſmalleſt degree. Upon this account, therefore, the cure is more ſafely conducted, by giving a doſe of *turbith mineral*, once or twice a week, than by any other purgatives; as it

lectuary of ſcordium, or ſome equally ſafe aſtringent.——The gripings to which perſons are ſubject in a ſalivation, are relieved by the warmeſt *aromatics*, even of the pepper kind, joined with *opiates*. But the *mercury* does now and then inflame the bowels, and ſo occaſion pain, and it is of great importance to diſtinguiſh this remarkable ſymptom from the common gripings, which may be done by attending to the extraordinary heat, ſtrength, and quickneſs of the pulſe, &c. In this caſe bleeding is indiſpenſably needful, and gentle *laxatives* highly uſeful.———The former muſt be repeated, if there is occaſion, and a proper fomentation applied: *glyſters* have likewiſe their uſe. And here it may not be amiſs to add, that if any very conſiderable ſymptom riſes in the courſe of a ſalivation, that muſt be firſt removed, before we rub in any more *mercury*.

The nerves are often affected during a ſalivation, and ſometimes, tho' rarely, fatal convulſions enſue; in which caſe, *aſa fœtida*, and other *fetids*, joined with *volatiles*, and, if the caſe be very bad, *bliſters* have a remarkable good effect.

(*c*) It is certainly a miſtake to ſay a ſalivation will not cure a clap, for it does that moſt effectually, at leaſt ſo far as to take off all the ill quality of the running, though it will not, indeed, entirely ſtop it.

will

will in ſome meaſure promote the flux, whilſt the matter productive of the *gonorrhœa* will, in the mean time, be gradually carried off (*d*).

An *exoſtoſis* how to be remedied.

35. It muſt likewiſe be noted, that if there be a tumor, uſually termed an *exoſtoſis*, upon ſome bone, which has been of ſo long ſtanding as to render it carious, it will be in vain to attempt the cure of the diſeaſe by a ſalivation, or any other method, unleſs care be alſo had to remedy this accident. And therefore the bone muſt be laid bare by applying a *cauſtic* to it, and its *exfoliation* promoted, by medicines adapted to this end (*e*).

The ulceration of the mouth how mitigated.

36. If the *ulceration of the mouth*, which generally accompanies a ſalivation, be ſo exceeding painful, or

(*d*) Experience ſhews that a *gonorrhœa* frequently continues after the *venereal diſeaſe* has been carried off by a ſalivation

Boerhaave tells us that he has ſeen ulcers all over the body and the *penis* cured by ſalivation, whilſt the *gonorrhœa* remained. *See his prax. med. vol.* v. *p.* 360.

Aſtruc takes notice of it, as a thing that often happens, and delivers the cure thereof with his uſual accuracy and judgment, which being ſo full and circumſtantial, we cannot do better than refer the reader thereto. *See his treatiſe of the ven. diſ. vol.* 2. *book* 4. *chap.* 10. *ſect.* 1. *p.* 159.

(*e*) *Aſtruc* is of opinion, that thoſe *exoſtoſes*, which remain after the courſe of *mercurial unctions*, are not to be meddled with, provided they give no pain.

But if an *exoſtoſis*, ſays he, which has reſiſted the force of the unction, ſhall, either from its own nature, or from being tormented with the application of remedies, have an acute pain and ſhooting, with a manifeſt heat and redneſs of the ſkin, there is ſo great danger of an abſceſs being joined with the *caries* of the bone, or, what is worſe, that it ſhall degenerate into a cancer, that there is no room for delay: therefore it is neceſſary to haſten to the operation, in which a crucial inciſion is to be made upon the ſkin, the four dependent corners ſhould be taken off with the ſciſſars, and the perioſteum being ſcraped away, the *exoſtoſis* is to be perforated with a trepan, in ſeveral places, and then to be entirely ſtruck off with a ſaw or chiſſel, and the baſis that it grew upon is to be brought to exfoliation with powder of myrrh, aloes, or euphorbium, with tinctures from extracts of the ſame medicines, or with the actual cautery, if the *caries* ſhall have penetrated ſo deep as to require it; laſtly, the wound that is left, is to be cured in the ſame manner as ulcers which are joined with a *caries* of the ſubjacent bone. *See* Aſtruc *of the ven. diſ. vol.* 2. *p.* 189, 190.

The common and ſucceſsful practice in caſe of an *exoſtoſis*, is to delay the ſalivation till the bone is exfoliated, and by this means the cure is more certainly effected, and the wound much ſooner healed.

the

the mouth ſo excoriated as to bleed continually, it muſt be often gargarized with *roſe water*, *milk and water*, or a decoction of *barley*, *marſhmallow roots*, and *quince ſeeds*. This is the only ſymptom I know of that is worth notice in a ſalivation, when it is conducted in a proper manner; and in reality, if the pain and ulceration of the mouth could be any way prevented, this diſeaſe would be as eaſily cured as ſome others are, of which much leſs notice is taken *(f)*.

37. As to the diet and other regimen, I conceive they ought to be the ſame in a ſalivation, at leaſt till it declines, with thoſe which are directed in a courſe of purging. For as when a perſon hath taken a purge, he need only keep himſelf warm in his room, and eat ſparingly of eaſily digeſtible food; ſo I can ſee no reaſon why a perſon in a ſalivation ſhould be kept conſtantly in bed, and forbid a ſlender diet, which may ſtrengthen nature, ſtruggling with the poiſon *(g)*. For numbers have been deſtroyed, by their ſtrength and ſpirits being totally exhauſted, by ſweating, purging, and needleſs abſtinence, beſides the miſchief cauſed by the mercury: and frequently alſo, after the diſeaſe is gone off, the patient, not having ſufficient ſpirits left to recover, ſinks thro' debility; or if he eſcapes, it is with ſo much

The regimen in a ſalivation.

(f) If the ulceration ſpreads and eats deep, detergent gargariſms ſhould be uſed; and the ulcers are to be frequently touched with a mixture of *honey* and *ſpirit of ſalt or vitriol*, or the like; at the ſame time obſerving to lower the ſalivation, if it be riſen too high.

(g) It would be extremely wrong, and greatly to the diſcredit of the practitioner, to keep a ſalivated patient in bed. In publick hoſpitals, it is true, it cannot well be avoided, for want of ſeparate warm apartments; but in private practice it may and ought.

The common ſuſtenance of patients in a ſalivation ſhould be intirely liquid, and conſiſt chiefly of broth, water and rice-gruel, milk-porridge, and the like: for the eating ſolid food, even if it could be done, would interrupt the ſalivation.

It may not be amiſs to add here a remark which I could not find a properer place to inſert.—And that is, that if a woman with child be infected with this diſeaſe to ſuch a degree as to require a ſalivation, this circumſtance makes it the more neceſſary; and the practice of the hoſpitals in *London* is to ſalivate the mother, even in the ſeventh month, that the infant in the womb may be cured likewiſe. *Turner*, in his *Siphylis* obſerves, that if a ſalivation be abſolutely neceſſary to cure a woman with child, it may be undertaken in the ſixth or ſeventh month of pregnancy, and gives an inſtance of its being performed with ſucceſs about that time.

much difficulty and pain, that life is not worth the purchase.

Why some are oblig'd to go to *France* to be cured.

38. And here it is easy to refute the objection, why some that undergo so much, in that state of the disease which we have just mentioned, are obliged to go to *France* to be cured. The reason of this I take to be, that in such persons the constitution is broken, and their strength exhausted, so that our thick and moist air hinders their recovery; whereas the air of the *French* climate, which is more healthy and clear, is suited to restore their strength and spirits; and not that the physicians of that nation, however learned they may be, have a better method of curing this disease, than those of our own country (*b*). But to return to the regimen.

39. I am therefore of opinion, and experience confirms it, that besides water-gruel, panada, posset-drink, warm small-beer, *&c.* veal and chicken broth, and the like, may and ought to be allowed in a moderate quantity; and that as soon as the swelling of the gums is so much abated that the teeth can be closed, rabbits, pullets, lamb, and such light meats, may be permitted sparingly, and the patient likewise may sit by the fire, or lie in bed, as he likes best: for as the cure of this disease is to be effected by a salivation, and not by sweating, I see no reason for over-heating the patient unnecessarily.

Advantages of this method.

40. This method is not only more expeditious, as not requiring so many days to be fruitlessly spent in preparing the body before salivation, nor such frequent purgation, nor the common decoctions, after the salivation is over; but I am well assured it is also easier and safer, and more preventive of a relapse; which any person, who has followed the other method, will experience upon making trial of this. At least it has succeeded with me in several patients, some whereof had already gone through more than one salivation, inef-

(*b*) Bathing certainly dilutes the blood by means of the *vasa inhalantia*. A physician of my acquaintance remembers to have seen thirty bathings successively ordered at *Montpelier* by the *French* physicians; and then slight frictions: — and that these only, in that climate, have actually cured the pox.——This method, however, I am persuaded, is not to be depended on in our climate, nor do I think it would be prudent to trust to it, though it has sometimes succeeded.

fectually,

fectually, having always relapſed from the cauſes above enumerated.

41. To conclude, I need not uſe many words, worthy Sir, to gain your eſteem, who have long been convinced of my probity, and vouchſafed to advance my reputation. I will therefore ſay nothing more of this diſeaſe, for it never was or will be a pleaſure to me, to perplex matters by a prolix and intricate ſtile. Be pleaſed then to accept this ſhort performance, how inconſiderable ſoever it be, either in value or bulk; becauſe I wrote it principally for the public good, and to teſtify my regard for you: which, great as it is, is yet leſs than you merit, both from me and all thoſe who are no ſtrangers to your great learning, affability, candour, and other laudable virtues. And indeed I do not flatter you, when I aſſure you, that ſince I was firſt honoured with your friendſhip, I have always ſet the higheſt value on it. For amongſt the obſervations I have made during the ſhort period of my life, this is well worth notice, and what I would likewiſe particularly recommend to my ſon, namely, that an acquaintance with men of eminent probity and virtue, hath always been of ſervice to me; whereas, contrariwiſe, an intercourſe with vicious men, (if ſuch a friendſhip, as is not founded on virtue, does not rather deſerve to be ſtiled a combination or conſpiracy) tho' they never injured me by their words or looks, hath at laſt, by I know not what means, ſometimes proved prejudicial to me or my affairs. Adieu, dear Sir, continue your friendſhip to

The author apologizes for himſelf.

Your moſt obedient ſervant,

THO. SYDENHAM.

An

An EPISTLE *of Dr* WILLIAM COLE *to Dr* SYDENHAM.

Worthy Sir,

YOU will perhaps wonder what impertinent perſon it is that breaks in upon your ſerious ſtudies; but I hope you will pardon me, when I aſſure you, that it is chiefly to expreſs my due acknowledgment, for the ſingular advantages I have received from your elaborate eſſays on *acute diſeaſes*. For you have ſpecified all the conſtitutions of years and of the air, of which you undertook to treat, with great accuracy, and in a quite new method, and have intimated ſuch genuine and very obvious indications, for the cure of all the diſeaſes happening therein, and illuſtrated the work with ſuch excellent remarks, that we may reaſonably preſume, that ſo much ſagacity and indefatigable application will eternally oblige both the phyſicians, and thoſe who ſhall be committed to their care.

But tho' you have wrote ſo accurately of thoſe things you deſigned to treat, that I can ſcarce forbear praiſing you for every particular, yet I chiefly thank you for your method of treating the *ſmall-pox*, by which that, hitherto fatal diſeaſe, may be readily cured, provided it be not attended with malignity, or ſome unuſual ſymptom, or obſtructed by nurſes; a ſet of people, who frequently injure the health of mankind in a great degree, occaſioning irregular ſymptoms by their hot regimen and medicines, and deſtroying abundance of perſons before their time. You ought therefore, learned Sir, to be eſteemed the preſerver of mankind, and a ſure guide to the ſick in the extremeſt danger, conducting them to health, if they will but follow your directions.

For my part, tho' I ſomewhat diſtruſted my judgment, yet I have long been of opinion that the eruption of the puſtules in the ſmall-pox is not the *eſſential* diſeaſe, but the *criſis* of the fever; and, accordingly, that, like other *criſes*, it required a regimen, in which, by the unanimous conſent of phyſicians, the whole buſineſs is to be left to nature, provided all things go on in a proper manner; which generally happens in this diſeaſe,

diſeaſe, nnleſs the blood be immoderately agitated in the beginning. But, after having peruſed your excellent treatiſe, I found that thoſe fears which had ſo long poſſeſſed me and others were groundleſs; and I ventured to treat my patients according to your method, (tho' ſometimes not only the common people, but phyſicians condemned it) which proved ſo ſucceſsful with thoſe that complied with it, that, whatever others think, I ſhall always eſteem myſelf happy in the poſſeſſion of ſo valuable a treaſure.

And when I was called to perſons afflicted with the the *confluent ſmall-pox*, which, however, ſeldom happened, I ſcrupled not, upon your authority, to have recourſe to opiates, though they ſeemed to be expiring, and have had great ſucceſs. And, in reality, you ſeemed to have given us ſo compleat a treatiſe on this diſeaſe, that I ſhould eaſily have imagined that the ſubject was exhauſted, had I not lately been informed by my learned and intimate friend Mr *Kendrick*, who highly extols your civility, that you had ſome new obſervations on this diſtemper, which I cannot but think muſt needs be eminently uſeful in practice, becauſe they are the fruits of *your* labour; and that, unleſs you communicate them to the publick, you will injure mankind and your own character likewiſe. And therefore, if the entreaty of a perſon unknown to you be of any weight, I beg you would publiſh them. But I muſt not ſtop here: for, having learnt from the ſame gentleman, that you have ſome curious obſervations on *hyſteric diſeaſes*, (which as they have exerciſed and fatigued the minds of the ableſt phyſicians of all ages, ſo, alas! do they too often withſtand the methods of cure delivered, and demonſtrate how unſafe it is to truſt to our reaſon in philoſophical matters, except in ſuch things as fall under the notice and teſtimony of the ſenſes). You muſt give me leave to ſay that you will, doubtleſs, greatly oblige both the preſent age and poſterity, by publiſhing your ſentiments of them. At leaſt I beg you will not be offended at the requeſt which I, tho' unknown to you, have ventured to make, both for my own and the publick good, and that you will reckon amongſt the number of thoſe who are moſt devoted to you,

Your obedient ſervant,

Worceſter,
Nov. 17, 1681.

WILLIAM COLE.

An EPISTLE *from Dr* THO. SYDENHAM *to Dr* WM COLE; *treating of the Small-pox and hyſteric Diſeaſes.*

Worthy Sir,

The author's modeſty.

1. WERE I to gratify ſelf-love ſo far as to appropriate to myſelf the praiſes which I have no right to, it would be difficult for me not to betray ſome pride, upon being ſo highly commended by ſo great a man, who, tho' an utter ſtranger to me, is known to the learned world by his excellent writings. But your having honoured me thus far, tho' undeſerving it, I aſcribe to your civility; for the worthieſt men are ſo formed by nature, that they are not only kind to ſuch as err in trivial matters, but are always ready to give a proof of their candour, by commending thoſe who come far ſhort of perfection. And it is with gratitude I own that you have given me a remarkable inſtance of this, by approving my ſlender endeavours, which were intended to benefit mankind.

His reaſons for treating of the *hyſteric paſſion.*

2. You have here what you requeſted, namely, my further obſervations on the *ſmall-pox*, and my new treatiſe of the *hyſteric paſſion*. I begin with the former, that what ſhould ſeem to have been wanting in it hitherto, may be ſupplied by ſuch remarks as are the reſult of a longer experience. But I have undertaken to treat of *hyſteric diſeaſes*, becauſe, except fevers, they happen moſt frequently, and likewiſe becauſe I conceive my trivial obſervations may be of ſome advantage to practice. But I own I had ſtill another reaſon for proſecuting theſe ſtudies, beſides the hope of ſerving the publick, which was to employ my leiſure hours well, and ſpend the long winter evenings agreeably and uſefully, being prevented by age now from going abroad to pick up companions. But whatever it was that firſt induced me, I do not find myſelf ſo fit for the undertaking, as I hoped to be; for that continued ſeries of thoughts which requires a fixt attention, has for many years paſt been prejudicial to my gouty conſtitution, and is more ſo now old age approaches. Yet as I have received your obliging letter, I will, in anſwer to it, treat of theſe matters,

matters, though with more brevity than I at firſt deſigned.

3. Before I begin to treat of the *ſmall-pox*, I muſt inform you, that the ſame ſort of *intermitting fevers*, which, as we have ſaid in another place (*i*), aroſe firſt in 1677, ſtill prevails, *viz.* in 1681, the time of my writing this epiſtle. Theſe fevers, throughout thoſe years in which they reigned, like all epidemics, chiefly raged in thoſe ſeaſons that conſpired moſt with their nature; but upon the approach of another ſeaſon yielded to ſuch epidemics, as that ſeaſon principally favoured. For inſtance, upon the coming in of winter, they always gave way to the *cough* and *peripneumonic fevers* thereon depending, and likewiſe to the *ſmall-pox*; but upon the return of the ſpring they re-appeared. So in the year 1680, when theſe intermittents had prevailed univerſally during the autumn, the *ſmall-pox* ſucceeded them in the winter, and ſpread much. But in 1681, the intermittents returned, tho' they did not ſpread ſo epidemically, their violence being abated, ſo that the *ſmall-pox* appeared along with them in a few places. But at the beginning of ſummer the *ſmall-pox* increaſed every day, and at length became epidemic, and killed abundance of perſons.

First enumerates the then reigning diſorders.

4. What reaſon ſeemed to intimate formerly, appeared manifeſt to me this year, 1681, namely, that it is wrong to confine the patient conſtantly in bed, before the total eruption of the puſtules; for the ſpring and ſummer having been the drieſt ſeaſons that any perſon living could remember, for the graſs was burnt up in moſt places, the blood was by this means deprived of the greateſt part of the humidity, which the air otherwiſe uſually communicated to it; whence the then reigning *ſmall-pox* was accompanied with a more conſiderable inflammation than ordinary, and the other ſymptoms thence ariſing were more violent (*k*). And

The patient why not to be kept in bed before the total eruption of the puſtules.

(*i*) See the epiſtle to Dr *Brady*, Page 297.

(*k*) As the ſpring and ſummer were remarkably dry ſeaſons, it is probable, they were likewiſe very hot; and then the unuſual violence of the ſmall-pox, and its ſymptoms, may be eaſily accounted for. For long continued heat and dryneſs are found to dry and criſp the fibres of the body, quicken the circulation, exhale the baliamic, thin, and aqueous parts of the fluids, and leave the remainder thick and acrimonious, whence it circulates with difficulty, and is much more diſpoſed to obſtructions and inflammations.

this I conceive was the cauſe that *purple ſpots* frequently preceded the total eruption of the puſtules, and that the violent inflammation which expelled them, by diſſolving the texture of the blood, ſuddenly deſtroyed the patient before the due expulſion of the morbific matter. And the diſeaſe proved ſo much the more deſtructive, becauſe the eruptions ſo readily ran together, for the reaſon above intimated; for the intemperature of the air, now, did the ſame miſchief ſpontaneouſly, which ignorant practitioners ordinarily occaſion, by uſing a hot regimen and cardiacs, at the beginning of the diſtemper. For it is a remark well worth noting, and the reſult of the moſt accurate obſervation, that the *ſmall pox* is leaſt dangerous, when the eruptions are few, and moſt ſo, when they are numerous; and accordingly the fewer, or more numerous they are, the patient lives or dies. It muſt, however, be owned, that the *bloody urine* and *purple ſpots*, which ſo certainly prognoſticate death, do ſometimes happen, when there is little ſign of the appearance of the *ſmall-pox*, or only a very few eruptions coming out; but theſe, as they generally accompanied the *confluent ſmall-pox*, ſo they ſometimes came ſo early, as to deſtroy the patient before the total eruption of the puſtules; as we obſerved above (*l*).

Why more or leſs endangered from the paucity or number of the eruptions.

5. I conceive it eaſy to account for the patient's being more or leſs endangered, in proportion to the paucity or number of the eruptions; for as every puſtule is at firſt a *phlegmon*, tho' of a very ſmall ſize, and ſoon impoſthumates, ſo the ſecondary fever, which depends on the matter now making, is more or leſs violent at the height of the diſeaſe, according to the quantity of matter to be ſuppurated, which is uſually compleated in the mildeſt ſort of the *confluent ſmall-pox* on the *eleventh* day, in the middle ſort on the *fourteenth*, and in the worſt on the *ſeventeenth* day. For it muſt be obſerved, that as the confluent kind exceeds the diſtinct in point of danger, as much as it is itſelf exceeded by the plague, ſo likewiſe, the abovementioned three ſorts of the confluent *ſmall-pox*, are comparatively more dangerous the one than the other; which reſpects alſo the ſex, or age of the patient, it being generally known, that perſons in the prime of life are in greater danger in

(*l*) See Page 110. Par. 24. 25, 26.

this

this diſeaſe, than women or children under fourteen.—But this by way of digreſſion.

6. Nor will it ſeem ſtrange that the danger ſhould be ſo great from a large number of eruptions, if it be conſidered that a *phlegmon* (commonly called a *boil*) in the arm or any other part, will occaſion a fever whilſt it ſuppurates; the blood being inflamed by the purulent particles which are received into the maſs from the veins, according to the laws of circulation, and thus giving riſe to the fever. But the phyſician has more reaſon to foretel death, on one of the abovementioned days, when the face, at the beginning of the diſeaſe, appears totally covered with ſmall eruptions, reſembling the filings of ſteel, on account of the extreme violence of the ſucceeding fever, which neceſſarily rages in proportion to the quantity of matter thrown out of thoſe innumerable impoſthumes into the blood. And it is eaſy to foreſee the deſtruction of the patient ſome days before it happens, tho' he thinks himſelf in a fair way, and is reputed to be ſo by the attendants, who are unacquainted with the nature and courſe of this diſeaſe. Further explained.

7. Hence therefore, if the patient be not otherwiſe endangered than from the abundance of eruptions (ſetting aſide the *bloody urine* and *purple ſpots* for the preſent) I conſider well whence this proceeds, and, if it can be done with ſafety, uſe my beſt endeavours to repreſs them, which in reality is the principal thing to be effected, and the way to relieve the patient; every thing being very hazardous, when this kind of the diſeaſe is confirmed: ſo that if the patient ſhould eſcape, it is not ſo much owing to my care, as to a plentiful bleeding at the noſe, or ſome other accidental alteration happening in the courſe of the diſeaſe. Now ſuch an extraordinary eruption of puſtules, in my opinion, proceeds from the too ſudden aſſimilation of the variolous matter; which ſeems chiefly to ariſe either from the over-hot and ſpirituous conſtitution of the patient, or from his having raiſed the fermentation too high, by confining himſelf to his bed too ſoon, taking hot cardiacs, or any ſort of ſpirituous liquor; by which means the blood is diſpoſed to receive the impreſſions of the diſeaſe, more intimately, and nature, being greatly diſturbed by the vaſt quantity of the variolous matter, The number of eruptions whence.

endeavours to change almoſt all the ſolids and fluids into puſtules.

Moſt chiefly occaſioned by confining the patient in bed before the 6th day.

8. The immoderate aſſimilation of the variolous matter, however, cannot be more effectually promoted, than by the patient's confining himſelf in bed unſeaſonably, namely, before the *ſixth* day from the beginning of the illneſs, or the *fourth* incluſive from the eruption, when all the puſtules are come out, and no more are expected. And tho' the moderate warmth of the bed, even after this time, does in ſome meaſure contribute to bring on the delirium, watching, and other ſymptoms, yet theſe are of ſuch a nature, that they readily yield to proper remedies; whilſt the imminent danger of death, that happens on the *eleventh* day, from the great abundance of the puſtules, cannot be prevented or removed by medicine.

This therefore is to be carefully avoided.

9. The patient therefore is to be diligently admoniſhed, by no means to keep his bed in the day-time, till towards the evening of the *ſixth* day, whereby the eruptions will be fewer, and he will be greatly refreſhed (*m*). But after this time, if the puſtules be very numerous, he will ſcarce be able to leave his bed at all, on account of the pain thence ariſing, and a greater diſpoſition to fainting upon ſitting up; ſo that having frequently remarked this, it came into my mind that nature, in the cuſtomary courſe of the diſeaſe, firſt pointed out the time, when it is neceſſary to keep the patient always in bed.

The nature and progreſs of the diſeaſe to be inveſtigated, in order to confirm this rule.

10. But in order to confirm this practical rule, which is of ſo great moment in leſſening the impending danger from the *ſmall-pox*, and in treating of it, at the ſame time, to take our hiſtory of it from the beginning, to the end, it will be proper to draw up a kind of plan of the whole diſeaſe, and make a ſtrict ſearch into its nature and progreſs; ſo that we may at length be enabled to aſcertain the matter clearly, from the unerring reaſon of thoſe who make uſe of the juſteſt obſervations, and not from opinion founded on the ſlippery baſis of fancy.

(*m*) A judicious practitioner tells us, that he never could find that the ſick could bear being kept out of bed ſo long, unleſs the diſtemper was very mild, and the puſtules few. *See Dr* Hillary *on the ſmall pox, 2d edit. p.* 79.

11. In

11. In the firſt place, therefore, its eſſence, ſo far as we can trace the eſſences of things, ſeems to conſiſt in a peculiar inflammation of the blood; in which, nature is employed for ſome days, in the beginning, in preparing and moulding the inflamed particles, for their readier expulſion to the external parts; at which time, the blood being diſturbed, a fever muſt needs be occaſioned; for, the agitated particles, hurrying in a tumultuary manner thro' the veſſels, neceſſarily cauſe a ſickneſs at ſtomach, ſharp pains in the head, and all the other ſymptoms preceding the expulſion, according as they are carried to this or that particular part. But when the eruption is over, the fleſhy parts become the ſeat of the diſeaſe; and, as nature has no other method of expelling the peccant matter from the blood but by raiſing a fever, ſo, likewiſe, it does not free the fleſhy parts from any extraneous body, but by impoſthumation. Thus, if by accident a thorn, or the like ſharp pointed body be lodged in the fleſh, unleſs it be immediately extracted, the parts around ſoon impoſthumate. Hence it is, that when theſe particles are lodged in the fleſh, they at firſt occaſion very ſmall *phlegmons*, wherein they lie concealed; which increaſing every hour, and becoming more inflamed, at length come to ſuppuration; when a part of the matter muſt needs be licked up by the blood which returns by the veins, and if too large a quantity thereof be received into the maſs, it is not only productive of a fever, which the debilitated patient is unable to bear, but alſo taints the whole maſs. Nevertheleſs, this is not the principal evil; for, by the extreme heat of the fever during the laſt days of the illneſs, occaſioned by the exceſſive violence of the matter, the ſalivation, which ought always to accompany the *confluent ſmall-pox*, is ſtopt too ſoon, whence immediate death enſues. But if only a ſmall quantity of the purulent matter be received into the blood, the violence of the ſecondary fever is eaſily checked by the increaſing ſtrength of nature, and the puſtules drying away gradually, the patient ſoon recovers.

It ſeems a peculiar inflammation of the blood.

12. Now, allowing this to be the genuine and juſt hiſtory of this diſeaſe, it is manifeſt, that failure or ſucceſs, on either hand, depend upon laying a good or bad foundation for the cure in the beginning. For if theſe

Failure or ſucceſs depend upon the procedure in the beginning.

theſe hot and ſpirituous particles be rendered more ſo by hot medicines, and eſpecially by a conſtant confinement in bed, the aſſimilating virtue, which they already poſſeſs in too great a degree, muſt needs be heightened and increaſed. And, beſides, the blood and other juices being hereby heated, yield more readily to the ſtronger impreſſion of the particles, whence more eruptions appear than ſhould, and life is, in conſequence, unneceſſarily endangered. Whereas the contrary, *viz.* the moderate cooling regimen, and the free uſe of the air, not only abate the force of the hot tumultuary particles, but likewiſe thicken and ſtrengthen the juices; ſo that they are better enabled to reſiſt the morbific ſpirits, and ſupport their violence; and hence no greater quantity of variolous matter is prepared, than is natural in this diſeaſe.

Diſadvantages of too early confinement in bed.

13. But the only inconvenience ariſing from a too early confinement in bed, is not from the aſſimilation of too large a quantity of the morbific matter, and the immoderate exaltation of the ferment of the diſeaſe; for the ſame cauſe frequently produces *bloody urine*, and *purple ſpots*, eſpecially in ſummer, and in perſons in the vigour of life. In my opinion both theſe ſymptoms proceed from the heat and commotion raiſed in the blood by hot and ſpirituous particles; by which it is agitated and conſiderably attenuated, ſo that it burſts the veſſels, cauſing *bloody urine* when it forces its way thro' the kidneys, and *purple ſpots*, when it is ſtrained thro' the extremities of the arteries terminating in the muſcles and ſkin, which reſemble ſo many mortifications in thoſe parts wherein the extravaſated blood is coagulated (*n*). And tho' both theſe ſymptoms might eaſily

(*n*) Theſe terrible ſymptoms ſhould ſeem to proceed from the acrimony, putrefaction and diſſolution of the blood; and if any thing can give relief, it muſt be bleeding, and the uſe of acids and reſtringents; which is agreeable to our author's opinion. But ſuch, alas! is the preſent imperfect ſtate of medicine, as to afford little hopes of a cure in theſe calamitous circumſtances, which for the moſt part terminate in the deſtruction of the patient.

In the *bloody* ſmall-pox, if there is any room for phyſick, (ſays Dr *Mead*) thoſe medicines bid faireſt for ſucceſs, which by their ſtypticity thicken the blood in ſome meaſure, and ſo check it, that it cannot break thro' even the ſmalleſt arteries. The beſt of this kind are the *Peruvian bark*, *alum*, and that *ſpirit*

eaſily have been prevented in the beginning (when they chiefly happen) by a cooling regimen and diet; yet when they actually appear, whoever attempts to cure them, by confining the patient in bed, and exhibiting cardiacs, will find himſelf as much in the wrong, as an old woman would be, who, to make her pot boil more gently, ſhould make a larger fire underneath.

The patient ſometimes to be expoſed to the open air, at the beginning of the diſeaſe.

14. But, to acknowledge the truth upon this occaſion, (tho' it ſhould chance to diſpleaſe the dogmatical, and ſuch as are unacquainted with this matter, and therefore incompetent judges) it is not only unſafe to keep the patient always in bed the firſt days of the illneſs, but ſometimes neceſſary to expoſe him to the open air, *viz.* if it be the ſummer ſeaſon, and he not paſt the prime of life, or if he has been accuſtomed to ſpirituous liquors, and eſpecially if the diſeaſe be owing to hard drinking. Now in theſe caſes the too haſty eruption of the puſtules cannot, in my judgment, be ſufficiently checked by refraining from bed, and taking no cardiacs; for the blood, unaſſiſted by theſe, is ſo overſtocked with hot ſpirits, of a like kind with the diſeaſe, that a ſort of violent exploſion of it muſt neceſſarily happen; and moreover ſuch a plenitude of humors will reſolve into puſtules, that the patient, being

ſpirit which is called *oil of vitriol.* Now theſe are to be uſed alternately in this manner: A dram of the *bark* may be given every ſixth hour; and, three hours after, a proper quantity of *alum.* It will be a very powerful medicine, if thus compounded: melt three parts of *alum* on the fire, with one part of that inſpiſſated juice, which is improperly named *dragon's blood:* when the maſs is grown cold, reduce it to a powder; a ſcruple of which made into a *bolus* with *conſerve of red roſes,* will be a proper doſe. The moſt convenient manner of giving the *oil of vitriol,* is in the *tincture of roſes*; five or ſix ſpoonfuls whereof may be taken ſeveral times in the day: and beſides, the patient's common drink may be acidulated with it; eſpecially if purple or black ſpots appear interſperſed among the puſtules. And this medicine will be of great ſervice, not only in the *bloody,* but in all the other ſorts likewiſe, accompanied with theſe ſpots. This one thing more I will add, that I have experienced the uſe of *bliſters* to be ſafe enough in this caſe, when a *delirium* requires their application. I have indeed ſeen ſome patients recover by this method, who had diſcharged large quantities of blood by the urinary canal at the time of the eruption of the puſtules: but it is worthy of remark, that in all theſe the diſeaſe terminated in ſome conſiderable evil.——Stack's *tranſlation of the doctor's diſcourſe on the ſmall-pox,* p. 51.

quite oppreſſed by the very copious matter returning into the blood, muſt inevitably periſh at the cloſe of the diſeaſe.

How deſtroyed at this time.

15. But the immoderate exaltation of the ferment, does frequently encreaſe the force of the variolous matter ſo much, that the patient ſinks at the beginning of the diſeaſe, *viz.* when the morbific matter cannot diſentangle itſelf and come out, by reaſon of the confuſed and irregular motion raiſed in the blood; but *bloody urine*, and *purple ſpots*, ſucceed inſtead thereof, and cloſe the cataſtrophe (*o*). And theſe likewiſe often happen in the *meaſles* and *ſcarlet fever*, if the eruption be unſeaſonably and vigorouſly promoted.

Bleeding leſs ſerviceable now than the admiſſion of freſh air.

16. Nor do I find that bleeding, (tho' it be uſed early) does ſo effectually check the overhaſty aſſimilation of the variolous matter, as cooling the blood by the air received in by breathing, eſpecially if the patient be put to bed immediately after the operation, and heated by hot cardiacs; the blood being by this means more diſpoſed to receive the impreſſions of the adventitious heat, than it was before bleeding. And I ſolemnly affirm, that one of the worſt caſes I ever met with in the *confluent ſmall-pox*, in which the patient died on the *eleventh* day, happened in a young woman ſoon after her recovery from a *rheumatiſm*, by the uſual method of copious and repeated bleeding (*p*). And from this inſtance I firſt

(*o*) When the blood is moved with too great velocity, no ſecretion can be regularly made, but much of what ſhould be thrown out will remain in the maſs; which will doubtleſs render it more acrimonious, and, conſequently, encreaſe the fever, and occaſion ill conditioned ſymptoms.

(*p*) The death of this patient, which, the author ſeems to inſinuate, happened from the previous repeated bleeding, ſhould, perhaps, rather be aſcribed to the inflammatory and very tenacious ſtate of the blood, which the rheumatiſm always leaves behind it.

That not a few phyſicians ſhould ſcruple bleeding in an inflammatory fever in a plethoric and young ſubject, for fear the morbific matter ſhould not come out, or be driven back, may well ſeem ſtrange; ſince the violence of the fever, and the remarkable force wherewith the puſtules in the confluent ſmall-pox generally break out, put this matter out of all doubt; and this not only in the beginning of the diſeaſe, but even after the eruption, or in any other ſtage of it, if the patient be in danger from an inflammation of the lungs, the brain, or ſome other noble part. But tho' this evacuation is beſt uſed when the patient is firſt ſeized, yet if the fever continues high after the

firſt learned, that bleeding did not contribute ſo much to keep the *ſmall-pox* within its due limits, as I heretofore

the eruption, and violent ſymptoms require it, nothing forbids its being repeated as there ſhall be occaſion: for the phyſician ought not to attend ſo much to the ſtages of a diſeaſe, and the idle notion of malignity, as to the ſymptoms that endanger the life of his patient. And, in reality, tho' the nature of a fever appears pretty plainly by the violence of it in the firſt days of the illneſs, yet after the eruption we can more certainly judge of the ſymptoms that will ſoon ſucceed, and of the termination of the diſtemper, than before; and therefore we ought to do our beſt in this ſtage of it (eſpecially before ſuppuration is finiſhed) to prevent thoſe ſymptoms which, from the nature of the diſeaſe, we know will neceſſarily ſucceed in the courſe of it. Now this evacuation moſt effectually anſwers this purpoſe, and may not only be performed with ſafety, but repeated if the nature of the diſtemper requires it, and may and ought to be joined with other evacuations that promote the ſame end, as abundant experience hath long ſince taught me. Beſides, who does not know that moſt women in the courſe of the diſtemper have their menſes, and are the better for it, though this evacuation happens not at the uſual period? And we have known others ſnatched from imminent death by a plentiful bleeding at the noſe; and why when nature denies her aſſiſtance, art may not adminiſter the ſame relief, cannot eaſily be accounted for.

Whether *Sydenham*'s ſuſpicion of the uſefulneſs of this evacuation, founded on a perſon's recovering from a *rheumatiſm* by copious bleeding, who nevertheleſs had a very bad confluent ſmall-pox, which has infuſed the like doubts into the minds of ſeveral others, is in reality of uſe or not, may be queſtioned. But if we attend to the uſual ſtate of the blood in the *rheumatiſm*, it will manifeſtly appear, that the *fluxing* of the approaching *ſmall-pox* could no ways be prevented in ſuch a caſe by the preceding bleeding; and that it was in vain to expect this ſort of effect from it. For, bleeding in the *rheumatiſm*, in ſuch proportion as the diſeaſe requires, is uſed to abate the tenſion of the veſſels, moderate the heat of the fever, and to make room for dilutents and attenuants; but after the pains are gone off, the blood retains this inflammatory ſtate in ſome degree for a conſiderable time, notwithſtanding the preceding bleeding, which appears by an accurate ſurvey of the blood after the departure of the fever, as well as from the frequent relapſes into this diſtemper from the ſlighteſt cauſe; and this not only in thoſe parts which were before affected, and in which the veſſels might be ſuppoſed to be ſomewhat obſtructed, but even in thoſe which never before were ſubject to the pains. Such blood, therefore, abounding with a viſcid inflammatory *ſtimulus*, in conjunction with the variolous matter, will attack the patient with double violence; and be much more apt to be detained in the ultimate veſſels of the membranous parts, than natural blood, and raiſe puſtules and inflammations there, whence the ſmall pox will neceſſarily be more

ſevere.

fore imagined; tho' I have frequently obſerved that repeated purging, before the blood is infected, generally renders the ſubſequent *ſmall-pox* of a mild and diſtinct kind (*q*). 17. I

ſevere. Experience likewiſe confirms this; for I never knew an inſtance where the blood was in this inflammatory ſtate at the acceſs of the diſeaſe, from whatever cauſe this diſpoſition of it proceeded, but the ſmall-pox would flux.

And indeed, if the excellent author had ſufficiently conſidered the caſe he gives us of the lady ill of the *black ſmall pox*, (*p.* 184. *par.* 11.) who on the third day after the eruption, and at an unuſual time, was ſeized with a copious menſtrual diſcharge, which laſted ſeveral days, it is hardly probable that he would have propagated ſuch a ſuſpicion in the reſt of his writings.

To conclude therefore from this caſe, againſt the uſefulneſs of bleeding in the ſmall-pox, is wrong.

But they conſult the health of their patients ſtill leſs, who, induced by fearfulneſs rather than reaſon, dread this ſafe evacuation, and endeavour to ſupply the neglect of it, whilſt the fever rages, to the great and certain danger of the ſick, by bliſters, cordials, and other ſtimulating medicines. But how much the violence of the fever, both in this and the future ſtages of the diſeaſe, is increaſed by ſuch a method, or how widely the promoting an evacuation without a *ſtimulus* differs in its effects, from another which vellicates and tears the fibres, and gives a greater degree of acrimony to the humours already too acrid of themſelves, I need bring no arguments to prove.

There are ſome ſubjects, however, (but fewer than thoſe of a contrary habit) who, partly from the weakneſs of the nervous ſyſtem, and partly from the ſlow circulation and viſcidity of their juices, are really languid and weak: now ſuch, and ſuch only receive benefit in this ſtage of the diſeaſe, from bliſters, cordials, and the like remedies, that furniſh nature with ſtrength equal to the illneſs; but thoſe that want neither ſpirits nor ſtrength, experience the contrary, unleſs perhaps ſome very bad ſymptom neceſſarily requires the help of a *ſtimulus* for a time. *Commentar. Noſologic.* p. 92. *& ſeq.*

(*q*) Dr *Hillary* recommends a preventive method for the ſmall-pox, which conſiſts in taking ſeveral doſes of proper *antiphlogiſtic purging phyſic*, at ſuitable diſtances from each other; abſtaining, on the days between purging, and during ſome time, from all heating, high ſeaſoned meats, and hot ſpirituous liquors, uſing a thin, cooling, and diluting diet, drinking ſmall, cooling, and gratefully acid liquors, and being very regular in the non-naturals. He obſerves, that if the perſon be of a very ſanguine habit, bleeding will be requiſite, or if the ſtomach is foul, a vomit, before the courſe of purging is begun.

He adds, by this regimen the crude humours of the body will be carried off, the fluids cooled, and rendered leſs liable to inflammation, or putreſcency; and, conſequently, the ſucceeding diſeaſe and its ſymptoms will be more mild and favourable.

I have

17. I am well aware that ſeveral objections may be made to this opinion of ours, of permitting the patient to ſit up in the day time; which may have great weight with the common people, and ſuch as are little ſkilled in this diſeaſe, to whom the lower rank of phyſicians generally appeal as proper judges in the caſe, that they may ſupport their ill-grounded reaſoning by their authority: ſuch reaſonings being in reality better adapted to their capacities, than thoſe that are the reſult of deliberate conſideration in men of deeper penetration. Hence it follows, that as the bulk of mankind can only arrive at a ſuperficial knowledge of things, and but few have ability to go to the bottom, ſo theſe pretenders to learning, under their patronage, eaſily get the better of the more intelligent, who are often expoſed to calumny, but bear it patiently, becauſe they have truth, and the moſt knowing men, tho' not the greateſt numbers on their ſide.

Objections may be made to the patient's ſitting up in the day-time.

18. It is objected, firſt, that ſitting up in the firſt ſtage of the diſeaſe hinders the eruption of the puſtules, and, of courſe, prolongs the ſickneſs, and other ſymptoms proceeding therefrom; which indeed I own, and daily experience confirms it. But then it muſt be enquired, which of the two is moſt dangerous; (1) to give a little check to the variolous matter, and thus prolong the ſickneſs occaſioned by keeping back the eruption, or (2) to increaſe the ferment of the diſeaſe, and aſſimilate ſo large a quantity of variolous matter, as to endanger the life of the patient, by the *ſecondary fe-*

Some of them enumerated, and anſwered.

I have always obſerved, that the longer the method above recommended was continued, before the perſon was infected, the more mild and favourable the diſeaſe was rendered, the ſymptoms more moderate, and the puſtules fewer. I never ſaw the *confluent ſmall pox* follow the uſe of it, even when the perſons were infected from ſuch as had that ſort of *pox*, and in ſome families to whom this diſeaſe had been frequently fatal. It is the chief, if not the ſole advantage, which inoculation has above the common way of infection, that the body by this, or ſome ſuch-like method, may be prepared for the attack; and thoſe who don't approve of inoculation, may, as far as I have hitherto found by experience, reap all the advantages of inoculation, without being concerned in giving the diſeaſe: and if the perſon thus prepared ſhould eſcape the infection, ſuch gentle cathartics, and a temperate way of living, though continued for ſome time, when the *ſmall-pox* reigns in the neighbourhood, will be far from injuring the conſtitution. *See his practical eſſay on the ſmall pox, p.* 59. *& ſeq.*

ver

ver on the *eleventh* day. I conceive it will appear, upon duly conſidering the matter, that very few have died merely becauſe the *ſmall-pox* did not come out ſooner or later; unleſs perhaps a few of thoſe, whoſe blood being inflamed by exceſſive heat and motion, circulated with ſuch velocity, as not to allow ſufficient time for the morbific matter to be expelled ſlowly; which is an argument in favour of my opinion.

19. For tho' we do nothing at all, we need not fear but the variolous matter (how much ſoever it ſhifts at the beginning of the illneſs, and oppreſſes the various parts it attacks, occaſioning violent ſymptoms, as enormous vomiting, pain in different parts, *&c.*) will, nevertheleſs, at length be conquered by nature, and driven to the ſkin; eſpecially as the coſtiveneſs of the patient, to this time, promiſes a certain, tho' a late eruption of the puſtules afterwards. But, contrariwiſe, how many dangerous ſymptoms enſue whenever the eruption is unſeaſonably promoted! It would take up too much time to enumerate them all: and we have already mentioned the chief, which are, (1) the number of eruptions too much augmented, whereto the fever which comes at the cloſe of the diſeaſe is proportionable, and accordingly more or leſs dangerous; (2) the *bloody urine*, and *purple ſpots*, both proceeding from the extravaſated blood, which being too much attenuated and violently agitated by immoderate heat, runs off wherever it finds a paſſage; (3) as we have already remarked, a total ſtoppage of a proper eruption, occaſioned be endeavouring too ſollicitouſly to promote it, which fails of anſwering the end.

20. If it be aſked, why a proper ſeparation of the variolous matter may not be as well promoted at the beginning of the diſeaſe, by refreſhing the patient with the moderate warmth of the bed, as without it; I aſk, by way of reply, whether experience does not teſtify, that a perſon in winter, whilſt he lies in bed moderately covered, without a fire in the room, is much warmer, than when he ſits up therein well cloathed? And if the difference here be manifeſt enough, I next enquire, which of the methods is beſt adapted to check the immoderate motion of the variolous ferment? which, in my opinion, the phyſician ought chiefly to endeavour in the beginning,

beginning, and according as he deviates more or leſs from this end, he will aſſiſt, or injure his patient. (*r*).

21. But what has chiefly impoſed upon the unattentive in this caſe, is their having obſerved a tendency in the patient to ſpontaneous ſweats, which continually flowing whilſt he keeps his bed, much more abated the feveriſh heats, than in thoſe who did not ſweat. Let us therefore firſt conſider, why we ſollicitouſly endeavour to check the fever, ſince it is the uſual inſtrument which nature chiefly uſes in preparing and expelling all kinds of noxious matter which lurk in the blood. For it is evident, that whilſt we carefully promote ſweat, in order to leſſen the fever, we by the ſame means force out a crude and indigeſted humour, like unripe fruit, and by theſe ſweats afterwards cauſe a high fever; for by this method the ſerum of the blood, wherewith the blood itſelf, and thoſe newly generated hot variolous

The fever why to be check'd in the beginning.

(*r*) It muſt be acknowledged, that it is oftener neceſſary to depreſs the fever, at the beginning of this diſeaſe, by bleeding, vomits, gentle lenitives, and proper cooling medicines and opiates, than to raiſe it; and this is the moſt effectual and ſafeſt method of promoting, inſtead of checking the eruption: for if the blood hurries on too quick, it will not allow ſufficient time for the morbific matter to be expelled ſlowly, as it ought to be. *See above, par.* 18. *towards the end.* But before attempting any evacuation, let the ſtate of the patient be maturely conſidered, becauſe a *ſtimulus* is ſometimes proper, and indiſpenſably required. *See p.* 114. *note* (*s*).

A good writer on this diſeaſe obſerves, that as the regular and complete eruption and ſuppuration may be retarded, either by the over-violent motion of the blood, or, on the contrary, by its being too low, languid and weak, and that an error on either ſide may prove fatal; a ſtrict regard muſt be all along had to the pulſe, fever, and ſtrength, of the patient, as well as the number of the puſtules, and other ſymptoms, that they may be kept regular and moderate; and whenever they are not ſo, nature muſt be aſſiſted, accordingly as theſe indicate and require; either by the uſe of *antiphlogiſtics* and *evacuations*, &c. as before directed, or by *gentle cardiacs*, and *alexipharmic medicines*, &c. But the latter are ſcarce ever required in the firſt ſtate, and not near ſo often in the ſecond, as the *antiphlogiſtics* are; beſides, as Dr *Sydenham* obſerves, the over officious petticoat doctors prevent this, by giving ſack and ſaffron, and their other good things, as they call them, whereby they too often either kill the patient, or at leaſt render the cure very difficult: yet I am well aſſured, that ſome have been as directly murdered by the too liberal uſe of cold water, when the lowneſs of the fever, and oppreſſion of nature, required a warmer *regimen*. *See Dr* Hillary's *pract. eſſay on the ſmall-pox, p.* 79, 80.

particles

particles are diluted, is driven out, and in the mean time theſe particles become more noxious and active, inaſmuch as they are now freed from the ſerum, already exhauſted by ſweat. In ſhort, the abatement of the fever and other ſymptoms by ſweat, and the too haſty expulſion of the puſtules hereby occaſioned, have ſucceeded ill in abundance of perſons, who have periſhed on the *eleventh* day from this cauſe.

Needful to refrain from bed at the beginning only, in the *confluent ſmall-pox*.

22. But it is to be obſerved, that I charge the patient to refrain from bed, only on ſuppoſition that the approaching *ſmall-pox* is of the confluent kind: for as to the diſtinct ſort, provided it can be certainly foreſeen, the patient need not be kept always in bed, or enjoined to ſit up, as the paucity of the eruptions prevents all danger either way.

The author's opinion founded on obſervation.

23. However, I do not flatter myſelf ſo far, as to think, that what I have here delivered ſhould be credited upon the authority of my ſlender judgment. And, in reality, I have ever ſo lightly eſteemed the ſentiments of the generality of mankind, that I may always reaſonably ſuſpect my own, when they claſh with thoſe of others; and I ſhould be upon my guard in this caſe too, if my reaſonings were not unanimouſly ſupported by practical obſervations. For, ſetting aſide theſe, what appears reaſonable to me or any other perſon, may, perhaps, be nothing more than the ſhadow of reaſon, that is, barely opinion. And the more I converſe with men, the more I am convinced how dangerous it is, for perſons, of the acuteſt underſtanding, to rack their brains in making a ſtrict ſearch into any art or ſcience, unleſs matter of fact be conſtituted the judge and teſt of truth and falſity. For, to uſe *Cicero*'s words, thoſe who are ſo highly prepoſſeſſed of their abilities, deviate widely from truth, in mere ſpeculative matters; whereas thoſe who apply their minds only to ſuch things as may be certainly determined by practice, tho' they ſhould happen to miſtake, would ſoon be ſet right, by bringing their notions to this touchſtone. For inſtance, in the preſent caſe, cannot I certify myſelf by obſervation, what method is moſt productive of a favourable or ſevere kind of *ſmall-pox*; and ſo form a judgment thereof, agreeable to the clearneſs of the fact? And were others to follow this way of reaſoning, I ſhould be ſatisfied with their conduct; but it is moſt unjuſt

unjuſt to accuſe me of advancing falſities, without having once tried whether the method, ſo frequently mentioned above, of keeping the patient up in the day time, at the beginning of the illneſs, be advantageous or detrimental. Sure if this humour of defaming thoſe who diſcovered truths, tho' contrary to generally received opinions, had formerly prevailed, no body would have attempted to make any diſcoveries that might be uſeful to mankind. But why ſhould I give myſelf ſo much trouble, if a long courſe of experience did not manifeſt this method to be much ſafer than the common one. For I am not ſo weak and ſenſeleſs as to ſeek for reputation, by exploding the opinions of thoſe, whom I ought to flatter, if I courted applauſe. Neither is it to be ſuppoſed that I am ſo abandoned, as to uſe my authority to compaſs the deſtruction of late poſterity after my deceaſe, that ſo I might murder my fellow-creatures when I am dead, as well as during my life; which I tremble even to mention (*s*).

He followed this method in his children and relations.

24. However it be, I have uſed this method in my own children, my neareſt relations, and all thoſe I have attended; and am conſcious of no fault, unleſs it be the yielding ſometimes to perſons of a contrary opinion, to avoid the imputation of moroſeneſs and obſtinacy; for the truth of which I appeal to my intimate acquaintance. But this has not been my ſole misfortune; for ſometimes, alſo, notwithſtanding that the attendants had contemned my advice and directions throughout the courſe of the diſeaſe, yet they have charged me with the death of the patient, tho' he periſhed by the heat which his friends and the nurſe promoted, and I exclaimed againſt ſo loudly (*t*). Hence, I could not help

(*s*) The candour and integrity of our judicious author are ſo generally acknowledged, that he is frequently entitled the *candid*, the *honeſt Sydenham*: and whoever peruſes his works with attention, will, I may venture to ſay, be abundantly convinced that he deſerved theſe appellations; and, conſequently, that he muſt be very far from being guilty of a crime which all good men have in abhorrence.

(*t*) This is too often the hard fate of the moſt experienced and honeſt phyſicians; allowances being ſeldom made for the perverſeneſs, or irregularity of the patient, and the miſmanagement of his friends and attendants. But how unjuſt, how ungenerous is it to charge them with the faults of others, and impute to them a misfortune which is wholly owing to a neglect of their wholeſome advice and cautions! *See the note* (*z*) *at p.* 216, 217. *towards the end.*

thinking,

thinking, conſidering the inſuperable prepoſſeſſion of the multitude, that it would be better for me, if I were never to be called again to attend any perſon in this diſeaſe.

The method defended.

25. I own, indeed, that the *ſmall-pox*, in what manner ſoever it be treated, will ſometimes prove highly confluent; whence this diſeaſe is never void of danger, tho' the beſt method and medicines be uſed to prevent it. But it is enough for my purpoſe to aſſert, authorized by frequent experience, that whoever refrains from bed in the day time at the beginning of the diſeaſe, abſtains entirely from fleſh, and drinks only ſmall liquors, is abundantly ſafer than he that confines himſelf immediately in bed, and takes hot cardiacs. For this method, as abovementioned (*u*), will generally prevent too large a crop of eruptions, and conſequently the exceſſive effervеſcence of the ſecondary fever, which not only proves deſtructive of itſelf, but by thickening the *ſaliva* too ſoon, endangers the patient in the declenſion of the diſeaſe. Moreover, this method is preventive of the *purple ſpots* and *bloody urine*; both which ſymptoms ſeize at the beginning of the diſeaſe, and often before any ſign of the eruption appears; which ordinarily happens, alſo, in the *meaſles*, *ſcarlet fever*, and other acute diſeaſes proceeding from a violent inflammation. Not to mention the ſingular refreſhment the patient finds from the admiſſion of freſh air, every time he is taken out of his warm bed; which all thoſe that I was ſuffered to treat in this manner, openly declared, and were very thankful for, having, as it were, received new life and ſpirits from breathing a cooler air (*x*).

The inclinations of the patient to be gratified.

26. Hence I have been induced to reflect, how much more frequently we are deceived, by the ſpecious appearance of reaſon, than by ſenſe, of which we have the ſureſt knowledge; whence it ſhould ſeem, that more regard is to be had to the appetites and longings of the patient, if they be not very irregular, or immediately deſtructive, than is due to the more precarious and fallacious rules of the healing art. To exemplify this: a perſon in a burning fever, earneſtly deſires to drink freely of ſome ſmall liquor to refreſh him; but

Exemplified.

(*u*) See above, *Par.* 9. *p.* 372.

(*x*) Great caution ſhould be had in this reſpect in tender and delicate ſubjects, otherwiſe fatal effects may enſue.

the

the rules of art, which are built upon ſome hypotheſis, having a different deſign in view, thwart the appetite of the patient. and, inſtead thereof, order a cordial. In the mean time the patient, not being ſuffered to drink ſmall liquors, nauſeates all kind of aliment; but art, eſpecially that which is profeſſed by the patient's friends and attendants, earneſtly requires he ſhould eat. Another, after a long illneſs from the ſame cauſe, begs hard for ſome uncommon, and, perhaps, pernicious eatable; and here again, impertinent art thwarts the inclination of the patient, and threatens him with death if he diſobeys: unleſs, perhaps, the artiſt thoroughly underſtands this excellent aphoriſm of the ſagacious *Hippocrates*, viz. *Such food as is moſt grateful, though not ſo wholeſome, is to be preferred to that which is better, but diſagreeable (y).*

Proved to anſwer the beſt ends.

27. Now, he that is but little verſed in the practice of phyſic, will readily grant, after due conſideration, that in all theſe deviations of nature, ſeveral patients have immediately mended, upon their non-compliance with the directions of their phyſician, and indulging their own inclinations. Nor will this ſeem ſtrange, if it be conſidered, that the all-wiſe creator has formed the whole with ſuch exquiſite order, that as all the evils of nature eminently conſpire to compleat the harmony of the whole work; ſo every being is endowed with a divine direction or inſtinct, which is, in a manner, interwoven with its proper eſſence, whereby it removes thoſe ills from itſelf. And this is manifeſt, in the natural termination of many *acute diſeaſes* (which

(y) That this is true, moſt phyſicians can teſtify from experience. We have known ſeveral perſons recover from very deſperate diſeaſes, after having gratified their appetites, whether by ſtealth, or the indulgence of the phyſician, how ſeemingly irregular ſoever they were. In effect, however noxious the quality of the thing coveted appears to be, the patient can generally err only in taking too much of it. To account for the advantages that accrue from the gratification of theſe irregular appetites, contrary to the ſtrongeſt preſumptions, in a ſatisfactory manner, I leave to thoſe who delight in ſuch curious and ſubtile ſpeculations. Our author in the following paragraph ſeems to reſolve theſe appetites into a kind of providential inſtinct, implanted in mankind for their preſervation; in which he is to be admired for his religion, to which he every where makes his philoſophy ſubſervient. *See p.* 215. *Par.* 20, 21. *and the note (z) at p.* 216, 217. *towards the end.*

generally proceed from God, as *chronic* ones do from ourſelves) and likewiſe in the propenſions which accompany them, and make way to free the patient from that danger, which art, when exerciſed by the ignorant, uſually occaſions. And hence, indeed, the ſafety of mankind was provided for, who had otherwiſe been in a melancholy condition, at a time when the healing art was totally confined within the narrow bounds of *Greece*, which bears much the ſame proportion to the reſt of the world, as a little village does to *Great Britain*. And, even at preſent, what would be the fate of the inhabitants of ſo many other vaſt countries, ſince all *Aſia*, *Africa*, and *America* (except a few thinly peopled colonies lately eſtabliſhed) and likewiſe a great part of *Europe*, remain utterly deſtitute of the art of phyſic (*z*)? But as an elegant comic writes, to diſtinguiſh ſuch as were famous for reaſon, and the practice of virtue, from the herd of thoſe that diſgrace the human form by a brutal life, ſays, *they are men, if they behave like men:* ſo likewiſe the art of medicine, if it be a real art, and not barely a name, is the beſt of all worldly gifts, and ſo much more preferable to all others, as life ſurpaſſes all the enjoyments it brings with it (*a*).

(*z*) This will, perhaps, appear to be alledged without ſufficient foundation, unleſs it be underſtood in a qualified degree. Medicine, conſidered as an art, might have been confined within theſe narrow limits within our author's time; but remedies had been univerſally ſought after, and many were diſcovered, ſoon after mankind became ſubject to diſeaſes; it being natural for them to ſeek relief. Thus phyſic had its origin from a principle of ſelf preſervation; and in this ſenſe it may be aſſerted, that no nation, however barbarous, was without ſome knowledge of it; as being poſſeſſed of ſeveral experienced remedies for particular diſorders.

(*a*) Health of body being the next valuable bleſſing to health of mind, the art which treats of the means of preſerving good, and reſtoring ill health, and is upon ſuch an infinite number and variety of occaſions found to anſwer theſe noble ends, may with reaſon be reckoned amongſt the moſt excellent, neceſſary, and uſeful ones we are acquainted with. What multitudes of mankind have been, and are daily, indebted to it for a great part of the happineſs of their lives: — living monuments of its real and extenſive uſefulneſs. Does ſuch an art ſtand in need of laboured encomiums to diſplay its excellencies? No—ſuch notorious inſtances are a demonſtrative proof of them; which no raillery, or invectives, can in the leaſt invalidate.

28. But,

28. But, to return to our ſubject; how advantageous ſoever it be, in general, to keep the patient from bed at the beginning of the diſeaſe, yet ſometimes (which is to be obſerved) he muſt be wholly confined to it, before the eruption. For inſtance, when a child, after dentition, is ſuddenly ſeized with convulſions, we muſt conſider that this may probably proceed from the endeavour of nature to drive out the eruptions of the *ſmall-pox*, *meaſles*, or *ſcarlet fever*, though they yet lie concealed in the ſkin. In order, therefore, to guard ſufficiently againſt this dangerous ſymptom, a bliſter muſt be immediately applied to the neck, and the child put to bed, and a cordial exhibited with a ſmall quantity of ſome opiate; whereby, the cauſe of the diſeaſe may be more powerfully expelled, and the diſturbance alſo quieted, which occaſioned the fit. For inſtance, five drops of *liquid laudanum* muſt be given to a child of three years old, in a ſpoonful of *plague-water*, or the like (*b*). And, in truth, I much ſuſpect, not to ſay I am certain, that ſome thouſands of children, and ſome grown perſons, have been deſtroyed for want of the phyſician's reflecting that theſe convulſions are only the fore-runners of the abovementioned diſeaſes: for unthinking practitioners taking theſe fits, which are really ſymptomatic, for eſſential diſeaſes, and attempting to cure them by a frequent repetition of glyſters and other evacuations, hinder the eruption of the *ſmall pox*, and ſo prolong the fits, which they ſo ſollicitouſly endeavour to conquer, and which would, otherwiſe, certainly vaniſh ſpontaneouſly, upon the appearance of the puſtules. Beſides, the *ſmall-pox* that is preceded by convulſions in children, (as we have elſewhere intimated) (*c*) attack them in a gentle manner, and ſeldom proves very confluent; ſo that the patient may be put to bed, with much leſs danger in the beginning of the diſeaſe.

Sometimes neceſſary to confine the patient in bed before the eruption.

(*b*) This ſpirituous vehicle is much too ſtrong to be given to ſuch young children, and the quantity of it is too large, even though it were to be diluted with ſome ſimple diſtilled water. Beſides, the medicinal uſe of diſtilled ſpirituous liquors, does ſo frequently prove highly prejudicial to grown perſons, that no prudent phyſician will encourage the giving them in any but the ſmalleſt quantity, and very ſeldom in ſo tender an age.

(*c*) See *Pag.* 102. *Par.* 2.

The *ſmall-pox* which ſucceeds *comatous* diſorders proves very confluent.

29. But I have obſerved, that the *ſmall-pox*, which immediately ſucceeds *comatous* diſorders, proves very confluent, in which caſe, I rather order a blifter, and the opiate, deſcribed above, than let the patient keep his bed before the eruption: For ſometimes, though very rarely, I have known ſuch convulſions precede the fits of intermittents, and have often ſeen them begun and terminated by comatous diſorders, both in children and grown perſons; neither of which, however, need be minded, but the fever only is to be vigorouſly attacked, as it is the primary and eſſential diſeaſe. For, if I were to attend chiefly to the cure of theſe comatous diſorders, accompanying the fever, and accordingly try to conquer them by bleeding, purging, and repeated glyſters, I ſhould heighten the fever, and of courſe increaſe the *coma* to ſuch a degree, that my patient would be laid aſleep for ever; whereas, if I uſe my utmoſt endeavour to cure the fever, all the ſymptoms dependent on it will eaſily go off with it: which I deſire may be carefully noted, becauſe very fatal miſtakes are often committed in this point (*d*). But I have treated amply of this in another place.

Bleeding and a vomit ſometimes requiſite.

30. I proceed next to obſerve, that tho' the patient may ſometimes refrain from bed in the day time, yet, in caſe of extreme ſickneſs, a high fever, violent vomiting, a vertigo, a kind of rheumatic pains of the limbs, and the like diſorders, he cannot be allowed this refreſhment, for theſe ſymptoms indicate the contrary; and if they be violent, eſpecially in the young and ſanguine, foreſhew that there is a copious variolous matter in the body, and threaten great danger from the tumultuary eruption of the puſtules, which will prove very confluent. In this caſe, therefore, as all endeavours muſt be uſed to check the immoderate ferment, which notwithſtanding, on the one hand, will rage more by the continual warmth of the bed, and yet, on the other hand, the patient cannot keep up, by reaſon of extreme ſickneſs, unleſs we relieve him, it is indiſpenſably neceſſary to bleed firſt in the arm, and to give a ſtrong vomit in a few hours afterwards, of the infuſion of *crocus metallorum*, which not only expels the matter occaſioning this unuſual ſickneſs, but refreſhes the patient ſo much, that being now in a manner well, he is able to

(*d*) See *p.* 132. 204.

refrain

refrain from bed (*e*). Neither are we to endeavour to weaken the force of the ferment by this method only, but, for the further ſafety of the patient, beſides the evacuations juſt mentioned, it will be proper to give him plenty of *ſpirit of vitriol*, in every draught of ſmall-beer, till the eruption be quite over (*f*). And notwithſtanding theſe evacuations, and the uſe of the cooling drink, the patient muſt not be allowed to keep his bed in the day, if he can bear to ſit up; becauſe theſe general remedies do not check the aſſimilation of the variolous matter, near ſo much as once cooling the blood by drawing in the freſh air, and breathing it out by the lungs, which alone immediately abates the ſymptomatic ſickneſs, abovementioned, in a ſurprizing manner, as I have ſeveral times experienced. But this ſomewhat unuſual method is not neceſſary, unleſs as ſuch as are in the prime of life, whoſe blood has been over-heated by venery, or wine, and in others (always excepting young children) who, together with the *ſmall-pox*, ſtruggle with the abovementioned violent ſymptoms. For where the blood is leſs inflamed, and the ſymptoms milder, as there is much leſs danger of aſſimilating the variolous matter too haſtily, ſo, of courſe, neither the abovementioned evacuations, nor the *ſpirit of vitriol*, need be uſed.

When and how long the patient is to be confined in bed.

31. I have treated this ſubject more at large, becauſe I am certain that ſucceſs or failure in this diſeaſe depend chiefly, if not entirely, on the management of the patient in the beginning. But the eruption being over, (which is compleated on the *ſixth* day, from the beginning of the illneſs, and on the *fourth*, incluſive, from the firſt appearance of the puſtules) the patient is not to be kept from bed the reſt of the diſtemper throughout, which indeed, as it ought not to be allowed before this day, ſo the condition of the patient will hardly admit of its being longer delayed, if the *ſmall-pox* be of the confluent kind. And let it be remembered, that this is the only ſort of which I have hitherto treated; for if the eruptions be few, and diſtinct, it matters not which method be uſed, if the phyſician hath a tolerable ſhare of ſkill; for want of which (though this kind is naturally void of danger) abundance have died, who unfortunately fell into the hands of ſuch as placed all their

(*e*) See *pag.* 24. note (*y*). (*f*) See *pag.* 224. note (*b*).

hopes in promoting the heat, and ſo ignorantly conſpired with the diſeaſe to deſtroy the patient.

Reſtleſſneſs to be relieved by opiates.

32. From this time the eruptions begin to fill, and inflame the whole body, eſpecially the head, ſo that the patient, if not a child, grows reſtleſs, and cannot readily ſleep, which is next to be carefully attended to in this diſeaſe; for the calmer the motion of the blood is, the better the eruptions fill, and come to their due ſize; and, on the contrary, the more violent it is, the more the eruptions ſink, their farther progreſs being checked; ſo that the expulſion of the peccant matter is not only obſtructed, but the order and genuine craſis of every particular *phlegmon* is alſo diſturbed, whence the eruptions either do not come to ſeparation in due time, or inſtead of *pus* an *ichor* is at length generated, and inſtead of the yellow matter, reſembling the colour of an honey-comb, ſome black or other preternatural humour, unlike the genuine eruptions of the *ſmall-pox*, is diſcharged. It ſeems to me, therefore, that *opiates* are as much indicated in the confluent *ſmall pox*, as any particular remedy is in any other diſeaſe; being a kind of ſpecifics here, as the *bark* is in *intermittents*; tho' I am well aware that they do not operate by an abſolute ſpecific virtue, but only by anſwering that indication, which conſiſts in quieting the tumultuary motion of the blood and ſpirits, that always accompanies the confluent *ſmall-pox* in grown perſons, and chiefly demands their uſe. Whoever, therefore, eſteems theſe ſymptoms to proceed only from the watchings, is not enough acquainted with the nature of this diſeaſe: for tho' it may ſometimes happens in this caſe, that the patient's ſpirits may be compoſed and calm, (which frequently happens upon taking *laudanum*) ſo likewiſe ſometimes the ſpirits being in violent motion, check the kindly eruption of the puſtules, tho' the patient ſleeps much; which is well worth obſervation.

Diacodium preferred to *laudanum*, and in what doſe to be given.

33. To treat now of the kinds of opiates: tho' I have given *liquid laudanum*, ſeveral years ſucceſsfully, in this caſe, nevertheleſs I think *ſyrup of poppies* is preferable to it: for tho' both are uſed for the ſame purpoſe, yet in my opinion *laudanum* is a little more heating than *diacodium*. As to the doſe of this ſyrup, it is to be proportioned to the age of the patient, and the urgency of the ſymptoms; for what perhaps might be too much

for

for one whoſe ſpirits are compoſed, would be too little for another, whoſe ſpirits are greatly hurried. For inſtance, ſuppoſe in general that ſix drams is a ſufficient doſe for moſt perſons, yet in the *ſmall-pox*, whenever it is wanted, we muſt give very near an ounce of it to anſwer any purpoſe; and no leſs quantity muſt be preſcribed for a doſe, throughout the courſe of the diſeaſe. We ſpeak of grown perſons now, for in giving it to children, the doſe muſt be leſſened in proportion to their age. Children, however, have not the ſame occaſion for opiates in this diſeaſe as grown perſons, becauſe they are more inclined to ſleep as long as it laſts; yet when they are much endangered thereby, I ſhould be afraid to refrain from opiates. But, I was going to obſerve, that it is difficult to ſettle the doſe of opiates in all the caſes in which they are required; for whether it be (1) in a tumultuary motion of the ſpirits; (2) a violent vomiting and purging, or (3) ſevere pain, (theſe being the three diſorders wherein opiates are chiefly indicated, as we have elſewhere obſerved) they are to be exhibited in ſuch a manner, that if the firſt doſe anſwers not the end, it muſt be repeated at proper intervals, till it does; not ſo much minding the quantity taken, as the effect it ſhould produce; which being anſwered, (and not till then) it muſt be adminiſtered leſs frequently and copiouſly. But ſuch a ſpace muſt be interpoſed between every doſe, that we may be able to learn whether the laſt has taken effect, before giving another; which being obtained, the doſe is to be diminiſhed in the courſe of the diſeaſe, as there ſhall be occaſion.

34. I have ſeveral obſervations by me to confirm what I have hitherto laid down, but at preſent will only ſet down one. On the 13th of *April*, 1681, Mrs. *Croſs*, a neighbour of mine, came to me in tears, and earneſtly begged of me to go and ſee her ſon, a youth of ten years of age, who, having been ill four days, ſhe apprehended had the *ſmall-pox*. As I was confined with a fit of the gout, I deſired my apothecary to call upon him, and let me know how he was; when he came back, he told me, that the mother had, by the advice of ſome women, given him the counteſs of *Kent*'s powder, and other hot medicines; and had beſides, in a manner, buried him under the cloaths, in order to raiſe a ſweat by the weight thereof; which the women

A caſe, exemplifying the author's method.

have recourſe to in this diſeaſe, as the laſt refuge. She had alſo given him a large quantity of poſſet-drink, wherein *marigold-flowers* and *hartſhorn* had been boiled, which encreaſed the fever, and cauſed ſuch a diſturbance of the ſpirits, that the child was very delirious, and could ſcarce be kept in bed by the attendants. The puſtules did not yet appear, at leaſt very viſibly, but lay very thick in the ſkin, the eruption being manifeſtly hindered by this violent method, which was intended to promote it. I ordered him to be immediately taken out of bed, and not to go into it again, except a-nights only, till after the *ſixth* day; I alſo preſcribed half an ounce of *diacodium* to be taken directly, which proving ineffectual, I ordered the ſame doſe to be repeated an hour after, but unſucceſsfully; for the blood was ſo violently agitated, that it could not be quieted before he had taken two ounces and an half: but ſuch a ſpace was interpoſed between every doſe, that I might be certain what effect the laſt had. Afterwards, I preſcribed only half an ounce to be given every night, at bed-time, to the end of the diſeaſe, which proved ſufficient to preſerve the calm, that had already been obtained by a more frequent uſe thereof: and by this means the patient recovered.

Reſtleſſneſs ſometimes is not to be removed by an opiate only.

35. And here I muſt inform you, that in caſe the heat and motion of the blood and ſpirits be extremely violent in the beginning, an opiate, though given in the largeſt doſe, and frequently repeated, will ſcarce avail, unleſs the patient quits his bed; for the warmth thereof encreaſes the heat of the diſeaſe, ſo as, upon this account, to make it neceſſary to give the opiate in a larger doſe, than perhaps nature is able to bear: which likewiſe happens, but with leſs danger of life, when the bark is given in an intermittent fever, whilſt the patient keeps his bed. And this perhaps may be the reaſon why the cure of the intermittent is ſometimes protracted, which otherwiſe might have been ſooner performed; and ſometimes, likewiſe, if the fever only remits, it is ſo encreaſed thereby, as greatly to endanger life.

When to be given firſt, and how long to be continued.

36. But not to mention extraordinary caſes, wherein this remedy may be indicated at any time of the diſeaſe; I would have it firſt exhibited in the evening, when the patient is wholly confined to his bed, (*viz.* the *ſixth* from the beginning of the illneſs) and repeated afterwards

wards every evening till the *ſeventeenth* day, or at leaſt till the danger is over (*g*). For on the *ſixth* day the fleſhy parts are inflamed, whence the head begins to be diſturbed by the humours, which are alſo inflamed from this cauſe.

37. But great care muſt be had to give the opiate earlier in this, than in other diſeaſes; becauſe a kind of fit of heat and reſtleſſneſs, always comes on towards evening; and ſometimes it happens, unleſs it be given early at the decline of the diſeaſe, that the patient becoming ſuddenly ſomewhat heavier, immediately grows hot, and afterwards complains of ſickneſs, which ſoon terminates in death; to the aſtoniſhment, and contrary to the expectation of his friends, who a little before conceived great hopes of his recovery: and his death might, perhaps, have been prevented by giving an opiate directly. On theſe days therefore, but eſpecially on the *eleventh* day, I order the opiate to be given earlier; as at *five* or *ſix* o'clock in the afternoon, and a ſecond doſe to be kept in readineſs, in caſe ſickneſs ſhould come on ſuddenly. For I am thoroughly perſuaded that ſome of my acquaintance have died, for want of taking this medicine, when the caſe required it: ſo that if *opportunity be quick* in any caſe, it is chiefly ſo in this.

To be given earlier in this than in other diſeaſes.

38. Since, therefore, it is ſo dangerous, either to omit giving an opiate ſoon enough, or contrariwiſe to give it ſo early, that its quieting virtue be ſpent before the time comes for repeating it; it is ſafeſt, in this uncertainty, to order an opiate to be taken at a ſet hour, every morning and night, on the laſt and moſt dangerous days of the diſtemper. Nor is an ounce of *diacodium* always a ſufficient doſe at theſe times, for this quantity avails no more in a violent inflammation of the blood, and a very tumultuary motion of the animal ſpirits, than half an ounce, in a milder diſeaſe. For I have learnt, from repeated experience, that an ounce and half is required in the young and ſanguine, to mitigate the violence of the ſymptoms wherewith they are ſeized, and which we do our beſt to prevent; and in ſuch ſubjects, this doſe may be repeated with ſafety and great advan-

And at a ſet hour morning and night.

(*g*) An opiate ought not to be given if the ſpitting abates conſiderably, or the *ſaliva* grows too ropy and tough as to endanger ſuffocation.

tage

tage at ſuch times, morning and night, till the patient recovers.

And ſometimes thrice in twenty four hours.

39. Moreover, I own, that I have ſometimes found it neceſſary, at the decline of a highly confluent *ſmall-pox*, to exhibit an opiate thrice in the ſpace of twenty four hours, *viz.* every eighth hour, on account of the violent motion, or diſturbance of the ſpirits, occaſioning ſome ſickneſs, which required it to be repeated more frequently. But it is to be obſerved, that if the exhibiting *diacodium* with ſuch frequency, be nauſeous to the patient, (which often happens on the abovementioned days) *liquid laudanum* muſt be preſcribed inſtead of it; ſixteen drops of which are equivalent to an ounce of *diacodium*, in caſe it be prepared according to our method already delivered (*b*).

An objection to ſo frequent a repetition of it anſwered.

40. I am well aware, that it will be objected by thoſe of a different opinion, that the peccant matter will be fixed, and the ſalivation diminiſhed by repeating the opiate with ſuch frequency in ſo large a doſe. But to this I anſwer, that tho' indeed the ſpitting will be in ſome meaſure abated, it will not however ceaſe ſo entirely, as not to riſe again in ſome degree, after the opiate has been taken a conſiderable time, and its virtue is nearly ſpent, and beſides will be attended with this double advantage. (1) The patient being ſtrengthened by the opiate will be better able to expectorate the phlegm, and the *ſaliva*, tho' leſs copious, be better concocted. (2) The want of ſputation is abundantly ſupplied by the ſwelling of the hands and face, which happens more certainly, and riſes higher from the repeated uſe of the opiate, on thoſe days wherein theſe parts uſually ſwell, *viz.* the face, from the *eighth* to the *eleventh* day, when it commonly begins to fall, but the hands, from the *eleventh* day, till the puſtules upon theſe parts be entirely ripe. And I poſitively aſſert, (which no perſon who is thoroughly acquainted with this diſeaſe can deny) that the want of either of theſe ſwellings, when they ought to appear, threatens more danger than the ſtoppage of the ſalivation. For my own part, I eſteem it much ſafer to riſque the danger of checking the ſpitting than to refrain from opiates, which are ſo very requiſite in this

(*b*) See pag. 161. par. 14.

diſeaſe,

diſeaſe, that whoever deprives his patient of ſo great a help, betrays much neglect and unſkilfulneſs (*i*).

41. But what I have hitherto delivered, is not to be underſtood as if I would adviſe the daily uſe of *diacodium*, tho' in a ſuitable doſe, in young children afflicted with the confluent *ſmall pox*, unleſs it threatens great danger; and this for two reaſons; (1) becauſe children are not ſo hot as perſons in the prime of life; and (2) becauſe their tender age is leſs able to bear the continued uſe of opiates; whereto may be added, (3) that children in this diſeaſe, ſleep moſt part of the time ſpontaneouſly, and ſo are leſs ſenſible of the tediouſneſs thereof; yet, nevertheleſs, when the eruptions are of a bad kind, or they become delirious, opiates are always indicated: theſe being certain ſigns of the irregular motion of the blood and animal ſpirits (*k*).

Not to be given ſo often in young children, unleſs in caſes of great danger.

(*i*) Now, concerning thoſe medicines which eaſe pain, and procure ſleep in this ſevere diſeaſe, Dr *Mead* tells us, that they are not to be uſed over-haſtily: for all *anodynes* in ſome meaſure obſtruct the ſeparation of the morbid humour from the blood, unleſs the pain happens to be exceſſive: and moreover, if the violence of the fever has raiſed a *delirium*, they generally make it worſe: wherefore, it is not proper to employ them, until the eruption of the puſtules be compleated; but after that, narcotics may be adminiſtred with ſafety. Thus it will be right to give the patient a doſe of the *Thebaic tincture*, or *diacodion*, every evening, eſpecially if he be a youth, or an adult perſon: for theſe medicines agree not ſo well with infants. And ſometimes, in caſes of very great inquietude, the doſe is to be repeated in the morning; for the ſuppuration of the matter ſtagnating in the puſtules is forwarded by quiet and ſleep. But if, towards the end of the diſeaſe, the patient happens to be ſeized with a ſhortneſs of breath, or danger of choaking from viſcid ſlime, theſe medicines are to be entirely prohibited. In the mean time, if the patient is coſtive, which is generally the caſe, and the fever continues, the body is to be opened with a clyſter every ſecond or third day. *Stack's tranſlation of his diſcourſe on the ſmall pox*, p. 45.

It ſhould not be concealed that Dr *Simſon* differs from Dr *Mead* in this particular; for he never gives an opiate, but when the ſuppuration is accompanied with great pain and reſtleſſneſs; and procures to his patients the ordinary courſe of their belly, thro' the whole time of the ſuppuration: a practice which he aſſures us has been attended with moſt agreeable ſucceſs.—*See the medical eſſays in* 8vo Vol. V. Part 2. p. 579.

(*k*) Children are ſometimes ſo fretful and tedious in this diſeaſe, that opiates can no more be diſpenſed with, than in grown perſons, and do equal ſervice: many inſtances of which have fallen under my obſervation.

42. Theſe

The chief curative indications ſpecified.

42. Theſe two particulars, of which we have treated ſo fully, *viz.* (1) the method of preventing the over-haſty aſſimilation of the variolous matter at the beginning of the diſeaſe, and (2) the manner of checking the inordinate motion of the ſpirits, ariſing from the inflammation of the external parts, are the two points, wherein the cure of the diſeaſe conſiſts; inaſmuch as the ill accidents which ſucceed, for want of ſufficiently preventing theſe two dangers, occaſion thoſe fatal ſymptoms, which deſtroy the patient in this diſeaſe. Theſe, therefore, being the chief curative indications, when I have ſufficiently anſwered them according to the method juſt delivered, I have diſcharged my duty as a phyſician, and not a preſcriber of medicinal *formulæ*; which two arts, talents, or provinces, as you pleaſe to term them, differ greatly from each other.

A bliſter when to be applied, if neceſſary

43. To mention one thing more, if there be occaſion for a bliſter, it ſhould be made very large and ſufficiently ſharp, and applied to the neck, but neither too early, that it may not ceaſe running before the *eleventh* day, which is attended with moſt danger, nor deferred to that day, ſo as to prove prejudicial, at this time, from being laid on too late, by encreaſing the heat of the blood, which is then ſcarce able to ſtruggle with the ſecondary fever. The fitteſt time, therefore, to apply a bliſter, is the evening preceding the great *criſis* of the diſeaſe, preſently after the opiate which is to be taken at this time. For if it be applied now, the pain it cauſes will go off before the critical day, and there will then be a diſcharge of the peccant matter, which is neceſſary to conquer the violent ſymptoms, happening on this day (*l*). For now the ſwelling of the face firſt

(*l*) With reſpect to bliſtering, in this diſeaſe, we cannot do better than tranſcribe ſome highly uſeful rules concerning it, from the work of a very able and ſucceſsful practitioner.

From as much as we know of the nature of this diſeaſe, ſays Dr *Hillary*, and the effects of bliſters, if ratiocination is at all allowed in medicine, we muſt neceſſarily conclude, that they are generally, if not always, improper in the *firſt*, are ſeldom uſeful in the *ſecond*, and oftener are applied, than advantage reaped from them, in this *third* ſtage of the diſeaſe, except as repellents.

The only caſes in the preſent ſituation, in which they can be rationally preſcribed, are, in my opinion, the following, *viz.* where the patient is of a lax, weak habit, the pulſe low, weak, and

firſt begins to ſink, and the ſalivation, which had hitherto been copious, to abate; the humour, which occaſioned it, being thickened, and difficultly raiſed. Not to mention that the bliſter ſupplies, in ſome meaſure, the ſinking of the ſwelling of the face, and the

and depreſſed, and the fever inſufficient for the expulſion and ſuppuration of the puſtules, thro' mere weakneſs of the ſolids, and viſcidity of the fluids, or where the remote parts of the body are cold, and the eruption is thereupon ſtopped, or the puſtules receded in the *ſecond ſtage*. Or when the ſwelling of the face, hands, or feet, in the *third ſtage*, riſe not at the proper time, or too ſuddenly ſubſide, and nature ſinks under the load, or where the *ptyaliſm* ſuddenly ſtops before its uſual period, or a *coma*, or *comatous delirium* from a viſcidity of the fluids appears, or an afflux of theſe to the brain; or if the fever is too low. In theſe circumſtances, I ſay, bliſtering freely muſt be of ſervice, and for the very ſame reaſons that muſt always render them injurious in every ſtage of the genuine inflammatory *ſmall pox*, except, as we took notice before, they are uſed as repellents; it being evident from the ſtranguaries, feveriſh heats, reſtleſſneſs, and continual thirſt, almoſt always attending the operation of *veſicatories*, that the active and corroſive ſalts of the *cantharides*, when mixed with the blood in the courſe of circulation, certainly increaſe its velocity, and render the inflammation more violent. *See his practical eſſay on the ſmall-pox*, p. 94, 95.

The beſt time of applying *bliſters*, as both reaſon and experience ſhew, ſays Dr *Wintringham*, is when either the feet or hands ought to ſwell, provided the nature of the diſeaſe will admit of their being deferred to that time; and eſpecially if theſe ſwellings do not appear in that ſtage of it appointed by nature for their appearance. For at this period the ſpitting generally abates, and the humours become very turgid, and nature endeavours to drive them to the extremities, and by the ſwelling of theſe parts to relieve the patient; for which reaſon this ſtage of the diſtemper requires either that they ſhould be ſpeedily carried thither, or that the belly be opened, and ſome part of them carried off this way; but which of the two is then moſt eligible, muſt be determined by the ſtrength of the patient, and the urgent ſymptoms (whether for inſtance the fever riſes too high or ſinks too low) and not by general rules.

Is not bleeding, therefore, opening the body, bliſtering, and the like, hurtful or beneficial to the patient, according to the different degree of the inflammation, the different time of the diſeaſe, the conſtitution of the patient, and the like circumſtances? And may not more certain indications for the timely uſe of all theſe remedies, both in this and the other ſtages of the diſtemper, be taken from the ſtrength or the weakneſs of the fever, and the foulneſs of the redundant humours, which oppreſs the ſick; always obſerving this particular, that if the fever rages greatly, and the ſtrength keeps up, it is neceſſary to refrain from *ſtimulants*, and *painful evacuants*; but that if the contrary ſymptoms urge, *bliſters* muſt be applied, and gentle laxatives adminiſtered? *Comment. Noſolog.* p. 98.

abatement

abatement of the ſalivation, and, likewiſe, contributes ſomewhat to check the ſecondary fever, which is then very high, the blood being in a manner oppreſſed, and totally infected with the abundance of *pus* abſorbed from ſuch a multitude of little impoſthumes, ſo that in moſt of the patients I have treated in this diſeaſe, I have obſerved, that the pulſe in the wriſt, could ſcarce be felt at this time, tho' it was eaſily felt the preceding, and following day.

Efficacy of *garlick* applied to the ſoles of the feet.

44. But amongſt all the remedies that occaſion a derivation, or a revulſion from the head, none, in my opinion, ſeems to operate ſo efficaciouſly as *garlick* applied to the ſoles of the feet. That it does really draw, is manifeſt by the bliſters it frequently raiſes, and the intolerable pain it ſometimes, though rarely, occaſions, by inviting the humours to thoſe parts, even without raiſing bliſters; ſo that to eaſe it, I have found it needful to order a cataplaſm, made of the crumb of white bread, boiled in milk, to be applied thereto. In grown perſons, therefore, afflicted with the *confluent ſmall-pox*, I uſually apply *garlick* ſliced, and included in a linnen rag, to the ſoles of the feet, from the *eighth* day, when the ſwelling of the face firſt begins to ſink, and renew the application every day, till the danger be paſt.

The regimen.

45. I muſt further obſerve, that the patient muſt be kept from fleſh throughout the courſe of the diſeaſe, and only allowed ſmall-beer for his common drink. In the mean time, it will be convenient for him to live on water-gruel, roaſt-apples, and the like. But upon the approach of the ſuppuration, when the purulent particles return into the blood, and taint the maſs, it will be proper to give a few ſpoonfuls of *wine*, every morning and night. As to the coverings of the bed, they are to be preciſely the ſame he made uſe of in health; and he is to be permitted to turn himſelf in bed as he pleaſes, whereby the ſymptomatic ſweats may be prevented, which, I conceive, have been ſufficiently ſhewn to injure the patient; and, by this means, the violent inflammation of the puſtules, ariſing from the exceſſive heat contracted by the fleſhy parts, by lying always in the ſame place, will alſo be prevented. But I have treated of this at large in another place (*m*).

(*m*) See p. 123. par. 46. and p. 125. par. 50.

46. I will

46. I will ſubjoin a late caſe, as a ſpecimen of this whole procedure. I was ſent for this winter by lady *Dacres*, to attend her nephew, Mr *Thomas Chute*, a perſon of a very ſanguine conſtitution, and in the prime of life. The day before I came he was ſeized with a high fever, vomited a conſiderable quantity of bilious matter, and had a violent pain in his back. In order to mitigate theſe ſymptoms, he went to bed, and by heaping on cloaths, and taking hot liquors, ſpent a day to no purpoſe in endeavouring to force ſweat, the great tendency to vomiting, and the purging, tho' moderate, rendering the ſudorifics ineffectual, and in the mean time increaſing the fever. I ſuſpected the *ſmall-pox* would ſhortly appear, and likewiſe prove very confluent; both on account of his youth, and the great inflammation raiſed in his blood by the fruitleſs attempt to procure ſweat (which if the diſeaſe had happened in the ſummer, would certainly have occaſioned *bloody urine*, and *purple ſpots*) but chiefly, becauſe I have always obſerved, that in young perſons attacked with exceſſive vomiting, ſickneſs and extraordinary pain, the ſucceeding *ſmall-pox* proved highly confluent. For this reaſon, judging it requiſite to uſe all endeavours to prevent the too-haſty aſſimilation of the variolous matter, I kept him up, till his uſual time of going to bed; and the next day in the morning, which was the *third*, the *ſmall-pox* not appearing, I directed eight ounces of blood to be taken away from the right arm. The blood was good and florid, having as yet only received the ſpirituous venom, and not that putrefaction occaſioned by a longer continuance of the diſeaſe, and generally obſervable in the blood of perſons lately recovered of this diſeaſe. The ſame day at five in the afternoon, I exhibited an ounce of the infuſion of *crocus metallorum*, which operated well, carrying off his ſickneſs, ſo that he ſeemed much better, and willingly refrained from bed, which he did not care to quit before, by reaſon of his great ſickneſs and giddineſs. On the fourth day in the morning, I found the eruptions coming out ſo copiouſly, notwithſtanding the endeavours I had uſed to prevent it, that they threatened the utmoſt danger; I was, therefore, very cautious to keep him up in the day time, and adviſed the drinking of ſmall-beer acidulated with *ſpirit of vitriol*. He continued the uſe of theſe things

A caſe exemplifying the whole procedure.

things to the ſixth day, when, tho' he was not ſick, but much refreſhed by the freſh air, yet his body was looſe between whiles; towards night, he was obliged to go to bed, which is common in this caſe, and, therefore, he continued therein, by my conſent, during the whole courſe of the diſeaſe; the eruption being now over. Tho' the puſtules were fewer, than I have obſerved in ſome that have died in this diſeaſe, yet they were more numerous, than they generally are in moſt that recover. I firſt exhibited, this evening, an ounce of *diacodium* in *cowſlip-flower water*, and directed it to be repeated every night; I likewiſe adviſed, that he ſhould have no more cloaths laid on him, than he was accuſtomed to in health; and preſcribed for his diet, water-gruel, barley-broth, and ſometimes a roaſt apple, and for his drink, ſmall-beer. On the eighth day I ordered ſliced garlick, folded in a linnen rag, to be applied to the ſoles of his feet, and renewed every day till the danger was paſt. After this the puſtules ripened kindly till the tenth day, when viſiting him in the morning, tho' I found him in a fair way, yet I perceived ſome ſigns of the ſecondary fever, along with ſome kind of reſtleſſneſs. Apprehending, therefore, the approaching danger, I immediately exhibited the opiate abovementioned, which quieted all the ſymptoms, and the ſame evening I preſcribed an ounce and half of *diacodium*. The next morning, which was the eleventh day, (the virtue of the opiate he had taken the night before being ſpent) he began to grow reſtleſs again; whereupon I gave him the ſame quantity immediately, and repeated it in the evening, and ordered it to be continued morning and night, till he was perfectly recovered. The patient complied, and no dangerous ſymptom after appeared, except a ſuppreſſion of urine ſometimes, which frequently attacks young perſons in this diſeaſe, but he made water kneeling in bed. As to the ſpitting, tho' it was checked in ſome meaſure by the frequent repetition of opiates in ſo large a doſe, yet at diſtant intervals from the uſe of them, he expectorated concocted phlegm, and his face and hands ſwelled ſufficiently at the proper time. On the eighteenth day he aroſe from bed, and I then firſt allowed him to ſup ſome chicken broth, and afterwards he returned by degrees to his uſual manner of living. On the twenty-firſt day eight ounces of blood

was

was taken away from his arm, which reſembled pleuritic blood, and differed little from *pus*. Laſtly, he was purged four times, at proper intervals.

The day from the beginning of the illneſs how to be underſtood.

47. It is here to be noted, that as often as the day from the beginning of the illneſs is mentioned in theſe ſheets, for inſtance, the *ſixth*, the *eleventh*, &c. I would not be underſtood to mean that the *confluent ſmall-pox* always came out on the third day; becauſe I am well aware that ſometimes, even in the worſt ſort, the puſtules do not appear till after the *third* day. But in general, the eruption happens on the *third* day, incluſive from the beginning of the diſeaſe. Thus, for inſtance, a perſon who is ſeized with the *confluent ſmall-pox* on *Monday*, will find the puſtules appear on the *Wedneſday* following; and the ſecond *Thurſday* after the firſt *Monday*, will be the *eleventh* day, which is highly dangerous, unleſs the phyſician uſes his endeavour to prevent it.

Theſe obſervations relate only to the *confluent ſmall pox*.

48. And I repeat it here once more, that theſe obſervations relate only to the *confluent ſmall-pox*, and are no way uſeful, or required in the *diſtinct kind*. Thoſe, therefore, who boaſt of curing this diſeaſe, when the eruptions are few and of the diſtinct kind, impoſe upon themſelves, as well as others. But if they have a mind to make a trial of their abilities, let it be in the *confluent ſmall-pox*, eſpecially in ſuch ſubjects as are ſeized with it in the vigour of life, or have over-heated themſelves by drinking wine too freely; leſt being exerciſed only in ſlight matters, they ſhould be ſo far miſtaken as to imagine they have ſaved thoſe, whom their attendants did not deſtroy.

The hiſtory of a patient of Dr *Goodall*'s in a fever.

49. I will not finiſh this ſhort diſſertation, without relating a hiſtory which was communicated to me, whilſt I was writing it, by my intimate friend Dr *Charles Goodall*, a fellow, and then cenſor of the college of phyſicians; judging it neceſſary, in order to confirm what I have advanced here, and in my other writings, concerning *purple ſpots* and *bloody urine*: for both theſe ſymptoms, when they happen in acute diſeaſes, proceed entirely from a violent inflammation of the blood, and therefore indicate cooling remedies. The caſe is as follows:

" 50. A young man of about twenty ſeven years of " age, ſlender, and of a hot conſtitution, was ſeized

" in *June* 1681, with a violent continued fever, at-
" tended with a dryneſs and foulneſs of the tongue, ex-
" treme thirſt, a quick pulſe, pain in the parts conti-
" guous to the *ſcrobiculum cordis*, but eſpecially in the
" back, where it was continual, and ſometimes *bloody*
" *urine*, and numerous browniſh ſpots in the neck,
" breaſt, and wriſts. The phyſician was called on
" the ſixth day, and found the patient in great danger
" from the copious diſcharge of *bloody urine*; and upon
" this account judged, that the curative indications
" were, (1) to cool and thicken the blood, and (2)
" cloſe the mouth of the relaxed veſſels of the kidneys.

51. " Bleeding, therefore, and a lenitive bolus being
" premiſed, he earneſtly adviſed the patient to refrain
" from bed, as much as he could, not doubting that
" the voiding *bloody urine* was promoted by the con-
" tinual warmth thereof. He alſo recommended him
" rather to ſleep upon a leathern couch, and ſeldom
" to lie on his back; to drink milk boiled with thrice
" its quantity of water, and live on panada, rice-milk,
" and roaſt apples, either alone, or ſqueezed into water,
" and ſweetened with ſugar. And he preſcribed the
" following remedies.

An aſtringent infuſion.

Take of the leaves of red roſes, ſix drams; the inner bark of oak, half an ounce; the ſeeds of plantain, bruiſed, three drams; ſpring water, two pints; ſpirit of vitriol, enough to give it a grateful tartneſs; infuſe them together in a cloſed veſſel with a gentle heat, four or ſix hours: to the ſtrained liquor add three ounces of ſmall cinnamon water; and fine ſugar enough to ſweeten it. Let the patient drink often of this infuſion day and night.

" A glyſter of *milk* and ſyrup of violets was injected
" at two in the afternoon, and the following draught
" exhibited at bed-time.

An anodyne draught.

Take of the diſtilled waters of cowſlip-flowers, plantain and cinnamon, of each half an ounce; diſtilled vinegar, two drams; ſyrup of white poppies, ſix drams; mix them together.

" 52. On the ſeventh day, the ſymptoms abating
" little, the glyſter juſt deſcribed was ordered to be in-
" jected

" jected every day, and the following emulſion and " draught preſcribed.

Take of the ſeeds of ſuccory, endive, lettice, and purſlain, each two drams; the ſeeds of quinces and white poppies, each a dram and half; four ſweet almonds, blanched; beat them very well in a marble mortar; then pour on by degrees a pint and half of barley-water, and ſweeten the ſtrained liquor with a ſufficient quantity of fine ſugar. Let twelve ſpoonfuls of this emulſion be taken every four hours. A cooling emulſion.

Take of the diſtilled waters of cowſlip-flowers, water-lillies, oak-buds and plantain, each half an ounce; diſtilled vinegar, and ſmall cinnamon water, each three drams; confection of hyacinth, half a dram; diacodium, an ounce: mix them together for a draught to be taken at bed-time. An anodyne draught.

" 53. On the eighth day, as the fever ſtill continued, and the patient voided much bloody urine, and " the ſpots likewiſe were numerous in the abovementioned parts, the phyſician, ſuppoſing theſe ſymptoms to proceed from the heat, thinneſs, and acrimony of the blood ordered bleeding to be repeated, " and allowed a freer uſe of ſmall-beer agreeably acidulated with ſpirit of vitriol. But when the patient " began to have an averſion to this liquor, a whey " made of milk and juice of lemons was ſubſtituted in " its ſtead, and he was likewiſe permitted to eat lemons " thinly ſliced, and enveloped with ſugar, and to theſe " the following remedies were added.

Take of the conſerves of wood-ſorrel and hips, each half an ounce; confection of hyacinth, three drams; diaſcordium, a dram and half; red coral prepared, dragon's blood, Armenian *bole, of each a ſcruple; ſyrup of comfrey and mouſe-ear, of each enough to make the whole into an electuary; of which the quantity of a hazel nut is to be taken every ſix hours, drinking after it a ſmall draught of whey, made with milk and juice of lemons, ſweetened with ſugar; or of the vulnerary decoction, acidulated with ſpirit of vitriol.* An aſtringent electuary.

" Let the draught preſcribed laſt night be repeated
" with ten drams of *diacodium*.

" 54. On the ninth day the *petechiæ* vaniſhed by de-
" grees, the urine was not ſo bloody, and the blood
" that was mixed with it ſeparated more eaſily, and
" ſubſided ſooner to the bottom of the containing veſ-
" ſel; for which reaſon the patient was adviſed to con-
" tinue the uſe of theſe remedies; and in a few days
" the following were added to the ſame purpoſe.

A reſtringent electuary.

Take of the conſerve of red-roſes (driven thro' a ſieve, and acidulated with ſpirit of vitriol) four ounces; Lucatellus's *balſam, two ounces*; Armenian *bole, dragon's blood, and the ſpecies of the electuary of coral, each a dram*; *ſyrup of coral, enough to make them into an electuary*; *of which let the patient take the quantity of a nutmeg, twice a day, with a draught of the following emulſion.*

An incraſſating emulſion.

Take of the ſeeds of lettice and purſlain, each three drams; *quince ſeed, a dram and half*; *the ſeeds of white poppies, half an ounce*; *five ſweet almonds blanched*; *beat them well together in a marble mortar, then pour on by degrees a quart of plantain water, and three ounces of ſmall cinnamon water*; *laſtly, ſweeten the ſtrained liquor with fine ſugar.*

" The fever and the fatal ſymptoms abovementioned,
" were carried off in three weeks by theſe reme-
" dies; and the ſpots diſappearing, and the urine re-
" turning to its natural colour and conſiſtence, the pa-
" tient by degrees recovered his health."

Bloody urine and *purple ſpots* require the ſame treatment in *fevers*, and the *ſmall-pox*.

55. But tho' the ſymptoms above enumerated only accompanied the continued fever, and not the *ſmall-pox*, yet, whenever they happen in either diſeaſe, they always proceed from a violent inflammation and an exceſſive attenuation of the blood, whence it is forcibly driven thro' the mouths of the veſſels. And doubtleſs the ſame method is to be uſed in ſuch a ſimilitude of cauſes, as far as the nature of the reſpective diſeaſes will admit. And, for this reaſon, I aſked Dr *Goodall*'s leave to communicate this cure here. Now, if my greateſt enemy, (tho' to judge of the diſpoſitions of others by my own, I ſhould hope I have none) had performed this

this cure, I ſhould readily have acknowledged, (being overcome by truth) that it was one of the moſt remarkable I had ever known; for I have long ago experienced the fatal effects of *bloody urine* in fevers. But as this was effected by my intimate friend, how zealouſly ought I to contend for truth, and his reputation! For this gentleman it was, who, at a time when few durſt aſſert that I had made the leaſt diſcovery or improvement in phyſic, defended my reputation againſt thoſe who injured my character, with as much warmth as a ſon would do that of a father. But tho' I am ſo much indebted to his goodneſs, I would nevertheleſs have concealed his praiſes, if they were not due to his merit; it being equally blame-worthy and falſe to commend or cenſure without cauſe. Let no one therefore be diſpleaſed with me for affirming, that he is a man of as much probity as I have ever known; for during the many years that I have been particularly intimate with him, I never knew him ſay, much leſs do, any thing to the prejudice of another. And how excellent a phyſician he is will ſhortly appear, (if his life be prolonged) as he hath with great judgment read the writings both of the ancient and modern phyſicians, and, with ſingular prudence and induſtry, inveſtigated the niceſt rules of practice, without a knowledge of which no man can practiſe the art with reputation; ſo that his patients will find him an able and ſucceſsful practitioner.

Dr *Goodall* commended.

56. And now I have delivered my ſentiments on this diſeaſe, which are deduced from practical obſervation, and not from a groundleſs hypotheſis; and in reality I cannot conceive how a perſon ſhould be miſtaken, who directs and confines all his reaſonings to the bare practice of the art or ſcience which he intends to learn and exerciſe with reputation. And, on the contrary, how it is poſſible that he ſhould do any thing but ſpend his life idly in deceiving both himſelf and others, who employs his time in ſearching after ſuch things as have not the leaſt relation to practice. And as he would be no honeſt and ſucceſsful pilot, who were to apply himſelf with leſs induſtry to diſcover and avoid rocks and ſands, than to ſearch into the cauſes of the ebbing and flowing of the ſea; which, tho' well deſerving the attention of a philoſopher, is quite foreign to him, whoſe only buſineſs it is to ſecure the ſhip; ſo neither will a phy-

The author's ſentiments on the *ſmall-pox* deriv'd from obſervation.

a phyſician, whoſe province it is only to cure diſeaſes, arrive at a perfect knowledge of the art of medicine, tho' he be a perſon of genius, who beſtows leſs time and application in inveſtigating the hidden and intricate method of nature in producing and nouriſhing diſeaſes, (whereon their hiſtories alſo depend) and adapting ſuitable remedies thereto, than in curious and ſubtile ſpeculations, that do not at all contribute to ſnatch the patient from imminent death, which is the intent of the healing art. And this deluſory procedure does not only deprive mankind of thoſe ſingular advantages, which would accrue to them from the ingenuity of many phyſicians, but renders the art of phyſic rather the art of diſcourſing than of *curing*. And it is come at length to this iſſue, that the patient muſt live or die, as the philoſopher conjectures right or wrong; which muſt always be highly precarious, inaſmuch as the firſt inventors of ſpeculations contended as warmly about their fanciful opinions, as thoſe did who blindly followed them, and it may be none of them in the right. For, tho' by much attention we may be able to diſcover what nature does in fact, and the organs ſhe employs in her operations, yet the manner of its operating will always be a ſecret to us (*n*). Nor is this ſtrange; ſince it is infinitely

(*n*) There is but this one way, *Van Swieten* obſerves, of diſcovering the nature of diſeaſes; namely, by collecting the ſymptoms of the diſtemper, conſidering them ſeparately, and then comparing them together, and likewiſe with what happens in a healthy ſtate, ſo as from thence by cloſe reaſoning to inveſtigate the immediate cauſe of the diſeaſe: but great care muſt be taken to mix nothing of a preconceived hypotheſis with our reaſonings. For notorious miſtakes have been often committed by ſuch as endeavoured to find out the cauſes of natural effects *a priori*, and diſregarded the obſervation of thoſe appearances which fell under the notice of the ſenſes. For as *Sydenham*, who had not his equal in finding out the nature of diſeaſes, wiſely obſerves, —— "*Though by much attention we* "*may be able to diſcover what nature does in fact, and the organs* "*ſhe employs in her operations, yet the manner of her operating* "*will always be a ſecret to us.*" Thus it appears by conſtant obſervation, that the velocity of the pulſe is increaſed in every kind of fever, and conſequently that the heart contracts quicker, and the cauſes on which its contraction depends, are augmented: bnt how thoſe cauſes act which quicken the motion or pulſation of the heart: whence it happens, for inſtance, in an intermitting tertian fever, that they ariſe or become active every other day, but on the intermediate day are obſerved not to act at all, no body yet knows. Whatever, therefore, we know

infinitely more probable, that we poor mortals, who are ſhut out from the glorious regions of light and life, cannot poſſibly comprehend the method which the All-wiſe Creator uſed in forming the machine; than that an unſkilful ſmith ſhould be ignorant of the manner of making a clock, the ſtructure and motion whereof manifeſt the great delicacy of the art. And though it evidently appears that the brain is the origin of ſenſe and motion, and the repoſitory likewiſe of thought and memory, it is, nevertheleſs, impoſſible the mind ſhould be ſo far enlightened by the moſt exact inſpection and conſideration thereof, as to underſtand how ſo thick a ſubſtance, and a kind of *pulp*, which ſeems not to be very artfully formed, ſhould ſuffice for ſo noble an uſe, and ſuch excellent faculties. Nor can it be accounted for, from the nature and ſtructure of its parts, how any particular faculty comes to be exerted thereby.

57. And let theſe particulars ſuffice for the *confluent ſmall-pox*; which, together with what I have already publiſhed concerning this diſtemper, in my hiſtory of acute diſeaſes, comprehends all that I have hitherto diſcovered and conſidered, as attentively as I could, relating thereto.

The author's obſervations on *hyſteric diſorders* deduced from his own experience.

58. I proceed now, in compliance with your requeſt, to communicate the obſervations I have hitherto made concerning *hyſteric diſorders*; which I own are neither ſo eaſily diſcoverable, nor ſo readily curable as other diſeaſes. However, I will endeavour to acquit myſelf herein to the beſt of my ability, and with that brevity which the compaſs of a letter requires; which in reality I am obliged to on account of my ill health, particularly at this ſeaſon of the year, when too intenſe application would immediately bring on a fit of the gout. For this reaſon I ſhall avoid prolixity, and proceed accordingly to my uſual method; which conſiſts (1) in giving a ſhort hiſtory of the diſeaſe, according to its genuine natural phenomena; and (2) ſubjoining the method of cure which hath ſucceeded beſt

know of the nature of a fever, we learn from its inſeparable effects and properties only; for the acuteneſs of man's underſtanding ſeem to go no further; neither have all ſuch as endeavoured to penetrate beyond theſe bounds made any truly uſeful diſcoveries. *Comment. in H. Boerhaave aphoriſmos.* Vol. 2. p. 11.

with me, and which I formerly learnt rather from my own experience than from reading.

Hyſteric diſorders make a moiety of chronic diſeaſes.

59. It ſhould ſeem, that no chronic diſeaſe occurs ſo frequently as this; and that, as fevers with their attendants conſtitute two thirds of the diſeaſes to which mankind are liable, upon comparing them with the whole tribe of chronic diſtempers, ſo hyſteric diſorders, or at leaſt ſuch as are ſo called, make up half the remaining third part, that is, they conſtitute one moiety of chronic diſtempers. For few women, (which ſex makes one half of the grown perſons) excepting ſuch as work and fare hardly, are quite free from every ſpecies of this diſorder, and ſeveral men alſo, who lead a ſedentary life, and ſtudy hard, are afflicted with the ſame. And though the ſymptoms, ariſing from hyſteric diſeaſes, were, by the antients, ſuppoſed to proceed from ſome diſorder in the *womb*; yet upon comparing hypochondriac complaints, which we judge to ariſe from obſtructions of the ſpleen and other *viſcera*, with thoſe ſymptoms which ſeize hyſteric women, we find a great ſimilitude between them (*o*). But it muſt be owned, that

(*o*) The *hyſteric paſſion*, ſays *Hoffman*, is falſely held by ſeveral modern writers to be the ſame with the *hypochondriac diſeaſe*, or to differ only with reſpect to the ſex, and not in nature; the latter only ſeizing men, and the former women. But to ſhew that there is a real difference between them, it would be worth while to give a true hiſtory of the hyſteric diſeaſe; to which end if we conſult the antients, and eſpecially *Hippocrates*, *Aretæus*, *Fernelius*, *Duretus*, *Montanus*, *Ballonius*, *Hollerius*, *Mercurialis*, and *J. Heurneus*, they ſeem unanimouſly of opinion, that a ſtrangulation of the *fauces*, quick and difficult reſpiration,, ſo as to endanger ſuffocation, loſs of ſpeech. and all ſenſe and motion, are to be accounted the proper and eſſential ſymptoms of this *uterine* diſtemper. And in effect, tho' both the hypochondriac and hyſteric diſeaſes appear to have ſome ſymptoms in common, yet they have ſeveral peculiar ones reſpectively, which fully manifeſt that they differ conſiderably from each other. Thus the *hypochondriac diſeaſe* is an inveterate diſeaſe, and requires a tedious proceſs in order to the cure of it; whereas experience ſhews, that the *hyſteric diſeaſe* often attacks pregnant and lying in women with great ſeverity, and alſo widows that are full of blood, after ſome conſiderable diſturbance of mind, and virgins upon a ſudden ſtoppage of the menſtrual diſcharge, and yet they are freed from it ſo effectually that it never returns again. Moreover, this diſeaſe often ſeizes women of a ſudden, ſo that they fall down directly without ſenſe and motion; which is never obſerved to happen in the hypochondriac diſeaſe. And this is further remarkable in *hyſteric paroxyſms*, that the ſymptoms, tho'

that women are oftener attacked with theſe diſorders than men; not indeed becauſe the *womb* is more indiſpoſed

tho' they lie without ſenſe and motion, will often abate ſoon, or go off entirely, upon holding burnt feathers flaming under the noſe. Again, in theſe fits the abdominal muſcles are drawn inwards by the violence of the ſpaſms, ſo that the navel in great part diſappears; whereas, in *hypochondriac diſorders*, the *abdomen* rather appears ſwelled outwards, and protuberant. Hyſteric ſubjects are alſo affected with ſo piercing and incredible a cold in the region of the loins, that it may be perceived by laying the hand thereon, and does not abate upon applying warm cloths to it; and they often have a fixt acute pain in the top of the head, which is confined within a ſmall compaſs, and is uſually entitled the *clavus hyſtericus*; and abundance of perſons perceive a kind of globe to aſcend from the lower belly towards the *thorax*: all which ſymptoms never happen in the *hypochondriac diſeaſe*. Neither does fainting, and a difficult reſpiration, threatening ſuffocation of a ſudden, along with ſo violent a ſtrangulation of the *fauces*, occur ſo frequently in this diſtemper, as in the *hyſteric paſſion*. And laſtly, no *hypochondriacs* were ever judged to be dead, and intended to be interr'd; which hath been the caſe in *hyſteric* ſubjects, as we learn from ſome hiſtories worthy of credit.

We ſhould not have laid ſo much ſtreſs on the difference between the two diſeaſes, and the neceſſity of diſtinguiſhing them accurately, but for its great uſefulneſs in practice. For the beſt remedies in the *hypochondriac diſeaſe* are vehement exerciſe, carminatives, ſpirituous and volatile medicines, ſtomachics and aromatics, ſtimulating neutral ſalts, mineral waters, ſolutive bitters, and eſpecially chalybeates: but theſe rather do hurt in the *hyſteric diſeaſe*, which is moſt relieved by bleeding, opiates, nitrous medicines, anti epileptics, coolers, drinking cold water and whey, and avoiding all hot things, not excepting wine.

The ſame author recommends *warm bathing* in the *hypochondriac diſeaſe* in the following terms.—But there is no caſe wherein this remedy (namely *warm bathing*) proves of greater ſervice than in the hypochondriacal diſeaſe; which is not only a ſtubborn, but alſo a reigning evil, at this time, being commonly attended with a grievous train of ſymptoms, without intermiſſion, and cauſing great perplexity to phyſicians, who have not hitherto diſcovered its perfect cure. To ſpeak the truth, there is no better, or more effectual remedy, for relieving and eradicating this diſtemper, than a proper uſe of the *hot* and *cold mineral waters*. But here we muſt obſerve, that *bathing* in the pureſt, and lighteſt water, wonderfully ſeconds the internal uſe of *medicinal ſprings*. For thoſe waters which are propereſt in drinking, as containing a conſiderable proportion of a heavy, earthy, and ſaline, or aſtringent, irony matter, are not ſo proper for the purpoſe of bathing, in this diſtemper, as the purer. This has been confirmed to me by long experience of the hot *Caroline* aſtringent ſpring. And hyſterical women receive the ſame advantages from warm bathing, as hypochondriacal men.

To

poſed than any other part of the body, but for reaſons hereafter to be explained.

Appears under numerous forms.

60. This diſeaſe is not more remarkable for its frequency, than for the numerous forms under which it appears, reſembling moſt of the diſtempers wherewith mankind are afflicted. For in whatever part of the body it be ſeated, it immediately produces ſuch ſymptoms as are peculiar thereto; ſo that unleſs the phyſician be a perſon of judgment and penetration, he will be miſ-

To diſcover the reaſon of the noble effects of *warm bathing*, in theſe caſes, we muſt firſt examine into the ſeat, the origin, the nature, and the ſymptoms of the hypochondriacal diſorder: and when all things are conſidered, it certainly appears to reſide in that nervous and membranous tube, wherein the aliment is digeſted, diſſolved, and diſcharged; that is, in the ſtomach and inteſtines; the periſtaltic motion whereof, which naturally conſiſts in a reciprocal dilatation and contraction, is plainly diſturbed, or even inverted. And this chiefly proceeds from certain ſpaſmodic, and convulſive contractions; whereby, if the lower parts of the inteſtines are affected, eſpecially when full, the excrements are not only detained in the tube, but flatulencies, or windy vapours, generated, and pent up; ſo as to riſe, and violently diſtend the ſmaller guts and the ſtomach. And thus all the nervous parts, endowed with an exquiſite ſenſe, are, by what the antients call, *conſent*, drawn into a ſimilar ſpaſmodic motion; whence proceed that numerous train of ſymptoms, which afflict nearly all the parts of the body. If this diſorder has only a tranſient cauſe, not ſeated in the ſubſtance of the *viſcera*, it receives an eaſy cure by proper remedies. But if it alſo ſeizes upon the *viſcera*, eſpecially the *pancreas*, the liver, the ſpleen, or the meſentery; and the coats of the inteſtines be injured, and deſtroyed, a thorough cure is very hard to effect: for the caſe is rather exaſperated, and at length ſometimes rendered incurable, by a frequent change of phyſicians, and medicines, with which people in this diſtemper vainly amuſe and deceive themſelves. From hence every phyſician will perceive, that of all remedies, none is ſo efficacious as a warm, innocent fluid, properly uſed, both externally and internally, for reſtoring the natural tone, or tenſion of the inteſtinal tube; eaſing and relaxing the ſpaſmodic contractions of theſe parts; and re-inſtating the inverted periſtaltic motion; or directing it to its natural tendency downwards: For thus, by its agreeable warmth, it gently mollifies and relaxes the hardened and criſped fibres, recalls the blood and humours, that were before excluded, and cauſes a free circulation of the juices thro' the veſſels of the inteſtines. *See new exper. on min. waters, &c. p.* 190, 191, 192.

It may not be amiſs to obſerve, that hyſteric and hypochondriac diſorders are ſometimes complicated in the ſame ſubject; ſome few inſtances whereof have fallen under my own obſervations, and others may be met with in practical writers; but this ſeldom or never happens in men.

taken,

taken, and ſuppoſe ſuch ſymptoms to ariſe from ſome eſſential diſeaſe of this or that particular part, and not from the *hyſteric paſſion*.

61. To exemplify this remark. Sometimes it attacks the head, and cauſes an *apoplexy*, which alſo terminates in an *hemiplegia*; exactly reſembling that kind of *apoplexy*, which proves fatal to ſome aged and corpulent perſons, and ariſes from an obſtruction and compreſſion of the nerves, occaſioned by a copious phlegm contained in the cortical part of the brain. But the *apoplexy* in hyſteric women ſeems to proceed from a very different cauſe; for it ſeizes them frequently after a difficult delivery, attended with a great loſs of blood, or proceeds from ſome violent commotion of mind. The *hyſteric paſſion* ſometimes reſembles an *apoplexy*.

62. Sometimes it cauſes terrible convulſions, much like the epilepſy, along with a riſing of the *abdomen* and *viſcera* towards the throat, and ſuch ſtrong convulſive motions, that tho' the patient be otherwiſe rather weak, ſhe can ſcarce be held by the attendants. And ſhe talks wildly and unintelligibly, and beats her breaſt. This ſpecies of the diſeaſe, which is commonly entitled the *ſtrangulation of the womb*, or *fits of the mother*, happens moſt frequently to ſuch women as are of a very ſanguine and robuſt conſtitution. Sometimes an *epilepſy*.

63. Sometimes this diſeaſe attacks the external part of the head, between the *pericranium* and the *cranium*, and occaſions violent pain, which continues fixed in one place, not exceeding the breadth of the thumb, and it is likewiſe accompanied with very violent vomiting. I call this ſpecies the *clavus hyſtericus*, which chiefly affects ſuch as have the *green-ſickneſs*. Sometimes a *vehement pain in the head*, with *exceſſive vomiting*.

64. Sometimes it ſeizes the vital parts, and cauſes ſo violent *a palpitation of the heart*, that the patient is perſuaded, thoſe about her muſt needs hear the heart ſtrike againſt the ribs. Slender and weakly women, that ſeem conſumptive, and girls that have the *green-ſickneſs*, are chiefly ſubject to this ſpecies. Sometimes it cauſes a *palpitation of the heart*.

65. Sometimes it affects the lungs, cauſing an almoſt perpetual *dry cough*; and tho' it does not ſhake the breaſt ſo violently, yet the fits are more frequent, and the patient's ſenſes are alſo diſordered. But this ſpecies of the *hyſteric cough* is very rare, and chiefly happens to women of a phlegmatic conſtitution. Sometimes a *dry cough*.

66. Some-

Sometimes a diſorder reſembling the *iliac paſſion.*

66. Sometimes attacking the parts beneath the *ſcrobiculum-cordis* in a violent manner, it occaſions extreme pain, like the *iliac paſſion*, and is attended with a copious vomiting of a certain green matter, nearly reſembling what is uſually called *porraceous bile*, and ſometimes the matter is of an uncommon colour. And frequently after the pain and vomiting have continued ſeveral days, and greatly debilitated the patient, the fit is at length terminated by an univerſal *jaundice*. Moreover, the patient is ſo highly terrified, as to deſpair of recovering; and, as far as I have obſerved, this dejection or deſpondency as certainly accompanies this ſpecies of the hyſteric paſſion, as either the pains or vomiting abovementioned. This kind chiefly attacks women of a lax texture of body, or thoſe who have ſuffered greatly by being delivered of large children.

Sometimes a diſorder reſembling a *fit of the ſtone.*

67. Sometimes this diſeaſe ſeizes one of the kidneys, where, by the violent pain it occaſions, it entirely reſembles a *fit of the ſtone*, not only with reſpect to the kind of pain, and the part affected, but likewiſe by the violent vomiting wherewith it is accompanied, and the pain's extending thro' the whole duct of the *ureter*: ſo that it is hard to diſtinguiſh, whether the ſymptoms ariſe from the ſtone or an hyſteric diſorder: unleſs, perhaps, the woman's ſpirit having been depreſſed by ſome misfortune a little before the diſorder came on, or the diſcharge of green matter by vomit, ſhould ſhew that the ſymptoms are rather to be aſcribed to an hyſteric diſorder than the ſtone. The bladder alſo is occaſionally affected with this deluſory ſymptom, which not only cauſes pain, but a ſuppreſſion of urine, as if there was a ſtone, tho' there is none. This laſt ſpecies rarely happens, but the former more frequently. Both are accuſtomed to attack ſuch women, as are greatly debilitated by frequent hyſteric fits, and in a bad ſtate of health.

Sometimes it occaſions a *continual vomiting or purging.*

68. Sometimes ſeizing the ſtomach, it cauſes continual *vomiting*; and ſometimes fixing in the inteſtines, occaſions a *purging*; but both theſe ſymptoms are without pain, tho' the abovementioned green humour frequently appears in both. Such alſo as have been weakened by frequent hyſteric fits, are chiefly ſubject to both theſe ſpecies.

69. More-

69. Moreover, as this diſeaſe affects moſt of the internal parts, ſo likewiſe it ſometimes attacks the external parts, and muſcular fleſh, ſometimes cauſing pain, and ſometimes a tumor in the FAUCES, *ſhoulders*, *hands*, *thighs*, and *legs*, in which kind the ſwelling which diſtends the legs is moſt remarkable. For whereas in dropſical ſwellings theſe two particulars may always be obſerved, namely, (1) they increaſe towards night, and (2) pit for ſome time after being preſſed by the finger; in this tumour the ſwelling is largeſt in the morning, and does not yield to the finger, or leave any mark behind it, and it generally only ſwells one of the legs. In other reſpects, if the magnitude and ſurface of it be obſerved, it differs ſo little from dropſical tumours, that the patient can ſcarce be perſuaded to think it otherwiſe (*p*).

Sometimes it attacks the external parts, cauſing a pain or tumour of the FAUCES, ſhoulders, *&c.*

70. The *teeth* alſo (which one would ſcarce believe) are ſubject to this diſeaſe, tho' free from the leaſt cavity, and manifeſt defluxion that might cauſe pain, which nevertheleſs is not at all milder, of ſhorter continuance, or more eaſily curable. But the pains and ſwellings that affect the external parts, chiefly happen to ſuch women, as are almoſt worn out by the long continuance and violence of hyſteric fits.

Sometimes the *teeth*.

71. But the moſt frequent of all the tormenting ſymptoms of this diſeaſe, is a *pain of the back*, which generally accompanies even the ſlighteſt degree of it. The abovementioned pains likewiſe have this effect in common, that the part they affect cannot bear the touch after they are gone off, but remains tender and painful, as if it had been ſeverely beaten; but this tenderneſs wears off by degrees.

Is generally accompanied with a *pain of the back*.

72. It is likewiſe well worth noting, that all theſe ſymptoms are preceded by a remarkable *coldneſs of the external parts*, which ſeldom goes off, before the fit ceaſes. And I have obſerved, that this coldneſs reſembles that which is perceived in dead bodies, the pulſe, notwithſtanding, continuing regular. Whereto may be added, that moſt of the hyſteric women that I have hitherto treated, have complained of a *lowneſs*, and (to

All its ſymptoms preceded by a remarkable *coldneſs of the outward parts*.

(*p*) I never once met with the *hyſteric ſwelled leg* deſcribed by our author, and no phyſician that I have happened to converſe with on this ſubject ever did; ſo that it is a very uncommon accident.

uſe

uſe their expreſſion) a *ſinking of the ſpirits*; which, by their pointing to the region of the lungs, to ſhew the part affected, ſeemed to be ſeated there. Laſtly, it is generally known that hyſteric women ſometimes *laugh*, and ſometimes *cry* exceſſively, without the leaſt apparent provocation.

This diſeaſe generally attended with a *copious evacuation of clear urine.*

73. But amongſt the ſymptoms accompanying this diſeaſe, the moſt peculiar and general one is the making great quantities of urine as clear as rock water; which, upon diligent enquiry, I find to be the diſtinguiſhing ſign of thoſe diſorders which we call *hypochondriac* in men, and *hyſteric* in women. And I have ſometimes obſerved in men, that ſoon after having made urine of an amber colour, being ſuddenly ſeized with ſome extraordinary diſturbance of mind, they have made a large quantity of clear water, with a continued violent ſtream, and remained indiſpoſed till the urine came to its former colour, when the fit went off.

And ſometimes with *fetid*, and highly *acid eructations.*

74. Moreover, in *hyſteric* and *hypochondriac* ſubjects, when the diſeaſe has been of long ſtanding, they have *fetid*, and ſometimes highly *acid eructations*, after eating, tho' they eat moderately, according to the appetite, the digeſtive faculty being greatly impaired, and the juices vitiated.

And with a great *diſturbance of mind*, and *lowneſs of ſpirits.*

75. But their unhappineſs does not only proceed from a great indiſpoſition of body, for the *mind* is ſtill more diſordered; it being the nature of this diſeaſe to be attended with an incurable *deſpair*; ſo that they cannot bear with patience to be told that there is any hopes at all of their recovery, eaſily imagining that they are liable to all the miſeries that can befall mankind; and preſaging the worſt evils to themſelves. Upon the leaſt occaſion alſo they indulge terror, anger, jealouſy, diſtruſt, and other hateful paſſions; and abhor joy, and hope, and chearfulneſs, which, if they accidentally ariſe, as they ſeldom do, quickly fly away, and yet diſturb the mind as much as the depreſſing paſſions do; ſo that they obſerve no mean in any thing, and are conſtant only to inconſtancy. They love the ſame perſons extravagantly at one time, and ſoon after hate them without a cauſe; this inſtant they propoſe doing one thing, and the next change their mind, and enter upon ſomething contrary to it, but without finiſhing it; ſo unſettled is their mind, that they are never at reſt.

What

What the *Roman* orators aſſert of the ſuperſtitious, agrees exactly with theſe melancholic perſons. *Sleep ſeems to be a relief from labour and inquietude, but from this many cares and fears ariſe*; their dreams being ever accompanied with the repreſentations of funerals and apparitions of their departed friends. And ſo much are they diſtempered in body and mind, that it ſeems as if this life were a purgatory, to expiate offences committed in a pre-exiſtent ſtate. Nor is this the caſe only in furious maniacs, but even in thoſe, who, excepting theſe violent paſſions, are judicious perſons, and for profoundneſs of thought, and ſolidity of ſpeech, greatly excel thoſe whoſe minds were never diſturbed by theſe tormenting thoughts. So that the obſervation of *Ariſtotle* is juſt, who aſſerts that *melancholly perſons are the moſt ingenious* (*q*).

76. But this very dreadful ſtate of mind, which I have mentioned above, only attacks ſuch as have been much and long afflicted with this diſeaſe, and are at length overcome thereby; eſpecially if misfortunes, grief, care, hard ſtudy, and the like, along with an ill habit of body, have contributed thereto.

Eſpecially when the diſeaſe hath been of long ſtanding.

77. It would take up too much time to enumerate all the ſymptoms belonging to hyſteric diſeaſes; ſo much do they vary, and differ from each other. *Democritus*, therefore, in writing to *Hippocrates*, ſeems to have had reaſon to aſſert, though he miſtook the cauſe of the diſeaſe, *that the womb was the origin of ſix hundred evils, and innumerable calamities*.. Nor do they

Hard to enumerate all its ſymptoms.

(*q*) Of all the miſeries that afflict human life, (ſays *Dr Cheyne in the introduction to his Engliſh malady*) and relate principally to the body, in this valley of tears, I think, *nervous* diſorders, in their extreme and laſt degrees, are the moſt deplorable, and beyond all compariſon the worſt. It was the obſervation of a learned and judicious *phyſician*, that he had ſeen perſons labouring under the moſt exquiſite pains of *gout*, *ſtone*, *colic*, *cancer*, and all the other diſtempers that can tear the human machine, yet had he obſerved them all willing to prolong their wretched being, and ſcarce any ready to lay down chearfully the *load* of *clay* (we will except thoſe who were ſupernaturally ſupported) but ſuch as laboured under a conſtant, internal anxiety, meaning thoſe moſt ſinking, ſuffocating, and ſtrangling *nervous* diſorders: it is truly the only miſery almoſt, to be dreaded and avoided in life, if, by any means, it can poſſibly. Tho' other evils be burdens, yet an erected ſpirit may bear them: but when the ſupports are fallen, and cover the man with their ruins, the deſolation is perfect.

only

only differ ſo greatly, but are ſo irregular likewiſe, that they cannot be comprehended under any uniform appearance, as is uſual in other diſeaſes: but are a kind of diſorderly train of ſymptoms, ſo that it is a difficult taſk to write the hiſtory of this diſeaſe.

The *external cauſes* thereof.

78. The *procatarctic*, or *external cauſes* thereof are either violent motions of the body, or, more frequently, ſome great commotion of mind, occaſioned by ſome ſudden fit, either of anger, grief, terror, or the like paſſions. Upon this account, whenever I am conſulted by women concerning any particular diſorder, which cannot be accounted for on the common principles of inveſtigating diſeaſes, I always enquire, whether they are not chiefly attacked with it after fretting, or any diſturbance of mind; and if they acknowledge this, I am well aſſured that the diſeaſe is to be aſcribed to the tribe of diſorders under conſideration, eſpecially if the diagnoſtic appears more evident by a copious evacuation of pale urine at certain times. But to theſe diſturbances of mind, which are the uſual cauſes of this diſeaſe, muſt be added, emptineſs of the ſtomach, from long faſting, or immoderate evacuations, whether by bleeding too profuſely, or giving too ſtrong a vomit or purge (*r*).

Its internal and efficient cauſes, *irregular motions* of the *animal ſpirits*.

79. Having now given a full deſcription of this diſeaſe, according to its common ſymptoms, we are next to conſider the *internal efficient cauſes* thereof, ſo far as theſe can be diſcovered from all the circumſtances which we have deſcribed, taken together. And, in my opinion, diſorders, which we term hyſteric in women, and hypochondriac in men, ariſe from *irregular motions of the animal ſpirits*, whence they are hurried with violence, and too copiouſly to a particular part, occaſioning convulſions and pain, when they exert their force upon parts of delicate ſenſation; and deſtroying the functions of the reſpective organs which they enter in-

(*r*) This diſeaſe in general may be ſaid to ariſe principally from weak nerves, and poor, thin, watery juices, whence the circulation is languid and ſlow, and the ſecretions and excretions imperfectly performed. Conſequently, whatever tends to debilitate the nervous ſyſtem, and impoveriſh the juices, may be enumerated amongſt the external or manifeſt cauſes thereof; ſuch as violent exerciſe, conſiderable commotions of mind however occaſioned, emptineſs, long faſting, watching, all immoderate evacuations, &c. *See above*, *Par.* 80.

to,

into, and of thoſe alſo whence they came; both being highly injur'd by this unequal diſtribution, which quite perverts the œconomy of nature.

80. The origin and *antecedent cauſe*, of theſe irregular motions of the ſpirits, proceed from the *weakneſs* of their *texture*, whether it be natural or adventitious, whence they are eaſily diſſipable upon the leaſt accident, and their office perverted. For as the body is compoſed of parts which are manifeſt to the ſenſes, ſo doubtleſs the mind conſiſts in a regular frame or make of the ſpirits, which is the object of reaſon only. And this being ſo intimately united with the temperament of the body, is more or leſs diſordered, according as the conſtituent parts thereof, given us by nature, are more or leſs firm. Hence women are more frequently affected with this diſeaſe than men, becauſe kind nature has given them a finer and more delicate conſtitution of body, being deſigned for an eaſier life, and the pleaſure of men, who were made robuſt that they might be able to cultivate the earth, hunt and kill wild beaſts for food, and the like.

And theſe proceed from their *weak texture*.

81. But that the irregular motion of the ſpirits is the cauſe of this diſeaſe, is fully manifeſt from the ſymptoms juſt enumerated; I will only mention the principal, begining with that remarkable one, the *ſtrangulation of the womb*, or *fits of the mother*. In this caſe the ſpirits being copiouſly collected in the lower belly, and ruſhing with violence to the *fauces*, occaſion convulſions in all the parts through which they paſs, puffing up the belly like a ball; which however is only a kind of convolution of the convulſed parts, that cannot be ſuppreſs'd without uſing violent means. The external parts and the fleſh, in the mean time, being in great meaſure deſtitute of ſpirits, which are carried another way, frequently become ſo cold, both in this and all the other kinds of hyſteric diſorders, that dead bodies are not colder, whilſt the pulſe remains in its natural ſtate; this ſymptom however is not dangerous, unleſs it be owing to ſome preceding exceſſive evacuation.

This opinion illuſtrated and exemplified by the *ſtrangulation of the womb*.

82. The ſame may be ſaid of that violent kind of of this diſorder, which in outward appearance reſembles the *bilious colic*, or *iliac paſſion*, wherein the patient is afflicted with a very violent pain, in the parts contiguous to the *ſcrobiculum cordis*, along with a copious diſ-

And the diſorder reſembling the *bilious colic* or *iliac paſſion*.

charge of green matter, by vomit; which ſymptoms proceeds only from a forcible impulſe of the ſpirits ſtagnating in thoſe parts, occaſioning the pain, convulſion, and loſs of their functions.

Whence the green colour of the matters diſcharged upwards and downwards

83 For it is not immediately to be concluded, becauſe the diſcharges upwards and downwards, in this diſorder, are ſometimes *green*, that it is ſeated in the fluids, or that the violent pain proceeds from the acrimony of ſome humour vellicating the parts to which it adheres, which for this reaſon we ſhould eſteem the cauſe of the diſeaſe, and therefore judge that it ought to be thoroughly expelled by emetics and cathartics. For it appears that the ſickneſs, which ſeizes thoſe who go to ſea, occaſioned by the agitation of the animal ſpirits from the motion of the ſhip, is attended in healthy ſubjects with a vomiting of green matter, tho' but half an hour before no ſuch bile, as we term *porraceous*, exiſted in the body. Again, do not children in convulſive fits, in which the animal ſpirits are principally diſordered, evacuate a matter of the ſame colour upwards and downwards? Whereto muſt be ſubjoined, what is manifeſt from daily experience, *viz.* that tho' ſuch women and children ſhould be thoroughly emptied by repeated purging, yet the greenneſs would ſtill appear in the diſcharges upwards and downwards. Moreover the green matter encreaſes upon the frequent uſe either of emetics, or cathartics; becauſe both theſe evacuations cauſe a greater diſturbance of the animal ſpirits; which, I cannot tell how, quite deſtroys the ferment of thoſe parts, or by the violence of the convulſions forces ſome juice of a ſtrange nature into the ſtomach and inteſtines, which has the property of tinging the juices of this colour. The Chemiſts, indeed, tho' they cannot furniſh us with better remedies, than may be obtained from pharmacy, are, however, able to gratify our curioſity, by exhibiting two equally clear tranſparent liquors, which upon mixture immediately become of ſome deep colour, as if there were conjuration in the caſe (*s*). But, in reality, the conſideration of colours is ſo inſignificant and variable, that no certainty can be had from them, with reſpect to the nature of thoſe bodies

(*s*) If the reader be deſirous of having ſome inſtances of this, he will find ſeveral in *Dr Shaw's chymical lectures*, p. 171, &c. and in *Poole's chymical vade mecum*, p. 378, &c.

wherein

wherein they appear: for it does not more neceſſarily follow, that whatever is of a green colour is acrid, than that all acrid things are green. Upon the whole 'tis apparent, that the violent pain which almoſt deſtroys ſuch as are ſeized with the hyſteric colic, and the evacuation of the green matter, proceeds entirely from the violent ruſhing of the ſpirits to the parts (*t*) beneath the *Scrobiculum cordis*, and contracting them by convulſions.

84. To this irregular motion of the ſpirits the *clavus hyſtericus*

(*t*) The bile ſays the acute *Huxham*, does not turn green, unleſs it be mix'd with an acid, and the ſtronger the acid, the darker greenneſs ariſes, approaching nearly to blackneſs, and the greater is the coagulation; ſo that the mixture in colour and conſiſtence nearly reſembles ink poured on ſoot: and this appears more manifeſt upon making an experiment with human bile, which is perhaps more alcaline, than that of any other animal. This ſeems to me to be the moſt common origin of black and green bile; and conſequently thoſe perſons err, who believe that theſe kinds of bile are only form'd in the paſſages, ſince anatomiſts frequently find both black and green or *porraceous* bile in the gall-bladder and biliary conduits.

Experience confirms this reaſoning, without which the moſt plauſible theory is vain; thus I have often been aſtoniſh'd to ſee a porraceous and a black bile (which is abundantly more acrimonious than that) thrown up by vomit, which corroded metals, and boil'd up on the ground, like ſpirit of vitriol dropt thereon; and ſo auſterely acid, that it ſet the teeth ſtrongly on edge, and excorated the throat. Are not theſe eminent proofs of acidity? Spirit of vitriol ſcarce gives greater. I treated a ſailor ſome time ago, who upon his return from *Virginia*, being ſeiz'd at firſt with gripings, and afterwards with violent convulſions and a delirium, vomited a large quantity of deep green, and ſometimes a very black and acid bile. The attendants having introduced a ſilver ſpoon into his mouth, during his convulſions, that he might not bite his tongue, it in a moment turn'd as black as if it had been ſtained with ſpirit of nitre. By the way, it muſt be obſerved, that this man being a great lover of juice of lemons, drank it copiouſly, in moſt of his liquors. And I muſt likewiſe add, that I have found ſuch perſons afflicted with a black, or porraceous bile who had frequently laboured under a diſorder in the ſtomach, occaſioned by a corroding, and very pungent acid. I remember about fifteen years ſince, that having ordered a young gentleman to be blooded, who was a great lover of acids and *cyder*, and on this account frequently ſeiz'd with *colic* and *rheumatic* pains, I was amaz'd to find the *ſerum* as green, as the juice of leeks. *See our ſecond obſervation in the Philoſophical Tranſactions.* No. 382.

I am indeed well aware that the excellent *Sydenham* holds, that *porraceous* or green bile proceeds ſolely from the irregular motion of the ſpirits: but if this were true, ſuch bile would be

The *clavus hyſtericus* caus'd by the irregular motion of the ſpirits. *p.* 37. *par.* 63.

The *clavus hyſtericus* is to be aſcrib'd in which all the ſpirits are collected in a certain point of the *pericranium*, occaſioning ſuch a kind of pain, as if a nail were driven into the head, and attended with a copious diſcharge of green matter by vomit. And this contraction of all the ſpirits, into a kind of point, differs little from the collection of the rays of the ſun by a burning glaſs; for as theſe burn by their united force, ſo thoſe for the ſame reaſon cauſe a pain, by tearing the membranes with united violence.

Alſo the copious diſcharge of *limpid urine*.

85. And from the ſame inordinate motion of the ſpirits, which diſturbs the mixture of the blood, ariſes the voiding of a *copious* clear *urine*; which is a frequent ſymptom in hyſteric and hypochondriac diſorders; for, when the due circulation of the blood is often diſturbed, the *ſerum* is hurried to the urinary paſſages before it has remained long enough in the body, to be impregnated with thoſe ſaline particles that render it of a ſtraw colour (*u*). We have frequent inſtances of this, in thoſe who

generated upon every extraordinary commotion of mind or vehement agitation of the ſpirits, which however ſeldom happens. The paſſions of the mind do indeed agitate and force out the bile into the *viſcera*, where, if it meets with an acid humour, it turns green, in which ſtate it is often vomited up, in great commotions of mind. But the ſame perſon who from a vehement commotion of mind now vomits green bile, will perhaps ſoon after, from a more violent diſturbance vomit an entirely yellow bile. And thus a perſon at ſea throws up a very green bile one day, who, nevertheleſs, the next day may vomit a yellow one, and *vice verſa*. The bile when out, of the body, does not turn green with violent ſhaking, and therefore ſcarce turns green in the body without the admixture of an acid, I ſpeak my thoughts. A vehement agitation of the ſpirits, or immoderate paſſion of the mind chiefly hurts digeſtion, ſo that the chyle turns ſour in the ſtomach, and gives a greeneſs to the bile, which flows into this bowel, and is mix'd therewith: and as long as the ſtomach continues weak, the food taken in is ill digeſted, whence both it and the inteſtines may be overcharged with an acid phlegm for a conſiderable time. *See Huxham de morb. col. danmon.* p. 19, 20, 21, 22.

That human bile, and the bile of animals turns green and afterwards black, by mixing and digeſting it with acids, is verified from ſome experiments of *Baglivi*, which tend to confirm what has been advanced above. *See Baglivi, op.* page 436, *ſeq.*

(*u*) This ſymptom ſhould rather ſeem to proceed from certain ſpaſmodic conſtrictions of the veſſels, and a tendency of the *Serum* to the urinary paſſages, accompanied perhaps with a diſſolution or an imperfect mixture of the conſtituent parts of the blood, or a poor and watery ſtate thereof.

who drink too freely, eſpecially of thin and attenuating liquors, whoſe urine immediately becomes tranſparent thereupon: in which caſe the blood being ſtock'd with an over proportion of *ſerum*, which it cannot retain, diſcharges it quite clear, and not yet coloured by the juices, by reaſon of its too ſhort ſtay in the body.

Illuſtrated by a caſe.

86. Three years ſince a nobleman ſent for me, who ſeemed to be afflicted with an *hypochondriac colic*, differing little from an *iliac paſſion*, attended with pain, and immoderate vomitings, which he had long laboured under, ſo that he was in a manner worn out. During the whole courſe of the diſeaſe, whenever he was worſt, I obſerved that he always voided a clear colourleſs urine, but upon the abatement of the diſorder, it inclined to its natural ſtraw colour. Viſiting him one day, I found his urine that was made at three ſeveral times, and kept apart, of a ſtraw colour, and he was very chearful, had an appetite, and thought of eating ſomething of eaſy digeſtion; but ſome perſon coming in that inſtant, and putting him into a violent paſſion, he immediately thereupon made a large quantity of very clear water.

The *ſputation* in hyſteric ſubjects from the ſame cauſe.

87. Poſſibly the ſpitting, which is ſo common a ſymptom in hyſteric ſubjects, ariſes from the ſpirits, diſturbing the mixture of the blood: they ſpit a thin *ſaliva* for many weeks, as if it were produced by *mercurial unction*; for during this commotion of the blood, which renders it unfit to perform the excretions in the natural way, the *ſerum* accidentally taking this contrary courſe, is not diſcharged by the kidneys according to the laws of nature, but derived to the glands from the extremities of the arteries, and empties itſelf by the ſalival ducts in the form of *ſaliva*. The ſame may be ſaid of thoſe profuſe night ſweats, which ſometimes ſeize hyſteric women, and proceed only from the ill ſtate of the *ſerum* of the blood, which diſpoſes it to be thrown on the habit, from the irregular motion of the blood juſt mentioned.

And the *coldneſs of the outward parts.*

88. It is manifeſt alſo that the *coldneſs* of the external parts, which often happens in hyſteric diſorders, ariſes from the ſpirits forſaking their ſtation, and crowding too much to ſome particular part; and doubtleſs both the *crying* and *laughing* fits, which frequently affect hyſteric women without any provocation, are cauſed

by the violent action of the animal ſpirits upon the organs which perform theſe animal functions.

Men ſometimes ſubject to *fits of weeping*; exemplified in a caſe likewiſe.

89. And, by the way, I muſt obſerve that men are ſometimes ſubject to ſuch *crying fits*, tho rarely. I was called not long ſince to an ingenious gentleman, who had recovered of a fever but a few days before; he employed another phyſician, who had blooded and purged him thrice, and forbid him the uſe of fleſh. When I came, and found him up, and heard him talk ſenſibly on ſome ſubjects, I aſk'd why I was ſent for; to which one of his friends replied, If I would have a little patience I ſhould be ſatisfied. Accordingly, ſitting down, and entering into diſcourſe with the patient, I immediately perceived that his under lip was thruſt outward, and in frequent motion (as it happens to fretful children, who pout before they cry) which was ſucceeded by the moſt violent fit of crying I had ever ſeen, attended with deep and almoſt convulſive ſighs; but it ſoon went off. I conceived that this diſorder proceeded from an irregular motion of the ſpirits, occaſioned in part by the long continuance of the diſeaſe, and partly by the evacuations that were required in order to the cure; partly alſo by emptineſs, and the abſtinence from fleſh, which the phyſician had ordered to be continued for ſome days after his recovery to prevent a relapſe. I maintain'd that he was in no danger of a fever, and that his diſorder proceeded wholly from emptineſs; and therefore ordered him a roaſt chicken for dinner, and adviſed him to drink wine moderately at his meals; which being complied with, and he continuing to eat fleſh ſparingly, his diſorder left him.

The other ſymptoms of the *hyſteric diſeae*, caus'd likewiſe by the *irregular motion of the ſpirits*.

90. To conclude (not to mention the other concommitant ſymptoms of this diſeaſe) the diſturbance and variable indiſpoſition of body aud mind, which prevail in *hyſteric* and *hypochondriac* ſubjects, ariſe from the ſame *inordinate motion of the ſpirits:* for ſuch perſons not having that firmneſs of ſpirits which the robuſt, and thoſe who never want vigorous ſpirits, always poſſeſs, cannot bear misfortunes, but being ſoon moved by paſſion or pain, are as much affected as thoſe whoſe minds are originally weak, or rendered ſo by a long train of diſorders, or their long continuance. For the ſtrength and ſteadineſs of the mind, during its union with the body, chiefly depends on the firmneſs

of

of the ſpirits which are ſubſervient thereto (*w*) which are in reality compoſed of the fineſt particles of matter, and border upon immaterial, or ſpiritual beings. And as the frame of the mind, if I may uſe the expreſſion, is much more curious and artful than the ſtructure of the body; as conſiſting in an harmony of the moſt excellent, and almoſt divine faculties; ſo if the conſtitution be any way diſordered the evil muſt be ſo much the greater, the more excellent and delicate the workmanſhip was, whilſt it remained entire. And this indeed is the caſe of thoſe miſerable dejected perſons we have deſcribed, which the poſitive command of the proudeſt *Stoic* would not ſooner relieve, than the tooth-ach would be prevented by a perſon's firmly reſolving not to ſuffer his teeth to ake.

91. I conceive now that it is ſufficiently manifeſt that all the kinds of this diſeaſe are to be aſcribed to a diſorder of the animal ſpirits; and not to the aſcent of malignant vapours from corrupted *ſemen*, or *menſtruous blood*, to the parts affected, as ſome authors have aſſerted; or, as others affirm, to a latent depravity of the juices, or a collection of acrid humours. For that the cauſe of this diſeaſe does not lie conceal'd in any morbific matter, appears evident from this ſingle inſtance: If a ſlender weak woman, otherwiſe uſually healthy, happens by miſtake to be debilitated and exhauſted by a ſtrong vomit or purgative, ſhe will infallibly be ſeized with ſome one of the concomitant ſymptoms of this diſeaſe; which would rather have been carried off than occaſioned thereby, if the cauſe thereof had been contained in an humour. The ſame may be ſaid of too great a loſs of blood, whether it be taken away by bleeding, flow immoderately after delivery, or be diminiſhed by inanition and too long abſtinence from fleſh; all which would rather be preventive than pro-

And not by malignant *effluvia* from corrupted *ſemen*, or *menſtruous blood*, &c.

(*w*) 'Tis not eaſy to comprehend what is meant here by *the firmneſs of the ſpirits*, it being a property that ill agrees with their extreme ſubtility and volatility; to which may be added that the idea we have of them is by no means clear and ſatisfactory, in ſo much that ſome eminent men have denied their exiſtence. The ſtrength and ſteadineſs of the mind, to uſe our author's phraſe, ſhould ſeem to depend principally on the ſtructure of the ſolids, which being ſufficiently elaſtic and open, the operations of the mind, in which conſiſts its ſtrength, will be performed with vigour and alertneſs.

ductive of hyſteric diſeaſes, if the cauſe thereof were included in ſome kind of matter; whereas, on the contrary, they are never more certainly occaſioned than by theſe evacuations.

The original cauſe thereof not in the *fluids* tho' it corrupts them in time.

92. But tho' it abundantly appears that the original cauſe of this diſeaſe is not ſeated in the *fluid*; it muſt nevertheleſs be owned, which indeed is fact, that the irregular motion of the ſpirits, whence it proceeds, generates putrid humours in the body; becauſe the function both of thoſe parts which ſuffer from the violent action of the ſpirits upon them, and thoſe which are deprived thereof, are quite deſtroyed. And moſt of theſe being a kind of *ſeparatory organs* or ſtrainers, deſigned for the reception of the excrementitious parts of the blood, it follows that if their functions be any way injured, abundance of the impurities muſt needs be collected in the body, which had been expelled, and conſequently the whole maſs of blood rendered more pure, provided every organ had done its office, which would not have been wanting, if each had received its proper ſupply of ſpirits. To this cauſe I aſcribe remarkable *cachexies*, *loſs of appetite*, *and the green-ſickneſs* in young women which latter is doubtleſs a ſpecies of hyſteric diſorders) and all the numerous evils which trouble thoſe who have been long afflicted with this diſeaſe; for all theſe proceed from corrupt juices collected in the blood, and derived thence to various organs. Of this kind is a *dropſy of the womb* in women who have long laboured under hyſteric diſorders, proceeding from a tranſlation of vitiated juices from the blood to theſe organs; which impairs their functions, whence they firſt become ſterile, and the tone of the parts is quite deſtroyed; and afterwards *ſanies* and *ſerum* are generated, which not only diſtend the *ovaries* and *ova* conſiderably, but inſinuating themſelves into the interſtices of the teguments, greatly ſwell them, as appears upon diſſecting the bodies of ſuch as periſh by this diſeaſe. In the mean time the hyſteric diſpoſition is the primary cauſe of theſe and other ſimilar humours, tho' they are not of the ſame kind with it.

Inſtanced in a *dropſy of the womb.*

And a *quartan.*

93. In the ſame manner in a *quartan*, wherewitha perſon in perfect health may be ſeized, by reſiding two three days in moiſt and marſhy places; ſome ſpirituous venom

venom of this diſeaſe is firſt communicated to the blood, which remaining a conſiderable time, and the animal œconomy being at length injured, taints all the juices of the body, and quite alters their nature; whence the patient, eſpecially if he be in the decline of life, is diſpoſed to cachexies and other diſorders, which ſucceed inveterate intermittents. And yet theſe intermittents are not to be cured by thoſe remedies which are adapted to purge off ſuch humours, but by ſuch *ſpecifics* as are immediately curative of theſe diſorders.

94. From what has been advanced, it ſeems evident to me, that the chief curative indication in this diſeaſe, is that which directs the *ſtrengthening the blood*, which is the ſource and origin of the ſpirits; this being effected, the invigorated ſpirits may preſerve that order which ſuits the due order of the whole and every part of the body. But as this diſorder of the ſpirits may by its long continuance have vitiated the juices, it will be proper firſt to leſſen their quantity by *bleeding* and *purging*, if the patient be not too weak, before we proceed to ſtrengthen the blood; which can ſcarce be done, ſo long as we are obſtructed by abundance of foul humours lying in the way. But as the pain, vomiting and purging are ſometimes ſo violent, that they cannot ſafely be neglected, till we have anſwered the primary intention of ſtrengthening the blood, we are to diſregard the cauſe for a time, and begin the cure by quieting the ſymptoms, for that purpoſe exhibiting an opiate; after which we muſt endeavour to mend and ſtrengthen the ſpirits, the weakneſs of them being the cauſe of the diſeaſe. And as experience ſhews that there are many fetid medicines, which are adapted to compoſe the tumultuary motion of the ſpirits, and keep them in their proper places, which for this reaſon are entitled *hyſterics*, recourſe muſt be had to them, whenever ſuch intentions are to be anſwered (*x*).

The chief curative indication is to *ſtrengthen the blood.*

Bleeding and *purging* when to be premiſed.

When an opiate is to be exhibited.

Fetid medicines excellent here.

95. With

(*x*) For a preſent relief on extreme lowneſs (ſays *Dr Cheyne in his method of cure in diſeaſes of the body and mind*, p. 154.) oppreſſion or *anxiety*, for a *filip*, or *ſpur*, I think nothing can exceed a tincture of true *aſa fœtida*, and *wood ſoot*, made on compound pœony water, with a tincture of *caſtor* and *ſal volatile*, and a few drops of *oleum ſuccini* added to it.——With this intention only, theſe perſpiratory, hot, and forcing medicines

Whence bleeding and purging increaſe the diſorder.

95. With this view, I firſt bleed in the arm, and afterwards give a cathartic for three or four mornings ſucceſſively. During theſe evacuations the patient ſeems to grow rather worſe than better; becauſe they increaſe the diſorder by the hurry they occaſion, which I take care to inform her of at firſt, that ſhe may not be dejected; it being the nature of this diſeaſe to ſink the ſpirits (*y*) Be this as it will, the primary intention cannot be conveniently anſwered, without carrying off a part of thoſe foul humours, which we ſuppoſe to have been collected by the long continuance of the diſeaſe.

cines ought to be given, and no hope or expectation is to be put in them further; but the whole ſtreſs of the cure is to be put in *alteratives* and diet: for ſuch ſtimulating *medicines* then become of wonderful preſent benefit; but they ought to be laid aſide when any relief is got by them, till the next *attack*, and the general method and medicines purſued, otherwiſe their efficacy by frequent *uſe* will be worn out. As to their effect on any ſudden attack of lowneſs, oppreſſion, anxiety, or *nervous dyſpnœa* (if a ſickneſs at ſtomach is not, as it moſtly is, the *caſe*, and then they ought to be taken in ſome cordial, and afterwards ſome *ſtomach purge* ought to ſucceed, or a *vomit* ſhould be permitted, if time allows) they, as all the *eaſtern gums*, *fœtids*, and *volatiles*, force the perſpiration for a ſhort time, and drive the viſcid juices to the circumference. and by their *actual* heat, melt perhaps the *gelatin ſerum* in the capilaries, as fire melts *jelly of hartſhorn*; for there can be no virtue in ſoot, but from the actual fire lodged in it, or from its *acid oil*; the one of which melts the *gelatin ſerum*, while the other vellicates the ſolids to force on the languiſhing *circulation*, which makes it of more preſent efficacy than even *aſa fœtida* itſelf; and the *eaſtern gums* alone, which have ſhut up in them *ſolar* heat, or fire, or the matter (perhaps) that makes the rays or fluid of the *ſun*'s heat. Of this claſs alſo are the *volatile ſalts*, which, I think, on this conſideration, are preferable to the *eaſtern gums*. The *gums* are ſolar rays included in a viſcous *balſam*; *ſoot* and *volatile ſalts* are culinary heat join'd to an acid; and hence alone the *philoſophy* of their operation and effects is to be deduc'd; for there is no material difference, but in ſubtility, between *ſolar* and *culinary* heat.

(*y*) If this diſeaſe proceeds from a weakneſs of the ſpirits and the poorneſs of the juices, as our author ſeems to think, bleeding and purging muſt doubtleſs be detrimental, inaſmuch as they tend rather to encreaſe the cauſe, than relieve the complaint. In caſe of exhoſtion and debility, 'tis manifeſt that neither bleeding nor purging ſhould be uſed, but if there be a fulneſs of blood, and the fits be violent, recourſe may be had to them with advantage. 'Tis obſervable that ſome hyſteric women cannot bear the gentleſt purgatives, or glyſters, but are ſeiz'd with a lowneſs of ſpirits as often as they have only a ſingle looſe ſtool. *See the concluſion of par.* 96.

96. After

96. After theſe evacuations, in order to ſtrengthen the blood and the ſpirits proceeding therefrom, I preſcribe ſome *chalybeate* medicine to be taken for thirty days; this being as effectual a remedy as can be given in this caſe: for it impregnates the vapid and languid maſs of blood with a certain volatile ferment, whereby the drooping ſpirits are rouzed and revived. And this is manifeſt upon adminiſtering ſteel in the *green-ſickneſs*; for it evidently raiſes and quickens the pulſe, heats the external parts, and changes the pale colour of the face to a florid red. But it muſt be noted here, that bleeding and purging are not always to be uſed before *chalybeates*; for in caſe the patient be extremely debilitated and almoſt worn out by the continuance of the diſeaſe, they may and ought to be omitted, and we are to begin with ſteel. This is a caution well worth obſerving.

Some *chalybeates* to be taken afterwards for thirty days

Bleeding and purging not always to be us'd before exhibiting *chalybeates*.

97. Steel, in my opinion, is beſt given in ſubſtance; and as I have never found or heard that it injured any one, who us'd it in this manner, ſo, much experience hath convinced me that it cures with more expedition and certainty than any of the common preparations thereof (z). For officious chemiſts rather leſſen than improve the virtues of this and other excellent medicines, by their method of preparing them. I have likewiſe been informed (which if it be true, will much ſtrengthen our aſſertion) that the crude ore is more efficacious in curing diſeaſes, than iron which has been refined by fuſion; but for the truth of this I have only the author's word, not being certify'd of it from my own experience. This, however, I certainly know, that all the beſt remedies, hitherto diſcover'd, owe their principal virtues to nature; for which reaſon grateful antiquity termed them the workmanſhip of the ſupreme being, and not of man. But that an excellent medicine may be productive of ſurprizing effects, by its native goodneſs and efficacy, in whatever form it be taken, is plain from the *bark* and *opium*: nor does the ſkill of a phyſician

Steel beſt given in ſubſtance.

(z) Of this ſentiment is *Bagilvy Hoffman*, and many other great men. The operations of ſteel medicines may be promoted, and they may be prevented from proving miſchievous, by uſing *warm bathing* between whiles; whereby the offending humours are the better prepared for diſlodgement and excluſion *See new experiments, &c. upon mineral waters. Tranſlated by Dr* Shaw, p. 195.

phyſician appear ſo manifeſt in preparing, as in chuſing and adapting thoſe remedies which nature hath prepared with her own fire, and abundantly ſupplies. All we have to do, therefore, is to reduce medicines to ſuch a form, that their ſubſtance, or virtues may be more effectually communicated to the body, which we are ſufficiently able to perform. Next to ſteel in ſubſtance, I prefer the ſyrup thereof, which is prepared by infuſing filings of ſteel or iron in *rheniſh* wine without fire, till it be ſufficiently impregnated therewith; and afterwards ſtraining it off, and with a ſufficient quantity of ſugar boiling it to the conſiſtence of a ſyrup. (*a*)

Purgatives why not to be given, during a courſe of chaly-beates, in this diſeaſe

98. I do not interpoſe cathartics at ſet times during a courſe of *chalybeates*, becauſe they ſeem to deſtroy the effects of ſteel both in hyſteric and hypochondriac diſorders. For when I chiefly propoſe to quiet the ſpirits, and reſtore and ſtrengthen their frame, the gentleſt purgative does, in one day, undo all that I had been able to perform by the uſe of ſteel for a week before; and thus by deſtroying the effects of the medicine, and exhibiting it afreſh, I trifle with myſelf and patient both. And doubtleſs this practice of purging between times, which obtains in the uſe of the *chalybeate* waters, renders them leſs efficacious. I am well aware, however, that ſome perſons have been cured, not only tho' purgatives have been interpoſed, but notwithſtanding they have been given daily along with ſteel; but the ſucceſs here is rather to be aſcrib'd to the remarkable virtue of the ſteel, than to the ſkill of the phyſician: for if purgatives

(*a*) *Quincy* in his diſpenſatory, under the article of ſyrup of ſteel, juſtly obſerves that the ſyrup prepared in this manner is very apt to candy, becauſe the more ſpirituous any menſtruum is, the leſs it is ſuited to diſſolve and ſuſpend ſugar: but he has not ſhewn a better method of making it, whether it be that he knew none, or thought the medicine not worth his notice. It cannot indeed be taken in a ſufficient quantity to do great ſervice, by reaſon of the ſugar which helps to clogg it, and render it diſagreeable to ſome palates, and too heavy for ſome ſtomachs. However as it may be an aſſiſtant occaſionally in preſcription, we ſhall give the manner of making it to the beſt advantage. as 'tis delivered by *Fuller* in his *pharmacopœia domeſtica* or *family diſpenſatory*.

Take of the true ſalt of ſteel, reduced to powder one ounce; diſſolve it in thirty two ounces of clear water, and ſet it by till the yellow fæces *be fallen to the bottom; then pour off the clear liquor carefully, and diſſolve therein, without boiling, two ounces of gum arabic, and thirty two ounces of fine ſugar.*

gatives had been omitted, the cure would have been ſooner compleated. (*b*)

99. Moreover, I cannot conceive what benefit can accrue from ſo frequent a repetition of cathartics, in ſeveral other diſeaſes beſides that under conſideration: for tho' it muſt be own'd that they clear the inteſtines of foul matters, and ſometimes alſo in ſome meaſure expel ill humours contained in the blood; yet on the contrary, it is as certain, that a frequent repetition of them in weak perſons, eſpecially if they be young, proves very detrimental; becauſe a large quantity of humours is thereby carried to the inteſtines, where they occaſion preternatural fermentations, whence ſwellings ariſe in the lower belly, which increaſe daily in proportion to the frequency of purging, and at length theſe parts, thro' their weakneſs and a defect of natural heat (being in a manner oppreſs'd with a load of humours) ſoon waſte and putrify. And ſometimes alſo the function of the *viſcera*; being deſtroyed by the cauſes juſt mentioned, hard tumours, reſembling the king's evil, and ſwellings of this kind, ariſe in the meſentery, and at length occaſion death. For theſe reaſons, I judge it ſafeſt in children, after a few general evacuations, to endeavour

Miſchief of frequent purging in other diſeaſes likewiſe.

(*b*) Our author is doubtleſs right in condemning pugatives in general, during a courſe of ſteel-waters; but ſuch caſes may happen as may require purging to be interpoſed between times, ſo that this is to be underſtood with due limitation. To promote the operation of them, and prevent them from having any ill effect, it will be convenient to ride on horſeback, or uſe ſome other proper exerciſe at ſuitable times. Correctives or additional alterative remedies of different kinds, ſuitable to the caſe, may frequently be uſed to advantage, as aſſiſtants in the cure [*c*]

(*c*) *Sydenham* ſeem'd to doubt (as Dr *Cheyne* obſerves in his *Engliſh malady*) whether purgatives ought to be join'd with *chalybeates* in the ſame courſe; but that can be no difficulty to thoſe who have underſtood what has been before ſaid, or are well acquainted with true philoſophy, and the animal *œconomy*. For the purgatives are either ſimply deſign'd (in ſuch a caſe) to cleanſe the *primæ viæ*, or to *juſe* and thin the blood: in the firſt caſe they are abſolutely neceſſary, and in the ſecond more ſo, if the *firſt intention* has not been fully purſued before, as we find by *Lower*'s bitter tincture, eſpecially when a purgative and chalybeate with the bark is combined, which ſucceeds wonderfully in ſuch caſes, where the habit is pretty full, and the ſolids not much relax'd. But a long courſe of *chalybeate* mineral waters is ſtill the moſt effectual for the purpoſe; *Spaw*, *Pyrmont*, or *Tunbridge*, in the hot weather, and *Bath* in the temperate and cold weather.

endeavour to ſtrengthen the blood and *viſcera*; which which may be effected by canary alone, or by infuſing ſtrengthening herbs therein; provided a few ſpoonfuls of it be given morning and night, in proportion to the age of the patient, and the uſe of it continued for a ſufficient ſpace of time. But as external medicines eaſily penetrate the tender bodies of children, and conſequently communicate all their virtue to the blood whatever it be, it is proper in ſwellings of the *abdomen*, whether they proceed from ſcrophulous diſorders, or the genuine rickets, to have recourſe to liniments, that may ſtrengthen the blood and *viſcera*, and remove any morbific taint wherewith they are affected.

A ſtrengthening liniment.

Take of the leaves of common wormwood, the leſſer centory, white hore-hound, germander, ground-pine, ſcordium, *common calamint, feverfew, meadow ſaxifrage, St John's wort, wild thyme, golden rod, mint, ſage, rue,* carduus benedictus, *penny royal, ſouthernwood, camomile, tanſey, lilly of the valley, all freſh gathered and cut ſmall, of each one handfull; hog's lard, four pounds; ſheeps-ſuet, two pounds; claret, a quart; infuſe them together in an earthen veſſel upon hot aſhes for twelve hours; then boil them till the aqueous moiſture is exhaled, and preſs out the ointment. Let the* abdomen, hypochondria, *and armpits be anointed therewith morning and night, for thirty or forty days running.*

Repeated purging requiſite in ſwellings of the *abdomen* in children, after inveterate intermittents But not in the *genuine rickets.*

100. But it muſt be further obſerved with reſpect to the *rickets*, that in ſuch ſwellings as formerly affected the *abdomen* in children, after inveterate intermittents, and reſembled the true rickets, repeated purging ſeem'd to be indicated; for before the uſe of the bark intermittents continued a long time, and depoſited a ſediment, which occaſioned ſuch ſwellings, and hence they could only be removed by frequent purging. But in the genuine rickets purging muſt not be repeated more than once or twice at moſt, before begining a courſe of alteratives: and whilſt the parts affected are anointed let the wine above mentioned be taken, or, if it can be done, let the child uſe beer for his common drink, wherein a ſufficient quantity of all, or ſeveral of the aforementioned herbs are ſuffered to ſtand in infuſion. Laſtly, this obſervation deſerves to be carefully noted,

becauſe

becauſe I am well aſſured that many children have been deſtroyed by the frequent repetition of cathartics, which perhaps the ſwelling of the belly ſeem'd to demand. (*d*) But this by way of digreſſion.

101. If

(*d*) The rickets is only an unequal diſtribution of the nutritious juices, whence ſome parts wear away for want of due nouriſhment, and others increaſe in bulk by being ſupplied too copiouſly therewith, and a diſtortion of the ſpine, and a conſiderable incurvation of the bones are likewiſe occaſioned.

It is a new diſtemper, and appeared not in our own nation till towards the middle of the laſt century; but afterwards ſpread throughout the reſt of *Europe*. It diſcovers itſelf chiefly by the following ſigns.

It appears firſt in the ninth month of the child's age, or later, and by degrees ſeveral parts of the body become diſproportioned, the ſkin grows lax, and the *abdomen* flaccid, the muſcles wear away, the joints of the hands, arms, knees, and feet grow large and bones too weak to ſupport the body, and frequently crooked, along with the ſpine; whence the child walks with difficulty, and often loſes the uſe of his feet entirely. And now the jugular arteries and carotids ſwell, the head grows large and cannot be held ſtill, by reaſon of the flaccidneſs of the neck which ſupports it. The child is more ſenſible than children ordinary are at that age, the *thorax* is ſtrait, the *ſternum* riſes in a point, and the extremities of the ribs are knotty. At length, the diſeaſe encreaſing, it is accompanied with a ſlow fever, a cough, difficult reſpiration, and other ſymptoms, which continue during life. It ſhould however be carefully remember'd that there are different ſpecies of the *rickets*, and that it laſts longer, and goes off ſooner, not producing the ſame ſymptoms in all ſubjects, but afflicting ſome more, and others leſs ſeverely.

Upon diſſecting the bodies of ſuch as have died of this diſeaſe, the liver in ſome has been found to be larger than it is in its natural ſtate, and alſo ſchirrous, and adhering to the diaphragm, the glands of the meſentery indurated, and the *pancreas* obſtructed: in others, the lungs have been found ſticking to the *pleura*, and back, and either livid, or much impoſtulated: and in others the *pericardium* has been found full of water. But ſeveral curious anatomiſts, as *Gliſſon*, and *Bonetus*, and *Heiſter*, among the moderns, almoſt unanimouſly affirm that the top of the ſpinal marrow is uncommonly hard and obſtructed, the cavity between the *dura* and *pia mater* full of water, the brain large, and the carotids and jugular veins leſs than the arteries.

The proximate cauſe of this diſeaſe ſhould ſeem to conſiſt in a ſtoppage of the free influx of the nervous fluid into the ſpinal marrow, from the compreſſion or obſtruction of this part, whence all thoſe parts which receive nerves therefrom cannot be ſupplied with nouriſhment, and thoſe on the contrary, which have their veſſels open, and admit a ſufficient quantity of nutritious juice, receive too much. Thus anatomy ſhews that the head of a ricketty child receives more nouriſhment,

An objection to the filings of steel answered.

101. If it be objected that the filings of steel may stick to the bowels, and do mischief, unless cathartics be exhibited at proper intervals; I answer, first, that I never

nourishment, because the nutritious lymph cannot enter the spinal marrow, and therefore not only encreases in bulk, but occasions the face to be fresh-coloured and florid.

The bones come to be incurvated, and deformed with knotty excrescencies about their *epiphyses*, because the muscles and ligaments which join them together are unequally nourished, the aliment being conveyed in greater plenty thro' the arteries to the bones themselves; whence their extremities, which are generally of a soft, cartilaginous and yielding texture in children, are distended from the small resistance they make, and become knotty: And when the aliment continues to be so irregularly applied, the bones increase continually in bulk, and the muscles, on the contrary, wear away and grow shorter, whence their extension is obstructed by the connecting muscles, and they grow bow'd or crooked, and the more so, by reason of their softness and flexibility at this age.

The distortion of the spine is occasioned solely by the laxness and weak tone of the bony processes, cartilages, ligaments, and muscles. which join the bones together; whence these parts by an incurvated situation separate so much from each other respectively, and are so much distended, that they cannot come together again, and be restored to their original state.

The mediate cause of this disease is the thickness, or viscidity of the juices, which being separated from a viscid blood, and carried to the spinal marrow, compress, or block up its conduits, or pores, and thus prevent the free influx of the subtile nervous fluid into this part, and its further distribution from hence thro' the nerves.

The remote causes are whatever hinders digestion, and generates a thick viscid chyle, altogether unfit for nutrition.

But the air which surrounds the bodies of children is principally productive of this distemper, being cold, cloudy and full of heterogeneous exhalations, which partly by debilitating the tone of the skin, retains the phlegmatic matters in the habit, and partly by relaxing the lungs. prevents the intimate mixture of the blood therein, and its regular distribution throughout the body likewise. We have a manifest proof of this from the air of *London*, which appears to be well adapted to occasion and feed this disease, both from the exhalations it receives from the circumfluent ocean, and certain mineral particles exhaled from the pit-coal, which is burnt there in great plenty. It ought not therefore to seem strange, that this distemper, from the same cause, is common in marshy and maritime places, and likewise in spring and autumn, and that there are such numbers of ricketty children at *Halle* in *Saxony*, where the atmosphere is very moist, from the saline exhalations, and the smoak of pit coal.

Moreover I scruple not to assert, that the ill custom which some women have of carrying their children often in their arms contributes to the stagnation of the fluids in the spinal

marrow

never obſerved this ill effect in any of my patients; and beſides 'tis much more probable that the ſteel, being enveloped in the *mucus* and excrementitious humours

marrow, and not only keeps the ſpine in an incurvated ſituation a long time but alſo bends the feet unequally, ſo that they grow crooked and gibbous, and this diſtemper is occaſioned The ſpine may be diſtorted alſo by falls, or blows.

Doubtleſs preceding diſeaſes likewiſe diſpoſe children to the rickets, eſpecially thoſe which cauſe a ſtagnation of the fluids in the ſpinal marrow, and conſequently hinder the free courſe of the nervous fluid.

If this diſtemper laſts longer than the fifth year of the child's age, it proves difficult of cure and generally renders the body weak and deformed for ſome years after, and unleſs it be removed in the patient's youthful age when the whole body undergoes a conſiderable alteration the caſe is adjudg'd abſolutely incurable. And it is equally difficult of cure, when it is hereditary, or comes on a few months after the birth of the child. And, laſtly, the caſe is dangerous, if a conſumption, join'd with a hectic fever, a dropſical ſwelling, an aſthma, or a looſneſs ſucceed. But when the rickets proceed from ſome bad quality of the air, or improper diet, or is ſucceeded by the ſmall-pox, itch, or other cutaneous eruptions, and is not accompanied with a conſiderable incurvation of the bones, and inability to motion it is eaſy of cure.

The curative indications are, to diſſolve the viſcidity of the juices, open the obſtructions, and promote a free circulation of the fluids throughout the whole body. And we are to begin with cleanſing the firſt paſſages, in order to carry off what feeds the diſeaſe, for which purpoſe gentle laxatives are ſerviceable, and emetics (if requir'd, and the conſtitution can bear them) inaſmuch as theſe kinds of remedies admirably evacuate the viſcous impurities collected in the ſtomach and inteſtines, and by their ſtimulating property diſſolve the viſcid humours, and open the obſtructed veſſels. But theſe remedies muſt not be given to thoſe who are very much exhauſted, have unſound *viſcera*, or the meſentery extremely obſtructed; aperient and ſaponaceous medicines, eſpecially neutral ſalts, being highly efficacious and preferable in this caſe. Gentle reſolvents may likewiſe be exhibited between whiles, and are better than mercurials here.

In order to open the obſtructions of the ſpinal marrow, and procure an uninterrupted circulation of the nervous fluid, frictions with warm cloths upon the ſpine, arms, legs and feet, and fumes of frankincenſe, amber, maſtich, and olibanum, *&c.* are commended by ſeveral authors. But I have learnt by experience that many have been wonderfully reliev'd, and at length cured, by bathing frequently in a bath prepared with nervous herbs, as marjoram, lavender, wild-thyme, roſemary, camomile, barm, *&c.* boil'd in ſoft water; and afterwards anointing the ſpine, and limbs, with a nervous liniment, ſuch, for inſtance, as the following.

Take of human fat and oil of mace, of each half an ounce; balſam of Peru, *one dram, the chemical oils of cloves, lavender and rue, each thirty drops; mix them well together.*

Great

mours of thoſe parts, will at length be evacuated therewith, than when they are agitated by purgatives, which occaſion unuſual coſtiveneſs, gripings and contractions of the inteſtines, whence the particles of the ſteel, which adhere to their coats, may enter deeper into them.

Hyſteric medicines to be join'd with chalybeates.

102. During a courſe of chalybeates, in order to ſtrengthen the blood and animal ſpirits, hyſteric medicines are to be adminiſtered in ſuch manner and form, as are moſt agreeable to the patient; tho' if they can be taken in a *ſolid* form, they will more effectually keep the ſpirits in their function and place, than in a *liquid* one, *viz.* in decoction, or infuſion; for the ſubſtance itſelf affects the ſtomach longer with its taſte, and communicates its virtue more intimately to the body.

The proceſs deſcribed.

103. Upon the whole, in order to anſwer all the indications above enumerated, I uſually direct the following few common and ſimple remedies with ſucceſs. Let eight ounces of blood be taken from the right arm.

A fetid plaiſter.

Take of galbanum, diſſolv'd in tincture of caſtor, and ſtrain'd, three drams, tacamahac, two drams; mix them together for a plaiſter to be applied to the navel.

Next morning let the patient begin with the following pills.

Take of the greater purging pills pil. cochiæ, *two ſcruples; caſtor powder'd, two grains; balſam of* Peru, *four drops; make*

Great care ſhould be had to join a ſuitable regimen with the proceſs us'd for the cure, which conſiſts in keeping the child from all flatulent, viſcid, and difficultly digeſtible aliment, giving him frequently ſmall chickes and veal broth wherein opening roots and craw-fiſh have been boiled. His drink ſhould be thin liquors, and whilſt he ſucks, good thin milk, not neglecting proper exerciſe at the ſame time. In caſe of coſtiveneſs a gentle laxative, or a glyſter may be given. But if the diſeaſe be occaſioned, or fed by ſome diſorder of the nurſe, the ſame medicines ſhould be adminiſter'd to her, which we have advis'd in a leſs doſe for children,

To conclude: the application of ſuitable bandages and bolſters to the incurvated ſpine, and differently diſtorted limbs, is adviſeable, provided care be had not to do miſchief inſtead of ſervice, and bring on a worſe diſeaſe than that we intend to cure. *See Hoff. op. tom.* III. *pag.* 487 *& ſeq.* See alſo Dr *Shaw's new practice of phyſic*, p. 554 *& ſeq.* where the reader will meet with a concile hiſtory of this diſeaſe, and the beſt methods of cure.—And *pag.* 64. *of our author's works.*

make them into four pills, to be taken at five in the morning, ſleeping after them. Let them be repeated two or three times, either every morning, or every other morning, according to their operation, or the ſtrength of the patient. Purging pills.

Take of the diſtilled waters of black cherries, rue and briony, each three ounces; caſtor, tied up in a piece of linnen, and ſuſpended in the vial, half a dram; fine ſugar, enough to ſweeten the whole; mix them for a julap, of which let four or five ſpoonfuls be taken when the patient is faint, or low-ſpirited, dropping into the firſt doſe, if the fit be violent, twenty drops of ſpirit of hartſhorn. Anhyſteric julap.

104. After having taken the purging pills, as above directed, let the patient proceed to the uſe of the following remedies.

Take of the filings of iron, eight grains; extract of wormwood, enough to make it into two pills; to be taken early in the morning, and at five in the afternoon, for the ſpace of thirty days, drinking after each doſe a draught of wormwood wine. Opening pills.

Or, for daily uſe,

Take of the filings of iron, and extract of wormwood, each four ounces; mix them together; let ſixteen grains, or a ſcruple of this maſs, be made into three pills, and taken at the times above-mentioned.

Or, if a bolus be more agreeable,

Take of the conſerve of Roman *wormwood, and orange-peel, each an ounce, candied angelica and nutmeg, and* Venice *treacle each half an ounce; candied ginger, two drams; ſyrup of orange-peel, enough to make the whole into an electuary.—Take of this electuary, a dram and a half; the filings of iron, finely pulverized, eight grains; ſyrup of orange-peel enough to make them into a bolus, to be taken every morning, and at five in the afternoon, with a draught of wormwood wine after it.* An opening electuary to be divided into boluſſes.

Take of the fineſt myrrh and galbanum, each a dram and half; caſtor, fifteen grains; balſam of Peru, *enough to make them into a maſs; of every dram of which let twelve pills be formed; three whereof muſt be taken every night during this proceſs, with three* Fetid hyſteric pill.

or, four ſpoonfuls of compound briony-water, after them.

But if theſe pills ſhould looſen the belly, as they ſometimes do, in ſuch as are eaſily purged, on account of the gums they contain, let the following be ſubſtituted in their ſtead.

Volatile hyſteric pills.

Take of caſtor, a dram; volatile ſalt of amber, half a dram; extract of rue, enough to make them into twenty four pills; three of which are to be taken every night.

A diſturbance cauſed by chalybeates, how to be remedied.

105. But it muſt be noted here, that chalybeates in whatever form or doſe they are exhibited, do ſometimes occaſion great diſorders in the ſex, both of body and mind, not only in the beginning, which happens to moſt perſons who take them, but during the whole time of their continuance. Now in this caſe, the courſe is not immediately to be interrupted, but that the patient may bear them the better, a proper doſe of *laudanum* muſt be given every night, for ſome time, in any *hyſteric water*.

How to proceed when ſteel is not required.

106. But when the diſeaſe is gentle, and does not ſeem to require the uſe of ſteel, I judge it ſufficient to bleed once, and purge three or four times, and then to exhibit the alterative hyſteric pills, above deſcrib'd, every morning and night, for ten days. This method ſeldom fails of curing when the diſtemper is not ſevere; and the pills alone often do great ſervice, without bleeding or purging.

Hyſteric medicines do not ſuit all conſtitutions.

107. It is however carefully to be noted, that ſome women, by reaſon of a certain peculiarity of conſtitution, have ſo great an averſion to hyſteric medicines, which are ſo generally ſerviceable in this diſeaſe, that, inſtead of being reliev'd, they are much injured thereby. In ſuch, therefore, they are to be wholly omitted: for, as *Hippocrates* obſerves, it is fruitleſs to oppoſe the tendency of nature; and in reality this *idioſyncraſy*, or antipathy is ſo remarkable and ſo common, that unleſs regard be had to it, the life of the patient may be endangered, and this not only from the hyſteric medicines, but from ſeveral others; in confirmation whereof I will at preſent produce only a ſingle inſtance (*e*) thus, ſome women

(*e*) The idioſyncraſy which *Sydenham* ſpeaks of here is ſeldom very manifeſt, much leſs *common*; and I never met with an inſtance where the life of the patient was endangered by not attending to it.

men in the *ſmall-pox*, cannot bear *diacodium*, becauſe it occaſions giddineſs, vomiting, and other hyſteric ſymptoms, whilſt *liquid laudanum* agrees with them very well. I experienc'd this, whilſt I was writing this epiſtle, in a young lady in the *ſmall-pox*, to whom I had given *diacodium* on the ſixth and ſeventh night, and ſhe was ſeized on both nights with the above-mentioned ſymptoms, and the inflammation of the puſtules did not go on regularly; but afterwards upon uſing *laudanum*, ſhe was freed from theſe ſymptoms, and the ſwelling of the face increas'd, the puſtules fill'd every day, and the reſtleſneſs and anxiety (which made a kind of fit of the ſmall-pox) were wholly removed every time this opiate was exhibited; the patient being ſtrengthened and revived thereby.—This by way of digreſſion.

If ſteel fails of curing, the chalybeate waters are to be drank

108. And in this manner hyſteric diſeaſes, and moſt kinds of obſtructions, but eſpecially the green-ſickneſs, and all ſuppreſſions of the *menſes*, are generally cured. But if the blood be ſo weak, and the irregular motion of the ſpirits ſo conſiderable, that the diſorder will not yield to a courſe of chalybeates, as above directed, the patient muſt drink ſome *ſteel water*, ſuch as that of *Tunbridge*, or ſome others lately diſcovered. For the chalybeate virtue of theſe waters is more intimately communicated to the blood on account of the large quantity that is drank, and alſo of their agreeableneſs to nature, and proves more effectual in curing diſeaſes, than the choiceſt preparations of iron, however magnified by chemiſts.

A caution to be obſerved in drinking them.

109. But this caution muſt particularly be obſerved in drinking them; *viz.* that if any diſorder happens which may be referred to hyſteric ſymptoms, they are to be omitted for a day or two, till that ſymptom goes off, which would otherwiſe hinder the water from paſſing off freely. For tho' theſe waters are not ſo apt to move the humours, and cauſe a diſorder of the ſpirits, as the gentle officinal cathartics yet they in ſome meaſure move the humours, inaſmuch as they are diuretic, and, beſides, they frequently purge. But if the waters themſelves obſtruct their own paſſage, by diſturbing the humours and ſpirits, it muſt needs be highly improper to order cathartics to be taken once or twice a week during a courſe of them; and ſtill more abſurd to mix purgatives therewith; which occaſion

both theſe and other *mineral* waters to paſs more ſlowly and difficultly. (*f*)

Their nature explained,

110. I muſt here acquaint you, that tho' ſome are of

(*f*) Preparatory to drinking *mineral waters* properly ſuch perſons as are full of blood, and ſuch only, ſhould bleed a few days before they begin with them, by which means they will the more readily enter the veſſels, and may afterwards the better correct the reſt of the blood; and next let them take a gentle purge. All the ſtronger purgatives muſt be forborn, eſpecially the *reſinous* kind, and all ſuch as are made of *ſcammony*, *coloquintida*, *hellebore*, and the like.

If there are indications for giving a vomit, a gentle one may be adminiſtered with great advantage: the beſt ſeaſons for drinking them are the months of *June*, *July*, and *Auguſt*; but if need be they may be ſucceſsfully drank in *May*, or even in *September*, eſpecially if the weather be warm; and in ſome caſes they may be uſed in autumn or winter.

The propereſt time of day to begin to drink them is about ſeven in the morning, or if the weather favours, at ſix; that by this means their operation may be commodiouſly finiſhed before dinner. I cannot approve of the cuſtom of haſtening to the ſpring at four or five, becauſe the air is then moſtly too cold, and cloudy, and checks perſpiration, and ſo eaſily occaſions coughs and other diſeaſes of the head and breaſt, and likewiſe becauſe this hinders their getting ſleep enough, and diſturbs them too early.

The beſt manner of drinking the *waters* is to begin with a ſmall quantity, increaſing it gradually to the proper doſe, and obſerving to diminiſh the quantity in the ſame proportion a little before finiſhing the courſe.

In the *laſt place*, we ſhall ſay a word or two of the proper *diet* and *regimen*, to be obſerved in drinking the *waters*. For as no remedy without a proper regimen can have its proper effect, ſo a courſe of *mineral waters* requires an exact care in this particular. There are two *errors* generally run into by the drinkers, *viz.* indulging themſelves either too much or too little. Some phyſicians are ſo ſcrupulous as to forbid their patients the uſe of all acid, ſaline, and ſpicy meats; though perhaps theſe alone are pleaſing and agreeable to them: but the point of exactneſs is here, for every one not greatly to recede from his uſual cuſtom, otherwiſe the appetite may be hurt, digeſtion not well perform'd, and crudities and new diſorders generated. Others, who have a principal regard to the ſtomach, only adviſe the uſe of ſpirituous and aromatic things, which is a great hindrance to the buſineſs of excretion; for common experience teſtifies that ſuch things bind up the belly. Above all, voracity, and turbulent diſorders of the affections ſhould be prevented, as great enemies to digeſtion; whence the body is loaded with an uſeleſs weight, and the *waters* render'd ineffectual for ſubduing and diſcharging the crudities of the body. The ſtomach alſo will be weaken'd and relaxed by this procedure, and the *waters* now plentifully drank, remain longer therein and thus give riſe to many inconveniences. *Heiſter Compend. Med.* p. 460. And *Dr Shaw's tranſlation of Hoffman on mineral waters*, p. 133.

of opinion, that theſe waters contain a ſolution of the *principles* or *elements of iron*, which is the ſame thing as ſuppoſing *liquid iron*; yet I doubt not that they are only ſimple elements, impregnated with the *ore*, or *mineral*, which they lick up in their paſſage thro' the *mine*. And this may be made manifeſt, by pouring ſome gallons of water upon a ſufficient quantity of ruſty nails, letting them ſtand ſome time together in infuſion; and afterwards adding to a ſmall quantity thereof, a little powder of galls, a few leaves of green-tea, or ſomething of the like kind; for thus it will be tinged in the ſame manner, as mineral waters are by ſuch mixtures (*g*) Moreover, theſe natural, or artificial waters (which name ſoever you give them) being drank in the ſummer time, and in a healthful air, are productive of the ſame effects. III. But

(*g*) 'Tis certain, ſays *Hoffman*, and abundantly confirmed by *chemical experiments*, that no *metals* are ſoluble, or can poſſibly enter the compoſition of *waters*, unleſs the metal be firſt diſſolved, or turned to a *ſalt* or *vitriol*,——Of all the *metals* there is none that diſſolves ſo readily in all kinds of acids as *iron*. And thus pure water itſelf, on account of the *æthereal principle*, and the *univerſal ſalt* it lodges, will ſoon prey upon, and diſſolve this *metal*. So that if a piece of *red hot iron* be quenched in common *water*, it communicates ſome particles of itſelf thereto; as appears by the ſtrengthening, binding, rough and ſtyptic taſte of the *water* thus heated. And as 'tis a familiar obſervation, that the moiſture of the *air*, *rain*, &c. corrodes *iron*, turns it into ruſt, and impregnates itſelf therewith; there is no queſtion but that all *ſprings*, which waſh the *beds of iron ore*, or take their courſe thro' red, clay grounds, lick up in their paſſage, particles of an irony nature; and come impregnated with them to the *ſpringhead*. And accordingly the waters of ſuch ſprings, all over *Europe*, are called by the name of *chalybeate*, *ſteel*, or *irony waters*.

The external ſigns of theſe *chalybeate waters* are derivable from the aſtringent ſtyptic taſte, which they in ſome degree impreſs upon the tongue; and the yellow kind of *oker* wherewith the canals or conduits they paſs thro' are lin'd; as alſo the baſons and reſervoirs that contain them, and the parts about the ſpringhead, where they overflow, or are ſpilt. For if this kind of *oker*, or rubiginous matter, be collected, waſhed, dried, and thoroughly roaſted over a ſtrong fire; it not only appears of an *irony nature*, by readily anſwering to the *load-ſtone*; but affords a no leſs certain chemical mark of its being *iron*, by ſubliming with *ſal ammoniac*, into flowers, that afford a moſt bright and perfect *tincture of iron*. Other concurring marks of their *chalybeate nature* are likewiſe afforded by the *purple colour*, or *inky blackneſs* they make with powder'd galls, the yellow colour wherewith they ſtain an egg put into the *ſpring*, and the *iron-mould* they cauſe on *linen*: which are all certain *characteriſtics* of

If the chalybeate waters fail, the sulphureous kind is to be tried.

111. But however this be, if the disorder proves so inveterate, as not to yield to the steel waters; the patient must be sent to drink some hot sulphureous waters; as those of *Bath*; and after having drank them for three mornings successively, she must bath in them the fourth, and the following day drink them again; and continue this course of drinking and bathing alternately for two months. For in the use of these and all kinds of mineral waters, it is to be carefully noted, that the course must be continued, not only till the patient finds some relief, but till she perfectly recovers, so as to be in no danger of a sudden relapse (*b*)

VENICE *treacle* excellent in this and many other diseases.

112. VENICE *treacle* alone, provided it be frequently used, and continued for a sufficient time, is an excellent remedy in this disease, and likewise in many

a fine *irony rust*, or the real and material existence of *iron* in the *waters*.—The conclusion upon the whole is, that these kind of *waters* really contain somewhat of an *irony nature*; which being joined with a sulphureous spirit, resembles *common vitriol* only, in the taste and the colour it gives, without any farther approaching to the nature thereof. *See this author's new exper. on min. waters, translated by* Dr Shaw, *p.* 44, 47, 41, 49, *and* 106.

That *mineral waters* are imitable by art is a fact too well established to be contested; however it may not be amiss to observe that our author is rather too hasty in advancing, that an infusion of *rusty iron* in *common water* will be tinged in the same manner as the *chalybeate waters* are, by adding thereto a small quantity of *galls* in powder, or something of a like kind; as will evidently appear upon repeating the experiment with both with proper caution and exactness; the *artificial* mineral waters not striking so deep a colour as the natural ones do, and differing likewise considerably in some other known properties, as levity, purity subtility, spirituousness, &c. Hence the former should seem a *priori* to differ greatly from the latter, and consequently cannot produce the same effects in drinking. And in reality it seems not likely that *art* should of a sudden prepare a medicine of this kind, equal in excellence and subtility, to such another, which *nature* perhaps, in bringing it to the perfection wherein it is exhibited to us, is employed in a great length of time.

For the ways of imitating *mineral waters* to the best advantage, we shall refer the reader to the work last quoted, *page* 197, *& seq*, and to *Dr Shaw's chem. lectures. p.* 89 *& seq*; where he will be abundantly satisfied as to this point.

(b) With respect to the drinking mineral waters, great regard must be had to particular circumstances, which are to direct us in the choice of a proper water, and the management of the patients during the course. 'Tis impossible to lay down such general rules relating thereto, as will no be liable to various exceptions; so that in these cases much must be left to the judgment of the physician, who ought to be endowed with no little discernment, to make a suitable application.

ny others proceeding from a want of heat and digeſtion: it is perhaps the moſt effectual medicine hitherto known, how much ſoever 'tis contemn'd by moſt perſons, becauſe 'tis common and of antient date.

113. If the patient be not of a ſlender and bilious habit of body, an infuſion of *gentian*, *angelica*, *wormwood*, *centory*, *orange-peel*, and other ſtrengthening ſimples in *canary*, does great ſervice, a few ſpoonfuls of it being taken thrice a day. I have adviſed ſome hyſteric women to drink a large draught of *canary* by itſelf at bed-time, for ſome nights running, and they have been eminently relieved; the whole body having been much ſtrengthen'd, and ſuch as were before cachectic becoming freſh-coloured, and briſk thereby.

Bitters very good in ſome conſtitutions.

And canary.

114. Moreover, the *cortex* is ſometimes found to ſtrengthen the blood and ſpirits in a wonderful manner; and I have known ſeveral hyſteric women and hypochondriac

The bark a great ſtrengthener of the blood and ſpirits.

Steel-waters, as *Hoffman* obſerves, are poſſeſs'd of an aperitive and *ſtrengthening property*, ſo as to be advantageouſly us'd as well internally as externally. Thus when drank they looſen the belly, but ſtrengthen the body and ſtomach, provoke the appetite, and may therefore be very ſafely and ſerviceably uſed in ſuch diſtempers as give way to any preparations of *iron*. Their external uſe in the way of bath, is very conſiderable, for ſtrengthening and cheriſhing benum'd and motionleſs limbs; curing pains, contractions, or relaxations; and for drying and healing up old ulcers. And tho' uſed for this purpoſe, in the way of bath, made but gentle warm; yet they heat the body, open the pores of the ſkin, and provoke ſweat; eſpecially if the patient goes directly from the *bath* to bed. *See new exper. on min. waters, p.* 85. [*i*]

(*i*) Some fearful and apprehenſive people have been diſſuaded, by intereſted perſons, from the uſe of the *Bath* waters in *lowneſs*, *oppreſſion* and *vapours*; and ſome unexperienced people have even imagined they have had more vapours than ordinary under the uſe of them. But theſe may as well affirm, that *opium* purges, and *jalap* binds. For if they mend the faults and weakneſſes of the ſtomach and bowels (as all the world acknowledges they do, and muſt do by their nature and compoſition) they muſt then infallibly be moſt beneficial in theſe diſorders, as from my own, and the experience of many thouſand others, can be teſtified, who will affirm them to be the moſt certain relief of any in ſuch caſes. And indeed, as by their *ſulphur* thus diſſolv'd in hot water, they are the moſt cleanſing and diluting of all medicines, ſo their ſteel (as I have already ſaid) is the moſt effectual for bracing the ſolids: and with ſuch a compoſition it would be pretty ſtrange they ſhould not (if any means could) be ſucceisful in ſuch caſes. *Cheyne's Engliſh malady*, p. 147.

chondriac men recovered, who were reduced to great weakneſs thro the long continuance of their reſpective diſeaſes, by taking a ſcruple of it every morning and night for ſome weeks. But this remedy proves moſt effectual in that ſpecies of hyſteric diſorders, which is accompanied with violent convulſions; and wherein the patients beat their breaſts: It muſt however be own'd that this medicine does not ſo certainly and frequently cure this diſtemper, as intermittents (*k*)

Diſeſteemed by ſome

But to mention this by the way, tho' the bark is ſo effectual in curing intermittents, and we uſe it freely ourſelves, and adminiſter it to our wives and children whenever there is occaſion; yet there are thoſe who diſlike it as much now, becauſe it cures with ſuch expedition and certainty; as they did formerly, becauſe it was but juſt diſcovered. And to this fate the beſt men, as well as the beſt remedies, have generally been expoſed; but by this we try our diſpoſitions as by a touch-ſtone, and hence diſcover whether we are good or bad men; namely, from the degree of joy, or grief we feel, whenever the good of mankind is promoted by any common benefit, and the favour of providence.

Advantage of a *milk diet* in thin and bilious habits.

115. But when any of the remedies above directed do not agree with the patient. as it frequently happens in thin and bilious habits, recourſe may then be had to a *milk diet*. For ſome women (which may ſeem ſtrange at firſt view) have been cured of long and obſtinate hyſteric diſorders, which had baffled all the endeavours of the phyſicians, by living on milk only for ſome time, and eſpecially of an *hyſteric colic*, which can only be relieved by *opiates* and therefore women are accuſtomed to repeat them at intervals, the pain returning as ſoon as the effect of the anodyne ceaſes. But what is moſt ſurprizing in this method of cure is, that *milk*

(*k*) The *bark* cannot be enough commended in this and moſt diſeaſes where the blood is impoveriſh'd, the ſpirits low and the tone of the ſolids conſiderably debilitated. To make it more effectual in this caſe, it may be join'd with hyſteric and chalybeate medicines. [*l*]

(*l*) I think ſays the laſt quoted author, there is not a more wonderful ſtrengthener of the ſolids, than the *jeſuit's bark*; and I take it univerſally to be the beſt and only cool bitter aſtringent known to men *ib.* p. 144.——To the tender, delicate, and ſuch as are unhappy in weak and *lax nerves*, the *bark* is the beſt and ſafeſt of the vegetable *reſtringents* and *bracers*.—*Method of curing the diſeaſes of body and mind*, p. 307.

milk, which yields only a crude and cold nouriſhment, ſhould nevertheleſs, by uſe, ſtrengthen the ſpirits; and yet this will not ſeem at all repugnant to reaſon, if it be conſidered that *milk* affording only a ſimple aliment, does not give nature ſo much trouble in digeſting it, as food and liquors of a more heterogeneous kind do, and that an equal mixture of the blood and ſpirits neceſſarily follows this perfect digeſtion. For it muſt likewiſe be obſerved, that 'tis not the bare weakneſs of the ſpirits conſidered ſeparately, but as compared with the ſtate of the blood, that as the cauſe of thoſe diſorders which afflict ſuch patients: for a child may have ſufficiently ſtrong and firm ſpirits with reſpect to its blood, which notwithſtanding may not be proportionable to the blood of a grown perſon. Now as the continued uſe of *milk* (tho' it be a crude and ſlender aliment) renders the blood more ſoft and balſamic; if the ſpirits thence generated be but adequate thereto, the cure goes on well. But notwithſtanding the advantages that might accrue from ſuch a diet, there are ſome who cannot ſupport the inconveniencies that generally accompany it in the beginning: becauſe it is apt to curdle in the ſtomach, and does not afford ſufficient nouriſhment to keep up the ordinary ſtrength of body *(m)*.

But it diſagrees with ſome ſubjects.

116. But

(m) *Milk* is ſo far from being a crude and ſlender aliment, that it is in general a very proper and wholeſome medicine and diet for weakly, conſumptive, and goury perſons, whoſe digeſtive faculty is impaired; becauſe it is both eaſy of digeſtion, and affords a copious nouriſhment: but in order to make it effectual for the purpoſes it is given, it ſhould be drank freely, and the uſe of it continued for a conſiderable time.

Breaſt milk is the ſofteſt and lighteſt, and beſt adapted to the nature of the human ſpecies: the writers of obſervations relate ſome wonderful cures that have been effected by the uſe thereof. The next in goodneſs to this is *aſſes*, and then *goat's milk*; cow's milk being by moſt authors rank'd in the laſt place. The extraordinary virtues of *aſſe's milk*, and the manner of drinking it to the beſt advantage, and the caſes wherein it is proper are delivered at large, and with great plainneſs by the judicious *Hoffman* in a diſſertation on the ſubject, entitled *de mirabili lactis aſinini in medendo uſu*, to which therefore we refer the reader for further information in this matter. *(n)*

(n) Milk, ſays Dr *Langriſh*, is univerſally eſteemed the beſt reſtorative, it being chyle already prepared, and moſt eaſily aſſimilated into blood, and converted into nouriſhment. All milk is of a ſoft, cooling, nouriſhing nature, putting the leaſt ſtreſs upon the ſeveral organs of the body to digeſt it, and afford-

Riding the beſt ſtrengthener of the ſpirits.

116. But the beſt thing I have hitherto found for ſtrengthening and chearing the ſpirits is *riding on horſeback* ſome hours almoſt every day. For, as this kind of exerciſe moſt affects the lower belly, which is the ſeat of the excretory veſſels, appointed by nature to carry off all the excrementitious parts of the blood, there can hardly be any diſorder of the functions, or natural weakneſs of the organs, ſo conſiderable as not to be relieved, by the often repeated agitation of the body, the ſame day, in the open air. Neither can any perſon have the innate heat ſo exſtinguiſhed, as not to be rouz'd afreſh by this exerciſe. Nor can there be any preternatural ſubſtance, or vitiated juice ſo intimately lodged in any cavity of theſe parts, which cannot, by the uſe thereof, either be reduced to ſuch a ſtate as is agreeable to nature, or diſſipated and expelled. And by this conſtant motion the blood, being continually agitated and mixed, is purified and ſtrengthened likewiſe. And in reality, though this exerciſe does not agree ſo well with women, who lead an eaſy and ſedentary life, as they may be injured by motion, eſpecially in the beginning, it is nevertheleſs very proper for men, and ſooneſt recovers their health *(o.)*

Exemplified in a caſe.

117. To produce an inſtance of its efficacy: a reverend and learned prelate having applied himſelf too intenſely to his ſtudies for a long time, was at length ſeized with an hypochondriac diſorder, which, by its long

fording as few excrementitious particles as can be: but above all *women's breaſt milk* is moſt to be depended upon, and has raiſed many people from the moſt deplorable conditions. *The milk drawn from the *breaſts of women* is the ſweeteſt; the neareſt whereto, is *aſſe's milk*, which indeed has a ſaccharine ſweetneſs, and comes almoſt up to the human. This is ſucceeded in virtue and goodneſs by that of *mares*, which is better than that of *goats*; yet even this exceeds that of *ſheep*, as theirs does that of *cows*, which is the coarſeſt of all.

Hence *milk* is moſt fit to repair the great decays of conſumptive people, and to recruit their exhauſted ſpirits; and ought always to be drank warm as it comes from the body, before the ſpirituous *gas* evaporates and flies off. *Modern theory and practice of phyſic*, p. 328.

For the further particulars of the virtues and uſes of *milk* we refer the reader to *Dr* Cheyne's *method of curing the diſeaſes of body and mind*, p. 126 *& ſeq.* and Lobb's *treatiſe on diſſolvents of the ſtone &c.* p. 364

(o) See above, ſect. iv. *chap.* 7. *par.* 10. *p.* 191.

* Vide *Boerhaave's* chemiſtry.

long ſtanding, deprav'd all the ferments of the body and deſtroy'd the digeſtions. He had gone through ſome courſes of chalybeates, and tryed moſt mineral waters, with repeated purgation, all kinds of antiſcorbutic medicines, and abundance of teſtaceous powders, which bid fair for ſweetening the blood. Being thus in a manner worn out, partly by the diſeaſe, and partly by the continued uſe of remedies for ſo many years, he was at length attack'd with a *colliquative looſeneſs*, which is the uſual fore-runner of death in *conſumptions* and other chronic diſeaſes, when all the digeſtive faculties are totally deſtroyed. At length he conſulted me, and I immediately judged that it would be in vain to order any more medicines, as he had taken ſo many ineffectually; and therefore adviſed *riding on horſeback*; directing him to take only ſuch ſhort journeys at firſt, as might beſt ſuit his weak condition. Had he not been a judicious and conſiderate perſon, he could not have been perſwaded to try this kind of exerciſe. I intreated him to continue it every day till he found himſelf perfectly recovered; and to lengthen his journeys by degrees to a moderate day's journey, and not to mind either meat or drink, or the weather, but to take up with ſuch accommodations as are to be met with upon the road, like a traveller. In ſhort he continued this method, till at length he rode twenty or thirty miles a day, and finding himſelf much mended in a few days, he was encouraged by this wonderful ſucceſs to continue this courſe for ſeveral months, in which ſpace of time he told me he had rode many thouſand miles; ſo that at length he was not only freed from his diſorder, but became ſtrong and briſk.

Excellent in conſumptions.

118. Further, this kind of exerciſe is not more beneficial to hypochondriac than to conſumptive ſubjects, of which diſtemper ſeveral of my relations have been cured by riding long journeys by my advice. For I was well aſſured that no other method or medicines were more effectual. Nor is riding on horſeback only proper in ſlight indiſpoſitions, accompanied with a frequent cough and waſting, but even in confirmed conſumptions, wherein the *looſeneſs* is ſucceeded by *night ſweats*, which are the general fore-runners of death, in thoſe who periſh by this diſeaſe. In fine, how deſperate ſoever a *conſumption* may, or is eſteem'd

to

to be (two thirds of ſuch, as die of chronic diſeaſes being deſtroy'd thereby) yet I ſolemnly affirm, that riding is as effectual a remedy in this diſorder, as *mercury* is in the *lues venerea*, or the *bark* in *intermittents*; provided the patient be careful to have his ſheets well aired, and takes ſufficient long journeys. But it muſt be obſerved, that ſuch as are paſt the prime of life, muſt continue the uſe of riding much longer, than ſuch as are not yet arrived at that age; which I have learnt from much experience, that ſcarce ever failed me; and tho' *riding on horſeback* does moſt ſervice in conſumptive caſes, yet *riding in a coach* does ſometimes produce ſurprizing effects. (*p*)

What is to be done in the fit

119. But to reſume our ſubject. This is the general method of curing this diſorder, which removes the original cauſe, conſiſting in the weak texture of the blood; and is only to be uſed therefore when the fit is off. But when the fit comes on, accompanied with any one of the above mentioned ſymptoms, and the diſorder is ſo violent as not to admit of a reſpite till it can be cured by ſtrengthening the blood and ſpirits, we muſt have immediate recourſe to hyſteric medicines, which by their ſtrong fetid ſmell compel the diſordered ſpirits to return to their deſerted ſtations, being either taken inwardly, held to the noſe, or outwardly applied: ſuch are *aſa fœtida*, *galbanum*, *caſtor*, *ſpirit of ſal-ammoniac*, and all ſuch medicines as have a very offenſive ſmell. (*q*)

Fetid medicines proper here.

120. And in effect, whatever has a diſagreeable odour, whether it be naturally fetid or render'd ſo by art, admirably anſwers this intention; and probably *ſpirit* of *hartſhorn*, of *human blood*, of *urine*, of *bones*, and the like, owe their principal virtues to a fetid *empyreuma*

(*p*) *Riding on horſeback*, as the learned *Hoffman* obſerves, is much extolled in a *conſumption* and *hectic* by the moſt eminent phyſicians, both antient and modern. And nevertheleſs, in the beginning of the diſtemper, and in young perſons of a plethoric habit, it proves detrimental, by occaſioning frequent returns of the *ſpitting of blood*. Nor is it at all ſerviceable where the lungs are adjudged to be conſiderably tainted and impoſthumated, inaſmuch as too much motion of the body, either by *riding on horſeback*, or in a *coach*, is very apt to bring on a fatal inflammation of this part. But in an *hypochondriac conſumption*, or atrophy, the caſe is extremely different, for here moderate exerciſe, repeated with frequency, is highly proper. *See* Hoff. *op. tom.* iii. *p.* 294.

(*q*) Here the caution above inculcated ſhould be remembered. *See above par.* 107. *p.* 436.

pyreuma which they contract in diſtillation, and is intimately united with them. And this is alſo manifeſt in the fumes exhaling from burnt leather, feathers, and ſimilar parts of animals For all the parts of animals have this property in common, that they emit a fetid vapour or fume whilſt they are burning, which being condens'd by diſtillation is converted into thoſe kinds of liquors, entitled *volatile ſpirits*, which obtain ſuch properties as did not originally exiſt in the ſubjects; as being only creatures of fire: and their virtues are manifeſtly the ſame from whatever animal ſubſtance they be gained *(r)*

121. It

(*r*) The apothecaries ſhops were formerly burthen'd with a vaſt number of volatile ſalts and ſpirits, drawn not only from different animals, but likewiſe from different parts of the ſame animal. Theſe were ſuppoſed capable of producing different effects upon the human body: thus the volatile ſalt and ſpirit, extracted from the human ſkull, were whimſically enough look'd upon as medicines peculiarly adapted to remove diſeaſes of the head: and thus the ſalt obtained from vipers was accounted the only one to be depended upon, for the cure of the bite of that animal; while the ſpirit from human blood, carefully prepared, was eſteemed the moſt ſovereign remedy in all diſorders, a medicine never enough to be extolled, to which all other preparations of this kind muſt give way; ſince this was drawn from the moſt perfectly elaborated juice of the nobleſt animal, and therefore conſequently muſt be endowed with virtues ſuperior to any other.

The modern practice of phyſick acknowledges no ſuch different effect from theſe preparations in the cure of diſeaſes.

There is indeed a difference in the ſmell, taſte, degree of pungency and volatility, manifeſtly perceptible to the ſenſes, in theſe ſalts and ſpirits; and without their medicinal virtues vary, if not quite ſo much, yet conſiderably enough to deſerve particular notice. But this difference all theſe preparations have in common, according as they are more or leſs loaded with oil, not as they are drawn from this or that animal ſubſtance. When firſt diſtill'd, they may be looked upon as a kind of volatile ſoap, in which the oil is the prevailing principle, In this ſtate they are leſs acrimonious and pungent, than when they have undergone repeated diſtillations, and ſuch other operations as diſengage the oil from the ſalt: for by this means theſe preparations looſe their ſaponaceous quality, and requiring greater degrees of acrimony, become medicines of a quite different claſs. To which muſt be added that when we conſider theſe ſalts as loaded with oil, the particular virtue of a diſtilled animal oil * is to be brought into the account.

Upon the whole, it ſhould ſeem, that theſe preparations do not differ near ſo much from one another, as they do from themſelves in different ſtates of purity; an obſervation which

makes

Laudanum sometimes neceſſary.

121. It is next to be obſerved that when the fit is attended with a very violent pain of any particular part, exceſſive vomiting, or a looſeneſs, beſides the *hyſteric remedies* above-mentioned, we muſt exhibit *laudanum*, which is the only medicine that can quiet theſe ſymptoms. But unleſs the pains occaſion'd by vomiting be in a manner intolerable, we muſt be cautious of mitigating them by *laudanum*, or any other opiate, before proper evacuations have been made. (1.) Becauſe ſometimes there is ſo conſiderable a plenitude of blood and juices in the body (eſpecially in ſanguine and robuſt women) as to render the frequent repetition of the moſt powerful opiate ineffectual. In ſuch therefore bleeding in the arm is indiſpenſably neceſſary, and a purge muſt be adminiſtered; and theſe things being rightly performed, before proceeding to the uſe of *laudanum*, the opiate, which availed not in a large quantity, will anſwer the end in a moderate doſe. (2) Moreover I have learnt from much experience, that whenever the patient has been accuſtomed by degrees to *laudanum*, and proper evacuations have not been previouſly made, ſhe is compell'd, by reaſon of the return of the pain, ſo ſoon as the virtue of the opiate vaniſhes, to repeat it every day for ſome years, gradually augmenting the doſe, ſo that in time it becomes impoſſible to leave it off, notwithſtanding all the digeſtive faculties are injured, and the natural functions weakened thereby. Tho' I do not conceive that the uſe of *laudanum* does immediately hurt the brain, nerves, or animal faculties.

Bleeding and purging when to be uſed before exhibiting it.

122. Therefore I judge it neceſſary from experience to make evacuations before exhibiting opiates: for inſtance, in robuſt and plethoric women, bleeding muſt be performed, and a purge adminiſtered; eſpecially if they have had a fit lately. But if weak women, and thoſe of a contrary conſtitution, be ſeized with ſuch a fit and pain, who have but lately been afflicted in the ſame manner, it will ſuffice to cleanſe their ſtomachs with three or four quarts of poſſet drink, and, after the operation, to preſcribe a large doſe of *Venice* treacle

makes this note the more neceſſary, as it is not perhaps ſo much attended to in practice, as it deſerves. Lewis's *tranſlation of the* Edinburgh *diſpenſatory*, p. 268.

* Hoffman. *obſervat. phyſico-chym. lib.* 1. *obſerv.* 14.

treacle, or *orvietan*, and a few ſpoonfuls, of ſome grateful ſpirituous liquor, with a few drops of *liquid laudanum* to be taken immediately after it.

When *laudanum* muſt be immediately given.

123. But if the patient has been long afflicted with a vomiting before the phyſician was called; ſo that there is reaſon to apprehend that a vomit might greatly diſturb the ſpirits, and weaken her too much, *laudanum* muſt immediately be exhibited in ſuch a doſe and repeated with ſuch frequency, as the continuance and urgency of the ſymptom demands; ſo that it may be able to conquer it.

Cautions to be obſerved in giving it.

124. But here two cautions are to be particularly obſerved. (1.) When, after neceſſary evacuations, the uſe of *laudanum* is once begun, it muſt be taken in a ſufficiently large doſe, and ſo frequently repeated, that all the ſymptoms may be removed; only allowing ſuch an interval between every doſe, that the effect of the former may be known before another is exhibited, But we have treated largely of this matter in another place. p. 177. (2.) When we endeavour to cure this diſtemper with *laudanum*, we muſt forbear all kinds of evacuations; for the gentleſt glyſter, of milk and ſugar, is enough to deſtroy all the good effects of the opiate, and cauſe a return of the pain and vomiting.

Violent vomiting requires the largeſt doſe and a frequent repetition of the opiates.

125. But tho' the pains above-mentioned, as we have already intimated, eminently require opiates, yet a *violent vomiting* indicates much the largeſt doſe of them, and their frequent repetition. For, in this caſe, the periſtaltic motion of the ſtomach being inverted, the medicine is thrown up by vomit, before it can produce any effect; unleſs it be exhibited anew after every vomiting, and particularly in a ſolid form; or if it be given in a liquid one, the quantity of the vehicle muſt be ſo ſmall, that it may barely moiſten the ſtomach, ſo that it may be prevented by the ſmallneſs of the matter from throwing it up: for inſtance, a few drops of *laudanum* in a ſpoonful of *ſtrong cinnamon water*, or the like. The patient likewiſe muſt be cautioned to compoſe herſelf immediately after taking the *laudanum*, and to keep her head as ſteady as may be: for nothing promotes vomiting ſo much as the leaſt motion of the head; whence the medicine, which was newly taken in, is ejected. Moreover, when the vomiting is in a manner conquered, it is proper to repeat the anodyne

morning and night for ſome days, in order to prevent a relapſe: and this ſhould be obſerved in *hyſteric pains*, or a *looſeneſs*, which have been cured by an opiate.

The pain and vomiting here often impoſe on phyſicians.

126. By this method the *ſymptomatic* pain and vomiting may be eaſily cured, which, becauſe they often reſemble other diſeaſes, decieve the phyſician more than any other ſymptoms that require their aſſiſtance: concerning which I will ſubjoin a few remarks. For inſtance, in that kind of hyſteric diſorder juſt deſcribed, which reſembles a *nephritic paroxyſm*, and a genuine fit of this kind, is it not manifeſt that the ſymptoms differ very little? For the pain attacks the ſame part in both diſorders, and is alſo attended with a vomiting, and notwithſtanding they proceed from very different cauſes, and require ſuch different treatment, that what relieves in the one, injures in the other, and *vice verſa* (*ſ*.) For where the ſtone, or the gravel, corrodes the kidneys, occaſions pain, and a vomiting alſo by conſent of parts, nothing does ſo much ſervice as a copious and frequent revulſion of the antecedent cauſe by bleeding, and dilating and relaxing the veſſels thro' which the ſtone is to paſs, by the frequent repetition of *emollient glyſters*, and internals of the ſame kind, along with *diuretics*, and *ſtone-diſſolving* medicines.

Danger of miſtaking the cauſe thereof.

But when theſe ſymptoms do not proceed from the ſtone, but from a too copious derivation of the animal ſpirits to the kidneys (in which caſe only opiates are indicated, and the gentleſt glyſter cannot be ſafely injected, after the firſt evacuations) I need not obſerve that a different method of procedure muſt needs be extremely hazardous.

And alſo of that diſorder which reſembles the *bilious colic*.

127. The ſame may be affirmed of that hyſteric diſorder, which reſembles the *bilious colic*, or the *iliac paſſion*: for when it is judg'd to be the bilious colic (tho' it is of a quite contrary nature, and occaſioned by the ſeparation of a ſharp humour into the bowels thro' the mouths of the *meſenteric* arteries) which is a miſtake, that a phyſician, who is not ſufficiently obſervant and conſiderate, may be eaſily led into, from the violent pain, and the green colour of the matter diſcharged upwards and downwards, the beſt method of cure conſiſts in ſmoothing the acrimony of the humour by cooling and thickening medicines, and giving purgatives

(*ſ*) *See above, ſect. 4. chap. 7. par. 18. p. 195.*

purgatives frequently, beſides glyſters every day, in order to free the bowels from them; eſpecially *mercurius dulcis*, mix'd with *ſcammony*, to carry off the morbific matter entirely. But if this diſeaſe, which is taken for the *bilious colic*, be in reality a *hyſteric* or *hypochondriac* ſymptom, 'tis clear, that this method muſt needs be wrong and very hazardous, ſince experience teſtifies, that after the firſt general evacuations which are intended to carry off the corrupt humours, generated by the irregular motion of the ſpirits, whence the virtue of the opiate may be obſtructed, nothing more needs to be done than to quiet the tumultuous ſpirits till the ſymptoms vaniſh; after which it is proper to adminiſter chalybeates, or any other remedy, which may eradicate the diſeaſe, by ſtrengthening and warming the blood. It is not my deſign to enumerate the many ill accidents which I have known happen to women, when this *hyſteric colic* has been eſteemed to proceed from *bile*: Nevertheleſs, I ſcruple not to aſſert that the frequent repeated evacuations, which in effect are manifeſtly indicated in the *bilious colic*, inſtead of relieving, increaſe the pain and vomiting, by promoting the diſturbance of the ſpirits, whence theſe ſymptoms originally proceed. But at length, the diſeaſe being prolonged for ſome months, terminates in convulſions, from a ſudden tranſlation of the *morbific cauſe* to the brain, which ſoon deſtroys the patient; and eſpecially if an emetic be exhibited, after a long-continued repetition of other evacuations, on account of the green colour of the matter vomited up *(t.)* In a word, I have learnt from obſervation, that particular caution muſt be had to guard againſt all errors in the diagnoſtics, by judging the common hyſteric ſymptoms to proceed from other diſeaſes which they frequently reſemble.

128. And here I muſt inform you, that beſides the imminent danger to which hyſteric women are expoſed by reaſon of the miſtakes already enumerated, there is another, which is equally fatal to numbers thus afflicted, when this diſeaſe, tho' it is not naturally mortal, proves ſo from the bad ſymptoms which ſucceed it. To exemplify this, let us ſuppoſe that a woman of a ſlender and weakly conſtitution, is happily delivered, and a few days after the midwife, either thro' ignorance

This diſeaſe ſometimes mortal from the bad ſymptoms ſucceeding it.

(t) See above, ſect. iv. chap. 7. par. 16. & ſeq. p. 194.

rance, or vanity, in order to ſhew how well ſhe has performed her office, perſuades her to riſe and ſit up a while; which being complied with, the patient is immediately ſeiz'd with an hyſteric diſorder, and, as it increaſes, the *lochia* are firſt diminiſhed, and then entirely ſuppreſſed, and their unſeaſonable ſtoppage ſucceeded by a numerous train of ſymptoms, which ſoon prove fatal, unleſs great ſkill and diligence be uſed to prevent it. And ſometimes a *delirium* proceeds from the ſame cauſe, which, augmenting continually, occaſions convulſions, and then death: or if the patient eſcapes, ſhe loſes her ſenſes, and continues ſomewhat lunatic for the remainder of life. Sometimes a ſuppreſſion of the *lochia* is followed with a fever, which either becomes of the ſame kind with, or proceeds from the then reigning epidemic: moreover the ſame hyſteric diſorders that firſt occaſioned the ſuppreſſion of the *lochia*, rage more violently now, thus, as it were, generating themſelves afreſh.

A ſtoppage of the LOCHIA in child bed whence.

129. I have long been of opinion, that ſcarce a tenth perſon of ſuch as die in child-bed, periſh either for want of ſufficient ſtrength to bring forth the child, or from the pains accompanying a difficult birth, but chiefly from riſing too ſoon after delivery, hyſteric paroxyſms being hereby occaſioned, which, when the *lochia* are ſtopped, cauſe a numerous train of fatal ſymptoms. Upon this account, thoſe that follow my advice, keep in bed at leaſt till the *tenth* day, in caſe they are of a weak conſtitution: and eſpecially if they have formerly been ſubject to *vapours*. For the reſt they have in bed not only preſerves them from the ſymptoms ſo often enumerated, but the continued warmth thereof revives the ſpirits, which are debilitated and exhauſted by the labour-pains, and the ordinary evacuations happening in this caſe, and likewiſe ſtrengthens nature, and carries off thoſe crudities that were collected during the time of pregnancy. (*u*)

Miſchief of riſing too ſoon after delivery.

Weak women ought not to be ſuffered to riſe till the *tenth* day.

130. But

(*u*) This obſervation of our author's is grounded upon a fact that has been too frequently verified; ſo that the cuſtom of riſing too ſoon and ſitting up, after delivery, cannot be too much condemned, nor the contrary practice too ſtrongly inculcated and recommended to the notice and attention of all thoſe of both ſexes that practice midwifry. And *Juncker* ſo far approves it, as to adviſe their not getting up till the ninth day. See his *conſpect. medicin. theoretico. pract.* p. 1009.

130. But if any one of the ſymptoms above enumerated happen from ſuch an error, the curative indications are to endeavour (1.) to compoſe the ſpirits diſturb'd by this motion, and (2) to remove the ſuppreſſion of the *lochia*; this being the immediate cauſe of theſe ſymptoms. This method, however, muſt not be obſtinately perſued; but having continued the uſe of thoſe remedies, for ſome time which ordinarily ſucceed in this caſe, and they failing, we are to leave them off; for, as forcing medicines are not to be adminiſtered here, ſo neither ought we to perſiſt in exhibiting thoſe of a milder kind, becauſe of the extreme weakneſs and lowneſs of ſpirits, which child-bed women, who are thus affected, labour under. To illuſtrate this by an inſtance: as ſoon as the *lochia* are ſuppreſſ'd, it is proper to put the woman to bed, and apply an hyſteric plaiſter to the navel, and preſcribe the following electuary, to be exhibited as ſoon as it can be made up. Method of curing a *ſuppreſſion of the* LOCHIA.

Take of conſerve of Roman *wormwood and of rue, each an ounce; troches of myrrh, two drams; caſtor, ſaffron, volatile ſal-ammoniac, and aſa fætida, each half a dram; ſyrup of the five opening roots, a ſufficient quantity to make them into an electuary; of which let the quantity of a large nutmeg be taken every three hours, drinking after it four ſpoonfuls of the following julap.* An opening electuary.

Take of the diſtilled water of rue, and compound briony water, each three ounces, fine ſugar enough to ſweeten it; mix them for a julap. A cordial julap.

If theſe medicines be given as ſoon as the ſuppreſſion of the *lochia* appears, they generally effect a cure; but if the diſorder continues after the whole quantity here directed is taken, we muſt exhibit at leaſt a ſingle doſe of *laudanum*; which, tho' it be naturally aſtringent, yet, by allaying the hurry of the ſpirits, whereby the uſual flowing of the *lochia* is check'd, it does great ſervice, and may ſometimes remove the ſuppreſſion when emmenagogues avail not: but opiates are moſt commodiouſly exhibited along with hyſterics and emmenagogues: e. g. fourteen drops of *liquid laudanum* in *compound briony water*; or a grain and half of *ſolid laudanum*, and half a ſcruple of *aſa fætida* made into two pills, *Laudanum* when to be given in this caſe.

Not to be repeated.

131. It muſt; however, be carefully obſerved, that in caſe the *lochia* do not flow afreſh by giving a ſingle doſe, the *opium* is by no means to be repeated, as is uſual and requiſite in other caſes; becauſe a repetition of it here would ſuppreſs them ſo powerfully, that they could not afterwards be forced. If therefore, after having waited ſome time, to be aſſured of its effects, we find it fail, we muſt return to *emmenagogues*, joined with *hyſterics*, and then inject a glyſter of *milk and ſugar*. And what has been inculcated above concerning *opium* is equally applicable to glyſters; for if the firſt does not bring down the *lochia*, nothing is to be expected from more; one being ſufficient to anſwer this end, by inviting the humours gently downwards, whilſt more may divert them another way. *(x)*

But beſt to wait, and ſee what effect time will produce.

132. This method having been us'd, with the caution above directed, it is ſafeſt, and incumbent on a prudent phyſician, to wait and ſee what effect time will produce; for the danger leſſens every day, and if the patient outlives the *twentieth* day, ſhe is in a manner out of danger. For when the woman has had a little reſpite, and recovered ſome degree of ſtrength, ſhe will be able to bear the propereſt method of removing that diſorder

As the *lochia* may be ſuppreſs'd from different cauſes, regard muſt always be had to the ſpecies of the cauſe whence this diſorder proceeds. Thus, after a difficult delivery, which has been accompanied with ſevere pains, occaſioning violent ſpaſmodic contractions of the ſolids, and a tumultuary motion of the fluids, whence the *lochia* ceaſe to flow, the curative indication is to allay the commotion, which may be acompliſh'd by bleeding, if requiſite, glyſters, anodynes, a moderately cooling regimen, keeping the patient quiet, and adminiſtering mild diaphoretics along with diluting thin liquors. But if the *lochia* be ſuppreſs'd by taking of cold, an obſtructed perſpiration, the depreſſing paſſions, and the like, the patient muſt be confined to her bed, and uſe a warm perſpirative regimen, drinking all her liquors warm, taking a few ſpoonfuls of ſome proper cordial, or warm wine between times, and living on gellies, panada, broth, *&c.* not omitting the uſe of proper uterine medicines at the ſame time, as *myrrh, borax, ſaffron, ſperma ceti, volatile ſalt of amber, wild valerian root, vilatile ſpirits*, and the like.

(y) When a ſuppreſſion of the *lochia* is occaſioned by inflammation ſimply, which ſometimes happens, bleeding, fomentations, and a proper diet muſt be uſed, and are attended with great ſucceſs. The ſymptoms, however, muſt determine when the patient ſhould be treated in this manner, but great care is to be taken to avoid procuring a looſeneſs, becauſe that often proves fatal in this caſe: this, therefore, muſt be looked on as an important caution.

diſorder, whatever it be, which proceeded from the ſuppreſſion of the *lochia*; whereas, contrariwiſe, by continuing to give a multitude of remedies. when the firſt proves ineffectual, the diſeaſe, and the hurry of the ſpirits occaſioning it, may be encreaſed; which deſerves particular attention.

133. I was ſent for not long ſince by a lady, who, from the cauſe juſt ſpecified, was ſeized immediately after delivery with hyſteric paroxyſms, and a ſtoppage of the *lochia*. I endeavoured to force them by the remedies above enumerated, but ſucceeded not; the hyſteric diſorder being ſo violent, as not to yield to medicine. Having therefore at length foreſeen that ſhe would recover if I did nothing at all, I judged that the cure might be left to time, the beſt phyſician. And my advice ſucceeded well till the *fourteenth* day; for viſiting her every day, I never found her one day worſe than ſhe was the day before. But after this, her attendants, whom I had hitherto prevented from injuring her, under the appearance of aſſiſting her, prevailed with her huſband to have her immediately blooded in the foot; which being done, the hyſteric paroxyſms encreaſed to that degree as in a few hours to occaſion convulſions, which ſoon proved fatal. Illuſtrated by a caſe.

134. And indeed, if I may ſpeak my ſentiments freely, I have long been of opinion, that I act the part of an honeſt man, and a good phyſician (not only in theſe diſeaſes of child-bed women, but likewiſe in all acute diſeaſes, where I cannot certainly promiſe that the method I make choice of will perform the cure) as oft as I refrain entirely from medicine, when upon viſiting the patient I find him no worſe to-day than he was the day before, and have reaſon to ſuppoſe he will be no worſe to-morrow than he is to-day. Whereas, if I attempt to cure the patient by a method, which I do not yet know to be effectual, he will be endangered, both by the experiment I am going to make upon him, and the diſeaſe it ſelf; nor will he ſo eaſily eſcape two dangers as one. For tho' at preſent there appears no manifeſt ſign of his amendment, yet it is certain, that the nature of an acute diſeaſe is ſuch, that it cannot always laſt; and beſides, every day will leſſen the danger, or at leaſt afford the phyſician a more certain and favourable opportunity of conquering the The equity of this manner of procedure

diſeaſe, than he had before. And this may truly be affirmed of moſt diſeaſes, but chiefly of ſuch as are peculiar to women in child-bed, wherein the leaſt error may prove fatal, and we find it ſo difficult to govern that natural evacuation, from the ſuppreſſion whereof the diſeaſes we have been treating of proceed.

Hyſteric diſorders ſometimes cauſed by *an immoderate flux of the menſes.*

135. But as *hyſteric diſeaſes* do not always originally riſe from the primary cauſe, which is the *natural weakneſs of the ſpirits*, but ſometimes from an adventitious weakneſs thereof, I intend, therefore, before I finiſh this epiſtle, to treat of this kind of cauſe, which is frequently productive of what are entitled *vapours*: and this is an *immoderate flux of the menſes*, either in child-bed, or at other times.

The firſt ſpecies of it deſcribed, and the method of cure delivered.

The firſt ſpecies chiefly happens ſoon after a difficult delivery, and is attended with a numerous train of hyſteric ſymptoms; but as it only comes and proves troubleſome in the beginning, ſo it ſoon goes off; being eaſily remedied by an incraſſating diet, wherewith the following drink may be joined.

An aſtringent drink

Take of plantain water and red wine, each a pint; boil them together to the conſumption of a third part, and then ſweeten it with a requiſite proportion of fine ſugar. Give half a pint of it twice or thrice a day.

In the mean time ſome ſufficiently weak hyſteric julap may be exhibited at times, and the following compoſition held to the noſe.

Take of galbanum and aſa fœtida, each two drams; caſtor a dram and half; volatile ſalt of amber, half a dram; mix them together.

Or,

A fetid paſte.

Take ſpirit of ſal-ammoniac, two drams; and let the patient ſmell to it often. (z)

136. But

(z) Should not this diſorder rather be entitled an immoderate flux of the *lochia*, or *violent flooding*, the menſtrual diſcharge never happening at this period of time? The cure of it is effected by keeping the patient moderately cool, bleeding, if the ſtrength will admit, promoting ſleep and reſt, and uſing reſtingents internally and externally, eſpecially applying linen cloths, dip'd in vinegar, to the regions of the *abdomen* and loins. The *Pulvis ſtypticus Helvetii* is given with great ſucceſs in this caſe, as I can atteſt from my own experience.

A learned phyſician, ſays *Lewis*, aſſures us from his own experience, that he never found any medicine ſo much to be depended on, in uterine hæmorrhages, as a mixture of equal parts of alum and dragon's blood, (uſually called the *pulvis ſtypticus*

136. But as to an *immoderate flux of the menſes*, which ſeizes women when they are not pregnant, tho' it happens at any time, yet it moſt frequently comes a little before the *menſes* leave them; namely about the age of forty five, if they begin early, or about fifty, if they begin late. In ſuch ſubjects they often flow immoderately, a little before they vaniſh entirely, and occaſion violent and frequent hyſteric fits, from the large quantity of blood which is continually loſt. Now tho' hyſteric medicines are to be us'd in this caſe, both internally and externally, avoiding the ſtronger kind, for fear of promoting the flux, yet the chief ſtept towards the cure conſiſts in checking the menſtrual diſcharge, which may be ſoon effected in the following manner, The ſecond deſcribed, and the method of cure particulariz'd.

137. Take away eight ounces of blood from the arm, and the next morning give the common purging potion, which muſt be repeated every third day for twice; and let her take an ounce of *diacodium* every night at bed time during the courſe of the diſeaſe, The proceſs.

Take of the conſerve of dried roſes, two ounces; troches of lemnian *earth, a dram and half; pomegranate bark, and red coral prepared, each two ſcruples; blood-ſtone, dragon's blood, and* armenian *bole, each a ſcruple; and as much ſimple ſyrup of coral as will make the whole into an electuary; of which let the quantity of a large nutmeg be taken every morning, and at five in the afternoon, with ſix ſpoonfuls of the following julap.* An aſtringent electuary.

Take of the diſtilled waters of oak-buds and plantain, each three ounces, ſmall-cinnamon water, and ſyrup of dried roſes, each an ounce; ſpirit of vitriol, enough to give it an agreeable ſharpneſs. An aſtringent julap.

Take of the leaves of plantain and nettles, each a ſufficient Incraſſating juices.

ſtypticus Helvetii), whether to correct the too frequent return of the menſes, or their too great abundance; to ſtop the flooding which women with child are ſubject to; or to moderate the flow of the lochia. The quantity he gave was more or leſs, according to the exigencies of the patient. In violent bleeding, he gave half a dram every half hour; and ſeldom or never miſs'd to ſtop the flux before three drams, or half an ounce had been taken. The ſucceſs of this medicine in theſe evacuations, encouraged him to preſcribe it in the fluor albus, in which it had ſurprizing good effects. See his *tranſlation of the* Edinburgh *diſpenſatory*, p. 174. and *medical eſſays*, vol 4. p. 38.

ficient quantity: bruiſe them well together in a marble mortar, and preſs out the juice, and laſtly clarify it. Let ſix ſpoonfuls of it be taken cold three or four times a-day.

After the firſt purge, let the following plaiſter be applied to the region of the loins.

A ſtrengthening plaiſter.

Take of diapalma and rupture-plaiſter, each equal parts; melt them down together, and ſpread the maſs on leather.

The regimen to be uſed.

138. A cooling and thickening diet muſt be preſcribed, only it will be convenient to allow the patient a glaſs of *claret* once or twice a day; which, tho' it be not altogether ſo proper, inaſmuch as it is apt to raiſe an ebullition, may be indulged in order to repair the ſtrength. And this method is not only very ſerviceable in theſe diſorders of the ſex, but is equally uſeful were there is danger of a miſcarriage; only in this caſe the purgatives and juices muſt be omitled. *(b)*

Hyſteric diſorders ſometimes cauſed by *a bearing down of* the *womb*.

139. There is alſo another cauſe of hyſteric diſorders, tho' it happens more rarely, and this is a *bearing down of the womb*, after a difficult birth, attended with abundance of hyſteric ſymptoms, which, however may be eaſily and ſpeedily cured by the following method.

How to be cur'd.

A reſtringent fomentation.

Take of oak-bark, two ounces; boil it in two quarts of ſpring water to one; and towards the end of the operation add of pomegranate peel bruis'd, one ounce; red roſe leaves and balauſtines, each two handfuls; and laſtly half a pint of red wine: ſtrain off the liquor for a fomentation, to be applied with flannels in the uſual manner, every morning, two hours before the patient riſes, and at night after ſhe is in bed, continuing the uſe of it till the diſorder vaniſhes, (c)

140. And

(b) An infuſion of the *bark* in red-wine is no contemptible medicine in this caſe: and it may not be amiſs to apply an aſtringent fomentation to the part; ſuch as that ſet down in the next paragraph. Sir *David Hamilton* commends a decoction of orange peel in this caſe, and I have experienced it to be a ſafe and effectual remedy.

(c) No notice is taken here of ſuſpending the *abdomen* in a proper manner, and uſing a fit poſture, which are ſo very neceſſary in the cure of this diſorder, that 'tis frequently not removable without; the patient therefore ſhould refrain from motion, and indulge

140. And now worthy Sir, having communicated all the obſervations I have hitherto made, relating to the hiſtory and cure of the *hyſteric diſeaſe* I have no more to add, but to intreat you to excuſe any inaccuracy I may have committed in the deſcription thereof, and likewiſe to accept this ſhort diſſertation, which was wrote expreſly to return you thanks for your approbation of my other works. And, in reality, I ſo rarely meet with ſuch treatment, that I muſt needs conclude either that I am void of merit, or that the candid and ingenuous part of mankind, who are formed with ſo excellent a temper of mind, as to be no ſtrangers to gratitude, make a very ſmall part of the whole. But whatever opinion the world may form of me, I will ſtill continue to inveſtigate and improve the method of curing diſeaſes, to the beſt of my ability, and to inſtruct ſuch practitioners, as have leſs experience than myſelf, For upon deliberate and equitable reflection I find it is better to aſſiſt mankind than to be commended by them, and highly conducive to tranquility of mind; popular applauſe being lighter than a feather, or a bubble, and leſs ſubſtantial than a dream. But if the wealth that is gained by ſuch an eminent name ſhould by ſome be thought to be of a more ſolid kind, I do not at all envy them the enjoyment of what they have acquired, but would have them remember that the loweſt claſs of mechanics do ſometimes get and leave greater fortunes to their children; and yet in this reſpect they are no way ſuperior to brutes, who make the beſt proviſion they can for themſelves and their iſſue. For if we accept ſuch good actions as proceed from choice and a virtuous diſpoſition (which brutes are naturally incapable of) they are manifeſtly upon the footing of an equality

The concluſion.

indulge an horizontal ſituation. and uſe cardiacs and gentle aſtringents internally, along with a ſuitable regimen.

'Tis ſomewhat ſtrange that *Sydenham* in this caſe truſts entirely to, and doubts not of the abſolute effects of an aſtringent fotus, whereas that has been frequently found to fail, and it has been quite neceſſary to make uſe of peſſaries.—For a proper form of one the reader may conſult *Heiſter*'s *ſurgery*, where he treats of the diſorder which this is intended to relieve: or the *medical eſſays*, Vol. 3, p. 313. where there is a deſcription of a very commodious one invented by Dr *Simſon* the *Chandos* profeſſor of medicine in the univerſity of St *Andrews*.

equality with these, and all other men, who have not the welfare of mankind at heart,—Pray give my service to our learned friend Mr *Kendrick*, who informed me of your affection for me, which I will endeavour to return in the best manner I am able, who am,

Worthy Sir,

London,
Jan. 20. 1681-2. *Your most obliged*

And affectionate

Humble servant,

THO. SYDENHAM.

A TREATISE OF THE GOUT and DROPSY.

The Dedicatory Epiſtle *of the* AUTHOR, *to Dr.* THO. SHORT, *Fellow of the* College of Phyſicians.

Worthy Sir,

I Preſent you here with a ſhort treatiſe of the *gout* and *dropſy*, inſtead of a larger work, which I had thoughts of writing, namely, the hiſtory of thoſe *chronic* diſtempers eſpecially, which I have often met with in my practice. But as my immoderate application to this work occaſioned the ſevereſt fit of the *gout* I ever had, it was a caution to me to deſiſt from my undertaking, tho' with reluctance, conſult my health, and reſt ſatisfied with having finiſhed my eſſay on theſe two diſeaſes: for the *gout* conſtantly returned, as oft as I attempted to go on with the work.

Be pleas'd, therefore, to accept this performance with all its faults, which is addreſſed to you for two reaſons chiefly. Firſt, becauſe you have readily acknowledged and aſſerted the uſefulneſs of the obſervations I formerly publiſh'd (which ſome perſons contemn) both before me and others; and, ſecondly, becauſe in the mutual intercourſe we have had in conſultations, I have found your genius well adapted to the practice of phyſic. For tho' you excel in all kinds of literature, yet nature has rather intended you for a judicious practitioner, than an idle theoriſt; practice and ſpeculation differing as much from each other, as trifles and matters of the greateſt importance; ſo that if my obſervation be right, they ſeldom meet in one and the ſame perſon.

Your penetration, joined with a large and extenſive practice, which have furniſhed you with an opportunity of making experiments, have placed you at the head of the faculty, and your affability will be a means of preſerving the eſteem you have acquired. If the following ſheets be not diſapproved by you (to whom they are inſcribed) and a few worthy men, my friends, I ſhall little regard the

cenſure

cenſure of others, who are angry with me, purely becauſe I diſſent from their opinions, relating to diſeaſes and the methods of cure. And this I cannot well help, becauſe my natural diſpoſition inclines me to ſpend that time in thinking, which others employ in reading; and I am more ſolicitous, that all I deliver ſhould be agreeable to truth, than to the ſentiments of others; as ſetting lightly by public applauſe. And indeed, provided I diſcharge the duty of a good citizen, and ſerve the public, to the prejudice of my private intereſt, what matters it if I gain no reputation thereby? For upon due conſideration, my endeavouring to ſecure a character, who am now advanced in years, will, in a little time, be like providing for a non-exiſtence. For what will it avail me after my diſeaſe that the eight letters, which compoſe my name, will be pronounced by thoſe, who can no more frame an idea of me in their minds, than I am now able to conceive what kind of perſons thoſe will be, who can have no knowledge of their immediate predeceſſors, and will perhaps have a different language, and other cuſtoms, according to the viciſſitudes and fluctuating condition of human affairs? To what purpoſe, therefore, ſhould I concern myſelf about the opinions of others? For if I have improv'd the diagnoſtic and curative parts of medicine, and thereby entitled myſelf to ſome praiſe, I cannot long enjoy it; and, on the contrary, if my writings are not much lik'd by ſome perſons, I ſcarce think I ſhall trouble the public with more, by reaſon of my ill ſtate of health. In reality, my hand trembled ſo, that I was not able to write this ſhort treatiſe I now publiſh; but was aſſiſted in this particular (which I gratefully acknowledge) by Mr *John Drake*, batchelor in phyſic, of *St John's* college in *Cambridge*, whoſe good nature and integrity render him an excellent friend; and whoſe natural and acquired endowments will make him highly uſeful to mankind, when he pleaſes to practiſe an art which he ſo well underſtands. I conclude, with aſking your pardon for the trouble I may have given you in the performance of my duty, and deſiring you to believe that it intirely proceeds from the regard and eſteem I bear you, who am, Sir,

London, *Your moſt obedient ſervant*,

May 21. 1683. THO. SYDENHAM.

A TREATISE *of the* GOUT.

1. THERE is no doubt, but men will conclude, either that the nature of the diſeaſe, which is my preſent ſubject, is in a manner incomprehenſible, or that I, who have been afflicted with it for theſe thirty four years paſt, am a perſon of very ſlender abilities, inaſmuch as my obſervations concerning this diſtemper and the cure thereof fall ſhort of anſwering their expectations. But notwithſtanding this, I will faithfully deliver the remarks I have hitherto made, concerning the difficulties and intricacies reſpectively occurring in the hiſtory of the diſeaſe, and the method of cure; leaving the illuſtration thereof to time, the diſcoverer of the truth. (*a*)

The *gout* hard to be underſtood.

2. The *gout* generally attacks thoſe aged perſons, who have ſpent moſt part of their lives in eaſe, voluptuouſneſs, high living and too free an uſe of wine, and other ſpirituous liquors, and at length, by reaſon of the common inability to motion in old age, entirely left off thoſe exerciſes, which young perſons commonly uſe (*b*). And, further, ſuch as are liable to this diſeaſe have large heads, and are generally of a plethoric, moiſt, and lax habit of body, and with all of a ſtrong and vigorous conſtitution, and poſſeſs'd of the beſt *ſtamina vitæ*.

Whom it chiefly attacks.

3. The *gout*, however, does not only ſeize the groſs and corpulent, but ſometimes, tho' leſs frequently, attacks lean and ſlender perſons: neither does it always wait til old-age comes, but ſometimes attacks ſuch as are

Sudden change of the ordinary way of living diſpoſes to the *gout*.

(*a*) The nature and cauſe of the *gout* are perhaps as little underſtood at this day, as they were in our author's time; but we are much better acquainted with the method of relieving it, which is the moſt eſſential and beneficial part of knowledge, and which, ſo far as it receives any improvement from theory, entitles that theory to our notice, and eſtabliſhes it upon the only ſolid foundation.

(*b*) That the *gout* does often proceed originally from intemperance, inactivity, and indolence, is not to be denied; but in caſe it be deriv'd hereditarily from *gouty* parents, and ſo in a manner interwoven with the frame and ſtructure of the body, the ſtricteſt regimen, together with an over-cautious uſe of the reſt of the *non-naturals*, generally avail little towards a perfect cure; and, if imprudently perſiſted in do ſometimes weaken the conſtitution ſo much that it cannot throw the diſtemper upon the external parts, whence it exerts its violence upon the inward parts, and deſtroys the patient without ever producing a regular fit.

are in the prime of life, when they have received the seeds of it from *gouty* parents, or have otherwise occasioned it by an over-early use of *venery*, or the leaving off such exercises, as they formerly indulged to a great degree: and who besides have had a voracious appetite, and used spirituous liquors immoderately, and afterwards quitted them, of a sudden, for those of a thin and cooling kind. (*c*)

Differs in its symptoms and manner of seizure in different persons.

4. When it seizes a person far advanced in years, for the first time, it never has such stated periods, nor proves so violent, as when it attacks a younger person, because (1.) he generally perishes before the disease accompanied with its natural symptoms, comes to its height; and (2) because the natural heat and vigour of the body being abated, it cannot be so constantly and powerfully thrown off upon the joints. But when it comes on sooner, tho' it may not yet fix on one part, nor prove so severe, but affect the patient occasionally, keeping no certain period, giving only a little pain for a few days, and coming on and going off without any order; yet it increases gradually, and goes on regularly, both with respect to the time of its coming, and the continuance of the fit, and rages more violently in its progress, than in its beginning.

How the *regular* gout begins and proceeds.

5. I will first treat of the *regular gout*, and next of the *irregular one*; whether occasioned by an unadvised use of improper remedies, or the weakness of the subject. The *regular gout* generally seizes in the following manner: It comes on a sudden towards the close of *January*, or the beginning of *February*, giving scarce any sign of its approach, except that the patient has been afflicted, for some weeks before, with a bad digestion, crudities of the stomach, and much flatulency and heaviness, that gradually increase, till the fit at length begins; which however is preceded, for a few days, by a numbness of the thighs, and a sort of descent of flatulencies thro' the fleshy parts thereof,

along

(*c*) So hasty a change from one extream to another, must needs weaken the constitution in a great degree in most persons, and consequently may dispose them to the *gout*, or other *chronic* diseases, according as they have a tendency to any particular distemper, and thus a greater evil may be occasion'd than the change is intended to prevent. Such steps, therefore, are not to be taken without good advice, and the alteration is then to be made slowly and gradually.

along with convulsive motions; and the day preceding the fit the appetite is sharp, but preternatural. The patient goes to bed, and sleeps quietly, till about two in the morning, when he is awakened by a pain, which usually seizes the great toe, but sometimes the heel, the calf of the leg or the ancle. The pain resembles that of a dislocated bone, and is attended with a sensation, as if water just warm were poured upon the membranes of the part affected; and these symptoms are immediately succeeded by a chilness, shivering, and a slight fever. The chilness and shivering abate in proportion as the pain increases, which is mild in the beginning, but grows gradually more violent every hour, and comes to its height towards evening, adapting itself to the numerous bones of the *tarsus* and *metatarsus*, the ligaments whereof it affects; sometimes resembling a tension or laceration of those ligaments, sometimes the gnawing of a dog and sometimes a weight and construction of the membranes of the parts affected, which become so exquisitely painful, as not to endure the weight of the cloaths, nor the shaking of the room from a person's walking briskly therein. And hence the night is not only passed in pain, but likewise with a restless removal of the part affected from one place to another, and a continual change of its posture. Nor does the perpetual restlessness of the whole body, which always accompanies the fit, and especially in the beginning, fall short of the agitation and pain of the gouty limb. Hence numberless fruitless endeavours are used to ease the pain, by continually changing the situation of the body and the part affected, which notwithstanding, abates not till two or three in the morning, that is, till after twenty four hours from the first approach of the fit; when the patient is suddenly relieved, by means of a moderate digestion and some dissipation of the peccant matter, tho' he falsly judges the case to proceed from the last position of the part affected. And being now in a breathing sweat he falls asleep, and upon waking finds the pain much abated and the part affected to be then swell'd, whereas, before, only a remarkable swelling of the veins thereof appeared, as is usual in all *gouty fits*.

The next day, and perhaps two or three days afterwards, if the *gouty matter* be copious the part affect-

ed will be ſomewhat pained, and the pain encreaſe towards evening, and remit about break of day. In a few days it ſeizes the other foot in the ſame manner; and if the pain be violent in this, and that which was firſt ſeized be quite eaſy, the weakneſs thereof ſoon vaniſhes, and it becomes as ſtrong and healthy, as if it had never been indiſpoſed: nevertheleſs, the *gout* affects the foot juſt ſeized, as it did the former, both in reſpect of the vehemence and duration of the pain: And ſometimes, when there is ſo copious a peccant matter in the beginning of the fit, that one foot is unable to contain it, it affects both at the ſame time with equal violence; but it generally attacks the feet ſucceſſively, as above remarked. When it has ſeized both feet, the following fits are irregular, both with reſpect to the time of ſeizure and their continuance, but the pain always increaſes in the evening, and remits in the morning: and what we call a *fit of the gout*, which goes off ſooner or later, according to the age of the patient, is made up of a number of theſe ſmall fits. For when this diſeaſe laſts two or three months, it is not to be eſteemed one continued fit, but rather a ſeries or aſſemblage of little fits, the laſt of which proves milder and ſhorter, ,till the peccant matter being at length quite expelled, the patient recovers; which, in ſtrong conſtitutions, and ſuch as ſeldom have the *gout*, often happens in fourteen days; and in the aged, and thoſe that have frequent returns of the diſeaſe, in two months; but in ſuch as are more debilitated, either with age, or the long duration of the diſtemper, it does not go off till ſummer advances, which drives, it away.

During the firſt fourteen days the urine is high-coloured, and after ſeparation lets fall a kind of red gravelly ſediment, and not above a third part of the liquids taken in is voided by urine, and the body is generally coſtive during this time. The fit is accompanied throughout with loſs of appetite, chilneſs of the whole body towards the evening, and a heavineſs and uneaſineſs even of thoſe parts that are not affected by the diſeaſe. When the fit is going off, a violent itching ſeizes the foot, eſpecially between the toes, whence the ſkin peels off as if the patient had taken poiſon. The diſeaſe being over, the appetite and ſtrength return ſooner or later, according as the immediately preceeding fit hath been

been more or leſs ſevere, and in conſequence of this the following fit comes on a ſhorter or longer ſpace of time; for, if the laſt fit proves very violent, the next will not attack the patient till the ſame ſeaſon of the year returns again. *(d)*

6. In this manner does the *regular gout*, accompanied with its genuine and proper ſymptoms, appear: but when it is exaſperated, either by wrong management or long continuance, ſo that the ſubſtance of the body is in a manner changed into ſupplies for the diſeaſe, and nature unable to expel it according to her uſual way, the ſymptoms differ conſiderably from thoſe juſt deſcribed. For, whereas the pain hitherto only affected the feet (which are the genuine ſeat of the morbid matter, which, whenever it attacks any other part, clearly proves either that the courſe of the diſeaſe is obſtructed, or the ſtrength gradually impaired) it now ſeizes the hands, wriſts, elbows, knees, and other parts; no leſs ſeverely than it did the feet before. For ſometimes it renders one or more of the fingers crooked, and motionleſs by degrees, and at length forms ſtony concretions in the ligaments of the joints, which deſtroying both the ſcarf-ſkin and the ſkin of the joints, ſtones not unlike chalk, or crabs eyes, come in ſight, and may be pick'd out with a needle. Sometimes the morbific matter is thrown upon the elbows, and occaſions a whitiſh ſwelling, almoſt as large as an egg, which becomes gradually inflamed and red. Sometimes it affects the thigh, which ſeems to ſuſtain a great weight, yet without much pain; but thence gaining the knee it attacks that part more violently, depriving it of motion, ſo as to nail it in a manner to the ſame place in bed. And when it is neceſſary to move the patient, either on account of the reſtleſſneſs of the whole body, which is ſo frequent in this diſeaſe, or ſome other urgent cauſe, it ought to be done with great caution, as the leaſt contrary motion, or ſhock, may perhaps give

The ſymptoms of the *irregular gout* enumerated.

(d) This is the moſt accurate hiſtory of the beginning and progreſs of the *regular gout* which has yet been publiſhed; and being exactly copied from nature, will appear in moſt ſubjects the ſame with little variation. The exactneſs of our excellent author in the deſcriptive part, may juſtly be propoſed to all future writers on the art of medicine, as a model worthy of their cloſeſt imitation. The ſkilful *Hoffman* has inſerted this hiſtory of the *gout* at length in his eſſay in this diſeaſe, not being able to furniſh out a better.

pain, which is only tolerable for this reaſon, becauſe it ſoon goes off. And, indeed, this moving of the patient, which ſhould be performed with ſuch care and tenderneſs by the aſſiſtants, is no inconſiderable part of the evils which attend the *gout*; for the pain is not very violent the paroxyſm throughout, in caſe the part affected be kept quiet.

It continues moſt part of the year.

7. As the *gout* formerly did not uſually come on till the decline of winter, and went off in two or three months; in the preſent caſe, it continues all the year, excepting two or three of the warmeſt ſummer months. And it is further to be obſerved, that as the *cardinal* or *general fit* continues longer now than it did heretofore, ſo likewiſe thoſe *particular fits*, of which the *general one* is made up, rage a longer time; for, whereas one of theſe did not laſt above a day or two before, it now, wherever it fixes, does not go off till the *fourteenth* day, eſpecially if the feet or knees be affected thereby. To this may be added, that the patient on the firſt or ſecond day after its coming, beſides the pain, is afflicted with ſickneſs, and a total loſs of appetite.

The intervals ſhorter, and attended with great weakneſs.

8. In the laſt place, before the diſeaſe came to ſuch a height, the patient not only enjoyed longer intervals between the fits, but likewiſe had no pain in the limbs, and the other parts of the body, all the bodily functions being duly performed; whereas now his limbs, during the intermiſſion of the diſeaſe, are ſo contracted and diſabled, that tho' he can ſtand, and perhaps walk a little, yet it is very ſlowly, and with great trouble and lameneſs, ſo that he ſcarce ſeems to move at all; and, if he endeavours to walk beyond his ſtrength, in order to recover the uſe of his feet, the ſtronger they grow, and the leſs liable they are to pain upon this account, ſo much more does the morbific matter (not wholly diſſipated during this interval) threaten the bowels, to the endangering the patient, as it cannot be ſo freely thrown upon the feet, which, in this ſtate of the diſeaſe, are never quite free from pain.

And other bad ſymtoms.

9. Moreover, the patient is likewiſe afflicted with ſeveral other ſymptoms; as a pain in the hemorrhoidal veins, nauſeous eructations, not unlike the taſte of the aliment laſt taken in, corrupting in the ſtomach, happening always after eating any thing of difficult digeſtion, or no more than is proper for a healthy perſon together with

loſs of appetite, and a debility of the whole body, or want of ſpirits; which render his life melancholy and uncumfortable. The urine, which was before high-coloured, eſpecially in the fits, and voided in a ſmall quantity, now reſembles that which is evacuated in a *diabetes*, both in colour and quantity; and the back and other parts itch much towards bed-time.

10. And when the diſeaſe is become inveterate, after yawning, eſpecially in the morning, the ligaments of the bones of the *metatarſus* are violently ſtretched, and ſeem to be ſqueez'd with great force by a ſtrong hand. And ſometimes, tho' no yawning has preceded, when the patient is diſpoſing himſelf to ſleep, he feels a blow of a ſudden, as if the *metatarſus* were breaking in pieces by a large ſtick, ſo that he wakes crying out with pain. The tendons of the muſcles of the *tibiæ* are ſometimes ſeiz'd with ſo ſharp and violent a convulſion, or cramp, that if the pain it occaſions were to laſt only a ſhort time, it could not be borne with patience.

11. But after many racking pains, the following paroxyſms become leſs painful, as an earneſt of the delivery which approaching death is about to give, nature being in part oppreſſed by the quantity of the morbific matter, and in part by old age, ſo as not to be able to propel it conſtantly and vigorouſly to the extremities; but, inſtead of the uſual external pain a certain ſickneſs, a pain in the belly, a ſpontaneous laſſitude, and ſometimes a tendency to a *diarrhœa* ſucceed. When theſe ſymptoms are violent, they eaſe the pain of the limbs, which returns upon their going off; and the paroxyſms are much prolonged by this alternate ſucceſſion of pain and ſickneſs. For it is to be obſerved, that when the diſeaſe has continued ſeveral years, the pain diminiſhes gradually every fit, and the patient at length ſinks rather from the ſickneſs than the pain; which in theſe fits, tho' it be longer, is not near ſo violent as that which he uſually ſuffered, when his ſtrength was little impaired. But nevertheleſs this violence of the diſeaſe was ordinarily recompenſed by longer intervals between the fits, and the good ſtate of health the patient enjoyed during the intermiſſion. In effect, pain in this diſeaſe is the diſagreeable remedy of nature, and the more violent it proves, the ſooner the

fit terminates, and the longer and more perfect is the intermission; and so on the contrary.

The *gout* generative of the *stone in the kidneys.*

12. But besides the above-mentioned symptoms, *viz.* the pain, lameness, inability to motion of the parts affected, the sickness, and other symptoms above enumerated, the *gout* breeds the *stone in the kidneys* in many subjects, either (1.) because the patient is obliged to lie long on his back, or (2.) because the secretory organs have ceased performing their proper functions; or else (3.) because the *stone* is formed from a part of the same morbific matter; which however I do not pretend to determine. But from what cause soever this disease proceeds, the patient is sometimes at a loss to know whether the *stone* or the *gout* be most severe. And sometimes a suppression of urine caused by the stone's sticking in the urinary passage,, destroys him, without waiting for the slow advances of its concomitant the *gout*.

And of great disorders of mind.

13. The patient is not only reduced to this helpless condition, but, to compleat his misery, his mind during the fit sympathizes with his body, so that 'tis not easy to determine which of the two is most afflicted. For every paroxysm may be as justly denominated a fit of anger, as a fit of the *gout*; the rational faculties being so enervated by the weakness of the body, as to be disordered upon every trifling occasion; whence the patient becomes as troublesome to others as he is to himself. Moreover he is equally subject to the rest of the passions, as fear, anxiety, and the like, which also torment him till the declension of the disease, when the mind is restor'd to health along with the body, having recovered its former tranquillity.

Whence it proves mortal.

14. To conclude: the *viscera* in time are so much injured, from the stagnation of the morbific matter therein, that the organs of secretion no longer perform their functions, whence the blood, overcharged with vitiated humours, stagnates and the *gouty matter* ceases to be thrown upon the extremities as formerly, so that at length death frees him from his misery.

Destroys more rich than poor, and learned than illiterate persons.

15. But, what is a consolation to me, and may be so to other *gouty* persons of small fortunes and slender abilities, is, that kings, princes, generals, admirals, philosophers, and several other great men, have thus lived and died. In short, it may, in a more especial manner.

ner, be affirmed of this diſeaſe, that it deſtroys more rich than poor perſons, and more wiſe men than fools; which ſeems to demonſtrate the juſtice and ſtrict impartiality of providence, who abundantly ſupplies thoſe that want ſome of the conveniencies of life, with other advantages, and tempers its profuſion to others with equal mixture of evil; ſo that it appears to be univerſally and abſolutely decreed, that no man ſhall enjoy unmixed happineſs or miſery, but experience both: and this mixture of good and evil, ſo adapted to our weakneſs and periſhable condition, is perhaps admirably ſuited to the preſent ſtate.

Seldom ſeizes women, children, or very young perſons.

16, The *gout* ſeldom attacks women, and then only the aged, or ſuch as are of a maſculine habit of body; for lean and emaciated women who, in their youth or riper age, are ſeized with ſymptoms not unlike the *gout*, receive them from *hyſteric* diſorders, or ſome preceding *rheumatiſm*, the morbific matter whereof was not ſufficiently carried off in the beginning, nor have I hitherto found children, or very young perſons, affected with the *true gout*. Yet I have known ſome who have felt ſome ſlight touches of it before they came to that age; but they were ſuch as were begot by *gouty parents (e)*. And let this ſuffice for the hiſtory of this diſeaſe.

The *gout* occaſioned by a *debilitated concoction*.

17. Upon a thorough attention to the various ſymptoms of this diſeaſe. I judge it to proceed from a *weakened concoction* both of the ſolids and fluids *(f)*; for

(*e*) *Boerhaave* tells us that he has ſeen *gouty* children, and that women get this diſeaſe by lying with their *gouty* huſbands. *See his prax. med. vol. v. p.* 195.

(f) This may perhaps diſpoſe to the *gout*, as it will to other diſeaſes both of the *acute* and *chronic* kind, but cannot be ſaid in a ſtrict ſenſe to be the ſole cauſe of any one diſtemper more than another. (*g*)

(*g*) The cauſe of an acquired gout, in thoſe born of ſound parents, ſeems to me, ſays Dr *Cheyne*, to be the abundance of tartarous, urinous, or other ſalts, introduced into the blood by the food. Salts ſeem neither to periſh, nor to be begotten; but to be conſtant and incorruptible parts of animal and vegetable bodies. The delicacy and flavour of fleſh and fiſh, is entirely owing to their abounding with a fine, ſoft, oily, or urinous ſalt, as is evident in veniſon and wild fowl. Wines of all kinds, have a greater or leſſer quantity of tartar in them, and other ſtrong liquors abound in their peculiar ſalts in proportion to their ſtrength. Spirits are nothing but a great quantity of vegetable ſalts crowded together in a little water and oil. Theſe ſalts receiv'd in abundance, but neither ſufficiently broke by the digeſtive powers, nor driven out of the habit by

ſuch as are ſubject to it, being either worn out by old age, or having haſtened this period of life by their debaucheries, labour under an univerſal paucity of animal ſpirits, occaſioned by the immoderate uſe of the vigorous functions, in the heat of youth. For inſtance, by a too early, or exceſſive uſe of venery, by the vaſt and continual pains they take to gratify their paſſions, and the like: whereto muſt be added the quitting of ſuch bodily exerciſes of a ſudden as they had formerly uſed (whether thro' age or idleneſs) which ſerved to invigorate the blood, and ſtrengthen the tone of the ſolids; whence the ſtrength decays, and the concoctions are no longer duly performed, but on the contrary the excrementitious part of the juices, which was formerly expelled by means of ſuch exerciſes, lies concealed in the veſſels to feed the diſeaſe. And ſometimes the diſeaſe has been encreaſed by a long continued application to ſome ſerious ſtudy; whereby the finer and more volatile ſpirits are called off from their proper function of aſſiſting the concoctions.

18. Again, ſuch as are ſubject to the *gout*, beſides having a voracious appetite in general, chiefly covet all kind of aliment that is hard of digeſtion, which, when they have eat as plentifully as they ordinarily did when they uſed exerciſe, they cannot digeſt. But this way of living does not occaſion the *gout* ſo often as the exceſſive uſe of wine, which deſtroys the ferments deſigned for various concoctions, hurts the concoctions themſelves and overcomes and diſſipates the natural ſpirits, by reaſon of the abundance of adventitious vapours. Now the ſpirits, which are the inſtruments of concoction, being weakened, and the blood over-burthen'd with juices, at one and the ſame time, all the concoctions muſt needs be depraved, whilſt all the *viſcera* are ſo oppreſſed; whence the ſpirits that have long been in a declining ſtate, are now quite exhauſted. For if this diſeaſe proceeded only from a weakneſs of the ſpirits, it would equally affect children, women, and perſons debilitated by a tedious illneſs: whereas the ſtrongeſt and moſt

And drinking wine too freely.

by due exerciſe, but by their plenty and nearneſs, uniting in greater cluſters, muſt neceſſarily form obſtruction, and give pain when by the force of the circulation they are thruſt through narrower and ſtiffer ſmall veſſels, or capillaries. Nothing either received or bred within the body, beſides theſe ſalts, can account for this difference. *See his eſſay on the gout* p. 4.

moſt robuſt conſtitutions are chiefly ſubject to it, but not before abundance of humours are collected in the body thro' the decay and waſte of the natural heat and ſpirits, which in conjunction deſtroy the vitiated concoctions.

19. Again, as each of the cauſes we have enumerated promote indigeſtion, ſo moſt of them contribute in ſome meaſure to introduce a laxity of the habit and muſcles of the body; which makes way for the reception of crude and indigeſted juices, as often as they are thrown upon the external parts. For when by lying long in the blood they are encreaſed in bulk, and have gained an ill quality, they at length acquire a putrefying heat, and, nature being no longer able to ſubdue them, become a *ſpecies*, and fall upon the joints, and by their heat and acrimony occaſion exquiſite pain in the ligaments and membranes that cover the bones; which being weakened and relaxed, either by age, or luxury and intemperance, eaſily admit them. But this tranſlation of the humours occaſioning the *gout*, and forming a *gouty* fit, happens ſooner or later, according as theſe humours are occaſionally put in motion.

Hence a laxity of the habit and muſcular ſyſtem.

20. I proceed now to the cure; in treating of which I ſhall firſt take notice of ſuch things as are to be omitted. Now, in this diſeaſe, if regard be had to the humours, and the indigeſtion occaſioning them, it ſhould ſeem at firſt view, that the curative indications ſhould principally tend (1.) to evacuate humours already generated, and (2) to ſtrengthen the concoction, or digeſtive powers, ſo as to prevent the accumulation of other humours; theſe being the uſual indications to be anſwered in moſt other humoral diſeaſes. But nevertheleſs in the *gout*, nature ſeems to have the prerogative to expel the peccant matter according to its own method, and throw it off upon the joints, there to be carried off by inſenſible perſpiration. Now there are only three ways propoſed of expelling the morbific matter of the *gout*, namely, (1.) *bleeding*, (2) *purging*, and (3) *ſweating*: but none of theſe will ever anſwer the end.

Bleeding, ſweating, vomiting, and purging improper in the *gout*.

21. (1.) Tho' *bleeding* ſeems to bid fair for evacuating the humours immediately to be tranſlated, as well as thoſe already fixed in the joints; yet it manifeſtly claſhes with that indication which the antecedent cauſe, *indigeſtion*, ariſing from a depravity or paucity of the ſpirits,

Bleeding why improper.

ſpirits, demands, which *bleeding* further weakens and diminiſhes; and for this reaſon it is not to be uſed either by way of preventing an approaching, or eaſing a preſent fit, eſpecially in the aged: for tho' the blood that is taken away generally reſembles *pleuritic* or *rheumatic* blood, yet *bleeding* is found to do as much miſchief in this diſeaſe, as it does good in thoſe. And *bleeding* in the interval, tho' long after the paroxyſm, is apt to occaſion a freſh fit, by the agitation of the blood and juices, which may continue longer, and be attended with more violent ſymptoms than the former, the ſtrength of the blood being impaired thereby, by means whereof the morbific matter ſhould have been powerfully and conſtantly expelled. This inconvenience always happens from *bleeding* in the beginning of the fit; and if it be uſed immediately after the fit, there is great danger (on account of the preſent weakneſs of the blood, and its not having recovered its former ſtrength, diminiſhed by the diſeaſe) of debilitating nature ſo much by the unſeaſonable uſe thereof, as to make way for a *dropſy*. Nevertheleſs, if the patient be young and over-heated by hard drinking, a vein may be opened in the beginning of the fit: but if bleeding be always uſed in the ſucceeding paroxyſms, it will ſoon render the *gout* inveterate, even in youth, and cauſe it to ſpread more univerſally in a few years than it otherwiſe would have done in many. *(g)*

Why *vomiting* and *purging*

21. (2.) With reſpect to *vomiting* and *purging*, it ſhould be noted, that as it is a fixt law of nature, and inter-

(g) Bleeding in the intervals, in plethoric conſtitutions, is not only advantageous but neceſſary, and may be done with ſafety. Where the veſſels are already conſiderably debilitated and relaxed from the manifold returns of the pain, an over-fulneſs muſt needs be highly detrimental, as it will put them upon the ſtretch, and conſequently be a means of weakening their tone ſtill more. Beſides, it often happens that *gouty* perſons have a ſharp appetite in the intervals, accompanied with a quick digeſtion, whence of courſe they make a copious chyle, and ſurcharge the veſſels, which require therefore to be emptied from time to time by bleeding, and other proper evacuations, that the fluids may have room to circulate more freely, the viſcoſity thereof be prevented, and the due tone of the vaſcular ſyſtem preſerved.

Dr *Hoffman* recommends cupping the bottom of the foot every three months, and ſays that he has known it highly ſerviceable in many perſons, and found great benefit from it himſelf. *Hoff. oper. tom. ii. p.* 346.

interwoven with the eſſence of this diſeaſe, that the morbific matter thereof ought always to be tranſlated to the joints, *emetics* or *cathartics* will only invite the *gouty* matter back into the blood, which was thrown off by nature upon the extremities; and hence what ought to be thrown upon the joints, hurries perhaps to ſome of the *viſcera*, and ſo endangers the life of the patient, who was quite ſafe before. And this has often been obſerved to prove fatal to thoſe who have ordinarily had recourſe to *purgatives* by way of prevention, or, which is worſe, to eaſe the pain in the fit; for when nature is prevented from perſuing her uſual, ſafeſt, and beſt method of tranſlating the morbific matter to the joints, and the humours are forced inwards upon the bowels, then, inſtead of pain in the joints, which is either ſlight, or none at all, the patient is almoſt, deſtroyed by ſickneſs of ſtomach, gripings, faintings and a numerous train of irregular. ſymptoms.

23. For my own part, I am abundantly convinced, from much experience, that *purging*, either with mild, or ſtrong, *cathartics* of that kind which are given to purge the joints, proves very prejudicial, whether it be uſed in the fit to leſſen the morbid matter, or in its declenſion to carry off the remainder, or in a perfect intermiſſion, or healthy ſtate to prevent an approaching fit. For I have learnt at my own peril, as well as that of others, that purgatives exhibited at any of theſe times, have, inſtead of doing ſervice, haſtened the miſchief they were intended to prevent. (1.) *Purging*, therefore, during the fit, by diſturbing nature when ſhe is ſeparating the *gouty* matter and throwing it off upon the joints, does ſometimes eminently diſturb the ſpirits which renders the fit more violent, and likewiſe much endangers the life of the patient. (2.) *Purgatives* adminiſtered at the end of a fit, inſtead of expelling the remains of the diſeaſe, occaſion a freſh fit, as ſevere as the former; and thus the patient being deceived by fruitleſs hopes, brings thoſe evils upon himſelf, which he had eſcaped if the humours had not been exaſperated afreſh. And this inconvenience I myſelf often experienced, after having had recourſe to medicine to expel what I eſteemed the remains of the diſtemper. (3.) As to *purging* at certain times in the intervals by way of prevention, tho' it muſt be owned that there is not ſo much

much danger of occasioning a fresh fit, as in the instance just mentioned, the patient in that case not being perfectly recovered; yet, even at this time, it is productive of a fit, for the reasons above specified; and tho' perhaps it may not come on immediately, the disease nevertheless will not go off entirely by taking any purge constantly at proper intervals. For I have known some *gouty* persons, who, to recover their health, not only purged spring and autumn, but monthly, and even weekly, and yet none of them escaped the *gout*, which afflicted them more severely afterwards, and was accompanied with more violent symptoms, than if they had totally forbore medicine. For tho' such *purging* might carry off a part of the *gouty* matter, yet as it does not at all contribute to strengthen concoction, but rather weakens it, and injures nature afresh; it only strikes at one cause, and is by no means adequate to the cure of the distemper.

24. To these observations must be added, that the same paucity of spirits which hurts the concoctions in *gouty* subjects, renders their spirits weak and languid, so that they are soon disturb'd by any cause which considerably hurries either the body or mind, and consequently are very volatile and dissipable, as they frequently are in *hysteric* and *hypochondriac* patients. And from this tendency of the spirits to irregular motions, it happens that the *gout* usually follows the slightest evacuation. For the tone of the parts being destroy'd, which the firmness of the spirits, so long as they continue strong, preserves unrelaxed and healthy, the peccant matter moves without interruption; and from this mischief done to the body a fit arises in a short time.

25. But notwithstanding this method is so very pernicious, yet there have been empirics, who have acquired a great character, by cunningly concealing the cathartic they used in this case. For it must be noted, that whilst the medicine operates, the patient feels no pain at all, or but a slight one; and if a course of *purgatives* can be continued for some days, without the intervention of a recent fit, the present fit will soon go off. But the patient will suffer greatly afterwards,

wards, by the ſudden tumult occaſioned by this agitation of the humours. (*b*)

26. (3) Finally, the carrying off the peccant matter by *ſweat*, is manifeſtly prejudicial, tho' in a leſs degree than the above-mentioned evacuations; for tho' it does not repel the morbific matter to the *viſcera*, but contrariwiſe propels it into the habit, it is notwithſtanding detrimental for theſe reaſons. (1.) Becauſe, during the interval of the fit, it forces the humours, which are yet crude, and not fitted for a due ſeparation, upon the limbs; and thus occaſions a fit before its time, and in oppoſition to nature. (2.) The promoting ſweat in the fit, throws and fixes the *gouty* matter too powerfully upon the part affected, at the ſame time occaſioning intolerable pain; and if there be a greater quantity thereof than can be received by the part affected, it immediately throws it upon ſome other parts, and thus raiſes a violent ebullition of the blood

Why *ſweating* is hurtful.

(*b*) *Sydenham*, ſays Dr *Cheyne*, otherwiſe a moſt accurate obſerver of nature, and a moſt judicious practitioner, has been the occaſion, I think, of a great miſtake in the management of the *gout*; by forbidding almoſt all evacuations either in the fit, or in the intervals, for fear of weakening the conſtitution. There are two ſeaſons, to wit, ſpring and fall, when the periodical fits of regular *gouts* commonly happen; which I conſider as cardinal and critical diſcharges, under general and mechanical influences, for purifying the blood, and diſcharging the *gouty* ſalts: in which nature is no more to be diſturb'd in its operations (I mean as to purging, for even then a gentle, ſlow, conſtant, and uniform perſpiration and breathing ſweat may be promoted, not only ſafely, but with great advantage) than in the monthly purgations of the ſex. But in the light flying touches of the *gout*, out of theſe ſeaſons, and in the intervals of the fits, gentle, warm, ſtomachic purges will be an excellent remedy to ſend theſe a going, to leſſen the fits, and lengthen the intervals. A perſon out of the pain and inflammation of the fits, and in their intervals (except his natural diſpoſition to breed another fit) is, to all intentions of medicines, the ſame as a well perſon. And all medicines levell'd againſt other diſeaſes incident to human bodies, may be as ſafely adminiſtred to a *gouty* (regard being had to his particular conſtitution) as to any other perſon. Wherefore, the general and direct methods of relieving the *gout* are, in the fits, a gentle, uniform, continued perſpiration, and breathing ſweat; in the intervals, labour, or exerciſe, and gentle, ſtomachic purges. *See his treatiſe on the gout*, p. 22, 23.

Some authors commend glyſters to be thrown up occaſionally in the fit; and certain it is, that if the fever be nigh, or the body coſtive, they may be uſed with ſafety, and all deſirable advantage.

blood and other juices: and if the body abounds conſiderably with a ſerous matter generative of the *gout*, an *appoplexy* is hereby endangered.

27. Hence therefore, it is a very dangerous practice, both in this and in all other diſeaſes, wherein a ſweat is raiſed by art to evacuate the morbid matter, and it does not flow ſpontaneouſly, to force it out too violently, and beyond that degree of concoction, which the humours to be carried off have, ſpontaneouſly, acquir'd (*i*) The excellent aphoriſm of *Hippocrates*, intimating that *concocted and not crude matters are to be evacuated*, relates to *ſweating* as well as *purging* (*k*); as appears manifeſtly from that ſweat which ordinarily terminates the paroxyſms of intermittents; which, provided it be moderate, and proportioned to the quantity of febrile matter, concocted by the preceding fit relieves the patient conſiderably: but if it be promoted beyond the limits preſcribed by nature, by keeping the patient conſtantly in bed, a continued fever thence ariſes, and, inſtead of extinguiſhing the former heat, a new one is kindled. So in the *gout*, the gentle breathing ſweat, that generally comes on ſpontaneouſly in the morning after each of the ſmall fits, of which, as I have before obſerved, the cardinal fit is compounded, eaſes the pain and reſtleſneſs, which tormented the patient ſo much during the night; but contrariwiſe, if this gentle moiſture, which is naturally of a ſhort duration, be violently forced, and continued longer than the quantity of the morbific matter concocted by the preceding fit requires, the diſeaſe is thereby encreaſed. In this therefore, and all

(*i*) If *Sydenham*, as one obſerves, had never written more than this paragraph, he had merited thereby immortal honours: for nothing more pernicious can be contrived, than to force ſweats by heating medicines. When the vital powers have rendered the morbific matter fit for expulſion, nature will find a method of diſcharging it out of the habit; and ſweats, if they are neceſſary: will ſpontaneouſly ariſe, provided all obſtacles are removed. It muſt be confeſſed that art may aſſiſt the vital powers in attenuating the maſs of humour, and rendering them fit for a ſubſequent extermination. This, however, cannot be done by hot ſudorifics. Warm remedies, it muſt be confeſs'd, conſidered as cordials, may poſſibly be of advantages in the latter end of ſome acute caſes, as they may rouſe the vital powers, and excite them to action, when too languid; but the great abuſe of theſe, which has prevail'd to a ſurprizing degree, renders this note the more neceſſary, which does not ſo much relate to the gout, as to febrile diſorders. *See.* p. 231. *Note.* (*e*)

all other diſeaſes that I have met with, excepting only the *plague*, it is nature's province, more than the phyſician's, to excite ſweat, as we cannot poſſibly learn how much matter is already prepared for ſuch a ſeparation, nor conſequently what method is to be taken to promote *ſweat*. (*l*)

The indigeſtion and heat of the humours to be principally regarded in the cure.

28. Since then it evidently appears from what has been delivered, that it is both a fruitleſs and a pernicious attempt to endeavour to cure the *gout* by evacuating medicines, we are next to enquire what other purpoſe the curative indications are to be directed to anſwer. And from a thorough attention to all the ſymptoms above enumerated we learn, that regard muſt be had to two cauſes principally in the cure of this diſeaſe. (1,) The *antecedent* or *primary cauſe*, or the indigeſtion of the humours, proceeding from a defect of the natural heat and ſpirits; (2) the *containing* or *immediate cauſe*, of the heat and effervеſcence of theſe humours after the putrefaction and ſharpneſs they have acquired by continuing too long in the body, occaſioned by the indigeſtion above mentioned. Now theſe cauſes differ ſo much from one another, that the medicines which do ſervice n the one, prove pernicious in the other; and hence it is that this diſeaſe is ſo difficult of cure. For at the ſame time that we endeavour to cure the indigeſtion by warm medicines, we run the riſque on the other hand of encreaſing the heat of the humours: and contrarywiſe, whilſt we ſtrive to mitigate the heat and acrimony of the humours by a cooling regimen or medicines we bring on indigeſtion, the natural heat being already impaired. But here, by the *containing cauſe*, I do not only mean that which is actually depoſited in the joints, and forms the preſent fit, but that alſo which ſtill lies concealed in the blood, and is not yet prepared for ſeparation. For all the morbific matter is ſeldom ſo entirely expelled by the fit, how laſting and ſevere ſoever it be, as to leave no remains of it in the

(*l*) A gentle. uniform, continued, breathing ſweat, is by many authors recommended to be procured in the fit, on account of its being accompanied with a fever, and experience ſhews the uſefulneſs of it, by the relief it ordinarily gives; for it abates the fever, purifies the maſs of blood, and diſcharges the *gouty* humour gradually and inſenſibly. But the medicines exhibited with this view ſhould be of the moderately warm diluting kind, and not too active and heating.

the body, after the fit is gone off; ſo that of courſe regard is to be had to this cauſe both in the fit, and during the intervals. But as the expulſion of the *containing cauſe* is entirely the buſineſs of nature, and to be performed according to her own method, and ſince nothing in the mean time can be done to cool the hot and ſharp humours, without injuring the digeſtive powers, unleſs it be by avoiding a hot regimen and medicines, which inflame the humours; ſo doubtleſs the chief curative intention, is after the digeſtion is removed, to ſtrengthen the digeſtive powers, which I ſhall now treat of; but in ſuch manner however, that I may, in the courſe of this diſſertation, as occaſion offers, likewiſe mention thoſe remedies which tend to mitigate the heat of the humours, and blunt their acrimony.

The chief thing to be done is to ſtrengthen the digeſtive powers.

29. Whatever remedies, therefore, aſſiſt nature to perform her functions duly, either (1.) by ſtrengthening the ſtomach, ſo that the aliment may be well digeſted, or (2.) the blood, that it may ſufficiently aſſimilate the chyle received into the maſs, or (3.) the ſolids, ſo as to enable them the better to change the juices deſigned for their nutrition and growth into their proper ſubſtance, and (4.) laſtly, whatever preſerves the ſecretory veſſels, and the emunctories in ſuch a ſtate that the excrementitious parts of the whole ſyſtem may be carried off in due time and order. Theſe, and all medicines of the ſame kind, contribute towards anſwering this intention, and are properly entitled *digeſtives*, whether they be of the medicinal or dietetic kind, exerciſe, or any other of thoſe things, which are called the ſix *non-naturals*.

This intention beſt anſwered by a proper regimen, medicines and exerciſe.

30. Such medicines in general are thoſe which are moderately heating, bitter, or of a mild pungent taſte, inaſmuch as they agree well with the ſtomach, purify the blood, and ſtrengthen the other parts. For inſtance, the roots of *angelica* and *elecampane*, the leaves of *wormwood*, *the leſſer ſentory*, *germander*, *ground-pine*, and the like: to which may be added, ſuch as are commonly called *antiſcorbutics*. as the roots of *horſe radiſh*, the leaves of *garden ſcurvy-graſs*, *water-creſſes*, and the like. But theſe acrid and pungent herbs, how agreeable and beneficial ſoever they may be to the ſtomach, yet, as they agitate the morbid matter which has long been generated, and encreaſe the heat, are to be uſed more ſparingly

The medicines enumerated.

ringly than thoſe which by their mild heat and bitterneſs both ſtrengthen the ſtomach and mend the blood.

Beſt given in a compound mixture.

31. And, in my opinion, a ſkilful mixture of ſome kinds of them anſwers the end of digeſting the humours better than any ſingle ſimple of this claſs. For though whenever we have occaſion for the ſpecific virtue of any medicine, it be a true axiom, that *the more ſimple it is, the better it is for the purpoſe*, yet when a cure is intended to be made by anſwering a particular indication, every ingredient contributes ſomething towards curing the diſeaſe; and in this caſe, the more ſimples the medicine contains, the more powerfully it will operate (*m*). For this reaſon various forms of medicines may be elegantly compounded of the ingredients above enumerated, and the reſt of the like kind. I give the preference to an electuary made after the manner of *Venice treacle*, becauſe the fermentation of the ſimples together improves their virtues and produces a *third ſubſtance*, which poſſeſſes greater virtues in the mixture, than any ſingle ingredient in the ſame quantity. But I freely leave the choice of ſuch ingredients, and the forms in which they are to be given, to the judicious phyſician; for I never thought myſelf obliged to write what they term receipts, but rather to note the true curative indications: the non-obſervation of which caution has given empirics a handle to cry themſelves up for the beſt phyſicians, as I have elſewhere obſerved. However, for the benefit of young phyſicians, I will communicate the medicine I generally uſe which is compounded in the following manner:

A digeſtive powder.

Take of the roots of angelica, ſweet flag maſter-wort, elecampane, the leaves of wormwood, the leſſer centory, white hore-hound, germander, ground-pine, ſcordium, *common calamint, feverfew wild ſaxifrage, St* John's *wort, golden rod, thyme, mint, ſage, rue, holy thiſtle, penny-royal, ſouthernwood, the flowers of camomile, tanſey, lilley of the valley,* Engliſh *ſaffron, the ſeeds of treacle muſtard, garden ſcurvy-graſs, carraway and juniper berries, of each a ſufficient quantity. Let the herbs, flowers, and roots be gathered when they are in their utmoſt per-*

(*m*) Whether a medicine be the better for a mixture of a multiplicity of ſimilar ingredients may in many caſes be doubted; but certain it is, that to anſwer the ſame end by a few, well choſen, is a much greater proof of the ability of the preſcriber.

fection; dry them in paper bags till they are reducible into fine powder. To ſix ounces of each, well mixed together, add enough of clarified honey and canary to make the whole into an electuary, of which let the patient take two drams morning and night.

A ſtomachic electuary.

Or for want of this, let the following be uſed.

Take of the conſerve of garden ſcurvy-graſs, an ounce and half; Roman *wormwood and orange peel, of each an ounce*; *candied angelica and nutmeg, of each half an ounce*; Venice *treacle, three drams*; *compound powder of wake-robin, two drams*; *and with a ſufficient quantity of the ſyrup of oranges, mix them up into an electuary. Let two drams of it be taken twice a-day, with five or ſix ſpoonfuls of the following diſtill'd water after every doſe.*

An antiſcorbutic diſtilled water.

Take of the roots of horſe-radiſh, ſliced, three ounces; *garden ſcurvy-graſs, twelve handfuls*; *water-creſſes, brook-lime, ſage and mint, of each four handfuls*; *the peel of ſix oranges*; *two nutmegs bruiſed*; Brunſwick *beer, or mum, twelve pints*; *draw off only ſix pints by diſtillation.*

Venice treacle a good medicine in this caſe, but not ſo good as the electuary above deſcribed.

32. Of all the medicines commonly known *Venice treacle* is the beſt for ſtrengthening the digeſtive faculties; but as it contains many ingredients that over-heat, and withal a large quantity of *opium*, an electuary like that above deſcribed may be more commodiouſly compoſed of the principal warming and ſtrengthening plants. But care muſt be had to make choice of ſuch ſimples, as are moſt agreeable to the patient's palate, becauſe it muſt be continued a long time, namely, for the moſt part of his life. Of all ſimples the *Peruvian bark* is the beſt; for a few grains of it, taken morning and evening, ſtrengthen and enliven the blood. (*n*)

Such medicines ſerviceable in moſt *chronic diſeaſes*.

33. And in reality, theſe, and ſuch-like medicines, which ſtrengthen and enrich the blood (provided their heat be not owing to vinous ſpirits, for reaſons hereafter to be given) do moſt ſervice in this and moſt other *chronic diſeaſes*; inaſmuch as every diſeaſe of this kind is

(*n*) Of the ſame opinion is Dr *Cheyne*: among all the ſtrengtheners of digeſtion I would recommend, ſays he, a ſtrong infuſion of the *jeſuits bark* in generous claret, as being the coolеſt bitter, the moſt powerful ſtrengthener of relaxed fibres in the inſtruments of digeſtion, and the greateſt antidote of the urinous ſalts, eſpecially if joined with *chalybeates*, and ſome qualifiers of its mawkiſh and nauſeous taſte. *See his eſſay on the gout*, p. 24.

is in my opinion to be referred to the ſame general cauſe; namely, *the indigeſtion of the humours.*

34. But as nothing can put this matter in a clearer light than the giving a view of the difference there is between *acute* and *chronic* diſeaſes, it is hoped the reader will not be diſpleaſed, if I make a ſhort digreſſion from the preſent ſubject. As therefore thoſe diſeaſes are generally deemed *acute* which ſoon prove fatal, or are ſpeedily brought to concoction; ſo theſe are entitled *chronic* diſtempers, which either require a long time to come to concoction, or never come to concoction at all. And this appears manifeſt, both from the nature of the thing, and the terms employed to expreſs it; but the cauſe of the diſſimilitude between theſe two kinds of diſeaſes being leſs obvious, and not ſo eaſily diſcoverable, I conceive it will be worth while to ſpend ſome time in a reſearch of this nature; ſince a clear and diſtinct notion of theſe particulars may greatly contribute towards diſcovering the genuine indications ſuited to the cure of theſe diſeaſes.

Proved from the difference found between *acute* and *chronic diſeaſes.*

35. Now, whether the inmoſt bowels of the earth (if the expreſſion be allowable) undergo various alterations, ſo as to infect the air by the vapours thence ariſing, which ſeems very probable to me; or whether the whole atmoſphere be infected by means of an alteration, reſulting from a peculiar conjunction of any of the planets; certain it is, that the air ſometimes abounds with ſuch particles as injure the human body: as at another time it becomes impregnated with ſuch particles as prove pernicious to ſome ſpecies of brutes. During this ſtate of the air, as oft as we receive into the blood by breathing the poiſonous corpuſcles which are prejudicial to the body, and contract ſuch epidemic diſeaſes, as ſuch tainted air is apt to produce, nature raiſes a fever, which is the ordinary inſtrument it employs to free the blood from any noxious matter therein contained. And theſe diſeaſes are commonly eſteemed *epidemic diſeaſes*, and are therefore *acute* and ſhort, becauſe their motion is ſo quick and violent. But beſides theſe diſtempers produced by an external cauſe, there are others not leſs *acute*, which proceed from ſome peculiar inflammation of the blood, and which do not ariſe from any general cauſe depending on the air, but from ſome peculiar irregularity, or in-

Acute diſeaſes, how cured.

diſpoſition of particular perſons. This kind of fevers, which happens in moſt years, I call *intercurrent* and *ſporadic*.

Whence *chronic* diſeaſes.

36. But *chronic* diſeaſes are of a very different nature from theſe; for tho' a certain unwholſome air may greatly contribute to their production, yet they do not ſo immediately proceed from the air, but generally from the indigeſtion of the humours, the common origin of all theſe diſeaſes. For when the *ſtamina vitæ* are much debilitated, and in a manner worn out either by age, or by remarkable and continued irregularities in the uſe of the ſix *non-naturals*, eſpecially with relation to food and drink; or if the ſecretory veſſels be ſo far weakened, as to be no longer able to perform their appointed functions of cleanſing the blood, and carrying off its ſuperfluities: in all theſe caſes a greater quantity of humours being collected in the body, than can be digeſted by the ſtrength of nature; theſe, by their long continuance in the veſſels, undergo various fermentations and putrefactions, and at length appear in a ſpecies, occaſioning different diſeaſes, according as they are variouſly vitiated and depraved. And as theſe vitiated juices differ from one another, ſo they fall upon the particular part that is beſt fitted to receive them, and there they gradually manifeſt thoſe numerous ſymptoms, which ordinarily proceed, partly from the nature of ſuch juices, and partly from the irregular motion excited in the parts affected: both which cauſes, in conjunction, conſtitute that irregularity of nature, which is characterized with the nature of ſome diſeaſe.

37. Now that moſt *chronic diſeaſes* chiefly proceed from ſuch an inability of nature to concoct the humours, will manifeſtly appear, if we reflect that aged perſons, whoſe digeſtive faculties are impaired, and their ſpirits, which are the inſtruments thereof, are waſted by the repeated functions of a long life, are more ſubject to theſe diſeaſes than young perſons, whoſe vital warmth is greater, and diſſipates thoſe foul humours which are amaſſed in the body, and whoſe ſecretory veſſels are poſſeſſed of ſuch a conſtant natural heat, that they may on no account fail of performing their functions of purifying the blood, unleſs they are burthened, and in a manner obſtructed by an over-fulneſs of humours. And further, that ſuch an indigeſtion

of

of the humours is the cauſe of moſt *chronic diſeaſes*, is clear from hence, that winter is much more apt to generate them than ſummer; notwithſtanding that ſome do not actually ſhew themſelves till the decline of winter, tho' the collection of humours whereon they depend, increaſes the winter throughout, becoming greater by the coldneſs of the ſeaſon, and debilitating nature, ſo as to render her leſs able to perform the functions of the animal oeconomy.

38. Hence it is that ſuch as enjoy a good ſtate of health in ſummer, do notwithſtanding rarely eſcape thoſe diſeaſes in winter, to which they are moſt ſubject; as for inſtance, the *gout*, *aſthma*, *cough*, &c. And hence likewiſe we learn why travelling into *ſouthern* countries, is ſo effectual to conquer thoſe diſeaſes, the cure whereof is fruitleſsly attempted in a colder climate. The truth of what has been delivered concerning the general cauſe of *chronic* diſeaſes, will be farther confirmed by the remarkable and almoſt incredible relief obtained by riding on horſeback in moſt *chronic* diſeaſes, but eſpecially in a *conſumption*. For this kind of exerciſe ſtrengthens all the digeſtive powers, whilſt it revives the natural heat by a continual motion of the body, and enables the ſecretory veſſels to perform their function of purifying the blood in a proper manner; whence an amendment of the greatly debilitated digeſtions muſt needs follow, and, of courſe, a healthy ſtate. Eminently relieved by riding on horſeback

39. From the reaſons therefore juſt alledged, it ſufficiently appears that ſuch *warm herbs* do great ſervice, where there is no manifeſt contra-indication, not only in the *gout*, but in moſt *chronic* diſeaſes, inaſmuch as they procure a warmth like that of ſummer, even in the midſt of winter: tho' if we accuſtom ourſelves to uſe them in ſummer, they will more effectually prevent ſuch diſeaſes, as are ordinarily occaſioned by the contrary ſeaſon. And in reality, if we defer, or neglect taking them till the approach of winter, at which time a conſiderable quantity of humours is amaſſed, it is to be apprehended it may then be too late to have recourſe to this refuge.

40. But tho' (as I have already ſhewn at large) the *gout* is of ſo peculiar a nature, as to be rendered worſe by *cathartics*; yet in moſt other *chronic* diſeaſes *bleeding* is to be repeated, as there is occaſion, and purging to be ordered *Stomachics* when begun not to be diſcontinued.

ordered before uſing the *ſtrengthening* and *ſtomachic* remedies here commended: but when the patient has begun with them, they muſt be continued without any intermediate evacuations; for it is always to be remembered, that whenever the cure of any diſeaſe is attempted by means of ſtrengthening remedies, all kinds of evacuations prove highly pernicious (*o*.) Laſtly, I do not aſſert that the *ſtomachic* medicines juſt enumerated are the moſt excellent of the kind, but I maintain that whoever happens to diſcover the moſt effectual remedy to anſwer this intention, will be capable of doing much more ſervice in *chronic* diſeaſes than he can well imagine.

41. But amongſt the remarks I proceed to communicate, on the cure of the *gout*, this is primarily and chiefly to be attended to, namely that all *ſtomachic* or *digeſtive* remedies, whether they conſiſt of a courſe of medicines, a regimen, or exerciſe, are not to be entered upon in a heedleſs manner, but to be perſiſted in daily with great exactneſs. For ſince the cauſe in this and moſt other *chronic* diſtempers, is become habitual, and in a manner changed into a ſecond nature; it cannot reaſonably be imagined, that the cure can be accompliſhed by means of ſome ſlight and momentaneous change made in the blood and juices by any kind of medicine, or regimen, but the whole conſtitution is to be altered, and the body to be in a manner framed anew. For it is otherwiſe here than in ſome acute diſeaſes where a perſon in full ſtrength and good health is ſuddenly ſeized with a fever; whereas in the *gout*, a perſon by indulging himſelf in high feeding, hard drinking, neglecting his uſual exerciſe for ſeveral years running, and wearing out his conſtitution by ſloth and idleneſs, or by hard ſtudy, and cloſe thinking, and other errors of life, does at length, in a manner purpoſely, injure the various ferments of the body, and oppreſs the animal

(*o*) This, without doubt, ſhould be underſtood with ſome limitation; for it may not be only convenient, but even abſolutely neceſſary to have recourſe to gentle evacuants during a courſe of ſtrengthening remedies, and they may be attended with conſiderable advantages. Circumſtances muſt decide when and in what manner they are to be given, nor are we to be deterred from making a proper uſe of them, by a ſervile deference to any great name. How often, for inſtance, are they commodiouſly joined with the *bark*, ſteel, and the like medicines, and thus effect what could not be obtained by either ſeparate;

mal ſpirits, which are the principal inſtruments of digeſtion, whence the vitiated juices, amaſſed in the habit, break out as ſoon as they come to their height, and do much miſchief, relaxing the fleſhy parts, and weakening the joints, ſo that they readily receive the humours thrown upon them. And in this manner a different conſtitution is formed by degrees, the original natural one being quite deſtroyed. And thoſe fits which engroſs the attention of indiſcreet and unthinking perſons, are no more in effect than the ſucceſſion and order of ſymptoms reſulting from that method which nature ordinarily employs to expel the morbific matter. Hence, therefore, 'tis a fruitleſs labour to attempt the cure of this diſeaſe by uſing any medicine or regimen occaſionally: for ſince this habit is chiefly founded on, and conſiſts in a weakneſs of all the digeſtions, and a relaxation of all the parts; both theſe diſorders muſt be remedied, and the ſtrength of the digeſtive powers as well as the tone of the parts reſtored and recovered by degrees to the former healthy ſtate of the body. But tho' it may ſeem impoſſible to compaſs this end effectually, not only becauſe any particular habit cannot eaſily be changed into a contrary one, but alſo, becauſe old age, which ordinarily accompanies this diſeaſe, greatly obſtructs this deſign; yet the cure is to be attempted as far as the ſtrength and age of the patient will permit, who will have the *gout* more or leſs ſeverely the farther he declines from, or the nearer he approaches this ſtate. (*p*)

(*p*) This advice is founded on good ſenſe, and the nature of things; for it would be prepoſterous to expect an inveterate and deeply rooted diſeaſe ſhould immediately give way to medicine; but if it appears to be relieved, it ought to encourage the patient to perſevere in the courſe he is in, as it muſt needs require a length of time for medicines to communicate their effects to the blood and juices, ſo as to charge them from a diſtempered to a ſound ſtate, and reſtore the ſolids to their due tone and motion. Is it likely a diſeaſe, which has perhaps been coming on ſeveral years, ſhould go off in a few weeks? Whatever, therefore, be the ability of the phyſician, if the diſtemper be of long ſtanding, it is impoſſible the patient ſhould receive a cure in a ſhort time; becauſe, in ſuch a caſe, their would be no proportion between the beginning, progreſs, declenſion, and termination of the diſorder; whence it follows, that to render the attempt ſucceſsful he muſt comply with the method preſcribed, and purſue it with chearfulneſs, courage and reſolution to the end; freedom from pain, and the vigorous exerciſe of the rational faculties being an abundant recompence for a tedious and mortifying reſtraint, and health a valuable purchaſe almoſt at any rate.

Digeſtive remedies to be uſed chiefly in the interv als of the *gout*.

42. Furthermore it is to be obſerved, that digeſtive remedies, either of the medicinal, or dietetic kind, are to be uſed chiefly in the intervals of the *gout*, and at as great a diſtance as may be from the ſubſequent fit. For age obſtructs the cure ſo much, that the ſtrengthening the digeſtive powers, the recovering the debilitated ferments of the body, and reſtoring the blood and *viſcera* to their due healthy ſtate, cannot be ſpeedily accompliſhed, and requires a continued uſe of medicine.

A ſuitable regimen to be joined with them.

43. But tho' theſe and the like remedies may do ſervice, yet they are not able alone to anſwer this intention of ſtrengthening; but need the joint aſſiſtance of ſuch things as do not properly belong to medicine: it being an error to imagine that this, or any other *chronic* diſeaſe, can be cured by medicine only. (1.) Therefore, moderation in eating and drinking is to be obſerved, ſo as on the one hand to avoid taking in more aliment than the ſtomach can conveniently digeſt, and of courſe increaſing the diſeaſe thereby, and on the other hand defrauding the parts, by immoderate abſtinence, of the degree of nouriſhment requiſite to keep up the ſtrength, which will weaken them ſtill more: either of theſe extremes being equally prejudicial, as I have often experienced both in myſelf and others. (2.) As to the quality of the food, tho' whatever is eaſy of digeſtion, ſingly conſidered, deſerves the preference, yet regard muſt be had to the palate and appetite, becauſe it is frequently found that what the ſtomach earneſtly covets, tho' of difficult digeſtion, does, nevertheleſs, digeſt better, than what is eſteemed of eaſier digeſtion, if the ſtomach nauſeates it; but for this reaſon indigeſtible aliment ſhould be uſed more ſparingly. (3.) I am of opinion that the patient ought to eat only of one diſh at a meal, becauſe feeding on different ſorts of fleſh injures the ſtomach more than eating an equal quantity of any one kind: but excepting fleſh he may eat other things at pleaſure, provided they be not ſour, ſalt, or ſpiced; becauſe, tho' ſuch food does not hurt digeſtion, it nevertheleſs does miſchief by putting the morbific matter in motion.

Only one meal a day neceſſary.

44. As to the times of eating, only dining is neceſſary; for as the night ſhould ſeem peculiarly deſigned to digeſt the humours, it would be wrong to waſte that

time

time in digeſting the aliment. For this reaſon *gouty* perſons ſhould forbear ſuppers, but they may drink a large draught of *ſmall beer*, as being generally ſubject to *the ſtone in the kidneys*; the growth whereof is conſiderably obſtructed by drinking ſuch a liquor at this time, as it cools and cleanſes the kidneys. (*q*)

45. A *milk-diet*, or the drinking milk, either as it comes from the cow, or boiled, without adding any thing to it, except perhaps a piece of bread once a day hath been much uſed theſe twenty years paſt, and hath done more ſervice in abundance of *gouty* ſubjects, whilſt they perſiſt in it exactly, than all other kinds of remedies. But upon quitting it, and returning to the ordinary way of living of healthy perſons, tho' they uſed the mildeſt and ſlendereſt diet, the *gout* immediately returned with more violence than ever; for as this regimen weakens the conſtitution, the patient cannot ſo well ſtruggle with the diſtemper, whence of courſe it proves more dangerous and laſting. Whoever, therefore, intends to purſue his regimen, ought before-hand to conſider maturely, whether he be able to preſerve in it for life, which perhaps he will find too much for him, tho' he ſhould be a perſon of great reſolution. For I knew a nobleman, who, after living a whole year on milk only with much pleaſure, during which time he had one or more motions every day, was conſtrain'd to leave it off, becauſe he grew coſtive on a ſudden, the temper of his body altered, and his ſtomach at length nauſeated *milk*, tho' he had ſtill a liking to it. Again, it is obſervable that ſome *hypochondriac* perſons of a groſs habit of body, or thoſe who have been long uſed to drink ſpirituous liquors freely, cannot bear milk. And further, the ſhort and fleeting benefit which thoſe who can bear milk receive from this regimen, is not only derivable from its exceeding ſimplicity, whence I doubt not but water-gruel may have the ſame effect, provided the ſtomach will bear it, but from its rendering the blood ſofter and ſmoother, by blunting the ſharp particles contained in the maſs: and moreover, which I eſteem the principal thing,

A *milk diet* more hurtful than ſerviceable.

milk

(*q*) This may perhaps chill ſome ſtomachs, and breed acidities, whence a draught of ſmall white wine whey, drank warm, or ſomething of the like kind, ſhould ſeem a much better liquor for this purpoſe.

milk being an aliment that is absolutely unfit for grown persons, represses that turgescence or plenitude of the humours which occasions the *gout*; and for this reason the few with whom it agrees, escape this disease, so long as they live upon *milk* only, but no longer. For as it runs directly counter to the original cause of the *gout*, which is the debility of the digestions and ferments, it does much more mischief in this respect than benefit in the other. And for want of attending sufficiently to this particular, some inconsiderate persons have fallen into gross and manifestly fatal errors; having, by attempting to conquer the containing cause of the disease, namely, the heat and acrimony of the humours, destroyed the digestions, and all the natural functions. *(r)*

Small beer the best liquor in the gout.

46. As to liquors, those are best, in my opinion, which are weaker than wine, and not so weak as water; such as our *London* small-beer hopp'd, or unhopp'd, extremes on either hand being pernicious. For, (1.) as to *wine*, tho' the common proverb intimates that whether

(*r*) Much has been said for and against a *milk diet* in this and other *chronic* diseases by practical writers, so that it must be left to further experience to determine the affair. It were to be wished, that both parties had communicated their observations of the good or ill effects of it with candour and accuracy, enumerating the circumstances under which it was given, and what happened during the course, and thus we might by this time have learnt the reasons of its success or failure, and accordingly been able to determine with some sort of certainty in what subjects it is to be used, and with what cautions, so as to answer the desired end; and, on the contrary, where it is absolutely improper, and likely to do michief.

Perhaps more have been hurt than reliev'd by it, for want of this kind of experimental knowledge. In general, it is observed to weaken the digestive powers, and consequently impoverish the blood and juices, whence proceed troublesome inflations of the stomach, obstructions of the *viscera*. a paucity and lowness of spirits, and abundance of *hypochondriac* symptoms especially in aged and weak persons, which frequently prove as obstinate, and more afflicting than the original disorder. Besides the *gout* may by this means be repelled, and fix'd upon some of the internal parts, for want of sufficient strength in the constitution to throw it upon the extremities, which is always accompanied with great danger, and doubtless has prov'd fatal in many cases. Or otherwise, it may only tend to keep off the *gout* for a time, and by debilitating nature in a great degree, render the patient less able to bear up under it for the remainder of life. In reality, I fear it will be found only a *palliative* cure at best; so that it deserves to be well considered, whether, in order to obtain a temporary relief, it be worth running the hazard of the dangerous consequences often attending it.

ther a perſon does, or does not drink wine, he will have the *gout*; yet it is certain, and confirm'd by the experience of abundance of *gouty* patients, that wine is in fact detrimental. For tho' it may be ſuppoſed to do ſervice by ſtrengthening the digeſtive powers, the weakneſs whereof I have long look'd upon as the antecedent or *primary* cauſe of the *gout*; yet, with reſpect to the containing cauſe thereof it muſt be deemed wholly pernicious, becauſe it enflames and agitates the humours, which feed the diſeaſe. Neither do we grant that *wine* uſed by way of common drink helps digeſtion, but rather aſſert, that it deſtroys it, unleſs in ſuch as have drank it for a long time. For tho' wine may, in paſſing thro' the veſſels, communicate ſome heat of the parts, yet it certainly depraves the ferments of the body, and waſtes the natural ſpirits: and hence, I conceive, it is, that great drinkers generally die of the *gout*, *palſy*, *dropſy*, and other cold diſeaſes. Furthermore, the continued and immoderate uſe of wine relaxes and enervates the body, rendering it like the bodies of women; whereas moderately heating liquors ſtrengthen the tone of the parts; whence ſuch as have always drank ſmall liquors are rarely afflicted with the *gout*. It muſt further be noted, that thoſe are chiefly ſubject to this diſeaſe, who, tho' they have naturally a weak digeſtion, do, notwithſtanding, receive too much nouriſhment from a certain richneſs of the blood, and grow more bulky by a kind of indigeſted matter, inſtead of a ſolid, wholſome ſubſtance And the uſe of wine adds to this richneſs of the blood, and ſo not only amaſſes a new collection of matter but alſo actually occaſions the diſeaſe, by ſtirring up the cauſe of it, which had long lain concealed and inactive, Again, as the blood of *gouty* ſubjects nearly reſembles that which is taken away in a *pleuriſy*, and other inflammatory diſeaſes, it is abſurd to inflame it more with ſpirituous liquors. And it is as dangerous on the contrary to have recourſe to over-cooling liquors; which, by utterly deſtroying both the digeſtions and natural heat, do more miſchief, not occaſioning pain, as wine doth, but death itſelf; as experience ſhews in thoſe perſons who having uſed themſelves to drink wine freely from their youth upwards to old age, and quitted it of a ſudden for water

Wine condemned.

water or ſmall liquors, have ſoon deſtroyed themſelves thereby. (s.)

47. *Gouty* perſons ſhould therefore make it a rule in this particular, to drink ſuch liquors as will not inebriate, if drank in a large quantity, or injure the ſtomach by their chilneſs. Of this kind, as I before hinted, is our *ſmall-beer*; and in other countries a ſimilar liquor may be made by diluting wine well with water. As to *water* alone, I eſteem it crude and pernicious, and have found it ſo to my coſt; but young perſons may drink it with ſafety, and it is at this day the common drink of the greateſt part of mankind, who are happier in their poverty, than we are with all our luxury and abundance. This is confirm'd by the great multitude of diſeaſes whith which we are afflicted upon this account, as the *ſtone*, *gout*, *appoplexy*, *palſy*, *&c.* beſides the injury done to the mind, in being drove from its natural rectitude, by the diſturbance which the fiery ſpirits of ſuch liquors, together with the animal ſpirits which aſſiſt the thinking powers occaſion, by volatilizing the mind too much, and ſuggeſting vain and idle notions, inſtead of ſolid and weighty reaſonings, and thus at length rendering us drolls and buffoons inſtead of wiſe men; between which the difference is almoſt as great, as between a ſubſtance and a ſhadow.—But enough of this.

Water bad for the aged, but may be ſafely drank by young perſons.

48. But tho, a perſon who has the *gout* mildly and only at intervals, need only uſe *ſmall-beer*, or *wine* diluted with water; this degree of the diſeaſe not requiring a ſtricter regimen; yet when the whole ſubſtance of the body is in a manner degenerated into the *gout*, it cannot be conquered without a total abſtinence from all kinds of fermented liquors, how ſmall and ſmooth ſoever they be; inaſmuch as all liquors of this kind contain a pungent ſpirit, with ſome degree of acrimony; and, what is worſe, being poſſeſs'd of a ferment, they diſpoſe the humours to a perpetual fermentation, in the ſame manner as yeaſt added to malt-liquors communicates its fermenting quality to the whole liquor. For this reaſon a *diet-drink* is to be ordered for common drink, to be made of thoſe ingredients which are commonly known and uſed for this purpoſe; but it muſt not be

An inveterate *gout* incurable without refraining all fermented liquors.

A *diet-drink* commended.

(s) If it be a fault to live too low in perſons ſubject to the *gout*, as experience abundantly manifeſts, it ſhould ſeem proper and even neceſſary to allow a moderate uſe of wine, in ſuch as are advanc'd in years, have cold ſtomachs, or a few ſpirits.

be too ſtrong, becauſe in that caſe it will inflame the humours as much as wine; neither, on the contrary, muſt it be ſo ſmall as to injure the natural functions by over-cooling. And this kind of drink, provided it be made of ſuch ingredients as the patient moſt likes, tho' it may occaſion ſome loathing for the firſt week or fortnight, does nevertheleſs prove as agreeable afterwards, as any other liquors he has been uſed to drink. It will likewiſe quicken the appetite, and render it more natural than it uſed to be with fermented liquors: and will be attended with this further convenience, that whoever uſes it for his common drink, may indulge more freely in other kinds of diet, than when he drank wine, or beer: for the errors in point of diet, which it is hardly poſſible to avoid entirely, will be in ſome meaſure corrected and amended thereby. But the principal benefit derivable from it, is its being preventive of the *ſtone*, which is the general attendant of the *gout*; as all ſharp and attenuating liquors both contribute to breed the *ſtone*, and occaſion a fit thereof. I prefer the following decoction for its agreeable colour and taſte.

Take of ſarſaparilla, ſix ounces; ſaſſafras wood, china *root and the ſhavings of hartſhorn, each two ounces; liquoriſe-root, an ounce; boil them together in two gallons of ſpring-water for half an hour; afterward infuſe them upon hot aſhes cloſe cover'd for twelve hours; then boil them till a third part of the liquor is exhaled; and as ſoon as it be taken off the fire, infuſe therein half an ounce of anniſeeds for two hours; laſtly ſtrain it off, and let it reſt, till it becomes clear, and put it into bottles for uſe* (*t*.) A dietetic decoction.

49. 'Tis

(*t*) *Sarſaparilla* is ſubdorific, and divides and attenuates groſs and viſcous humours, whence it comes to be accounted a *ſpecific* in the gout, *palſy*, and other inveterate *chronic* diſorders.

But Dr *Cheyne* obſerves, that its principal virtue lies in the bark: that which I would particularly recommend here, ſays he, is, a weak decoction of the BARK of *ſarſa* root (in the BARK the virtues of the plant chiefly conſiſt) for being repleniſhed with moſt part of, if not all the juice-circulating veſſels, it contains all its ſalts, and moſt active parts; and being ſpungy and tender, it is thereby more eaſily digeſted: and were roots are moſt in uſe, the BARK of the root is more eminently uſeful, for the reaſons aſſigned: as alſo becauſe towards the end of the *autumn*, when roots are gathered, the cold has already driven the juices into their BARK. *See his eſſay on the gout.* p. 42.

When to be entered upon.

49. 'Tis propereſt to begin with this decoction, immediately after the fit of the *gout* is gone off, and it muſt be continued, both in the fit and intervals, during the remainder of life. For it is not ſufficient at a time when the diſeaſe actually rages to ſtudy for new medicines, as nature, whilſt the humours are in ſuch commotion and diſturbance, cannot well bear the exchange of fermented liquors, of an active and ſpirituous quality, for ſuch as are ſmall and without ſpirit. At the ſame time the above-mentioned electuary muſt be taken every day, both in the fit and in the intervals; for the warmth of this will in ſome meaſure correct the ſmalneſs of the diet-drink, as it will communicate a due degree of heat to the blood and *viſcera*, without the agitation which is generally occaſioned by the heat of fermented liquors. *(u.)*

Arguments in favour of a total abſtinence from wine and fermented liquors.

50, If it be objected, that a total abſtinence from wine and other fermented liquors would render life in a manner inſupportable, I anſwer, it muſt be conſidered, whether it be not much worſe to be tortured daily by the pain accompanying an inveterate *gout* (for when it is gentle there is no need of ſo ſtrict a regimen) than to be confined to this decoction; which, if the patient continues, he may indulge himſelf in moſt other kinds of aliments; not to repeat now, that this drink, like all other things, grows pleaſant by cuſtom. Doubtleſs, whoever hath had this diſeaſe, if he is not void of reaſon, will not heſitate at all to which to give the preference. *(w)*

If wine be neceſſary, *Spaniſh* wine is beſt.

51. But notwithſtanding, if the patient, either (1.) from a long continued and immoderate uſe of intoxicating liquors; (2) or by reaſon of old age; or (3.) great weakneſs, cannot digeſt his food, without wine, or ſome other fermented liquor; 'tis certainly dangerous for

(u) See above, par. 31.

(w) Dr *Cheyne* prefers the following diet drink from *experience* in this caſe to all other kinds of beverage.—Take of raſpings of *guaic* two pounds, (or rather of its *bark* one pound) a pound *loaf* of bread much baked, hot from the *oven*, a pound of unbruiſed *Juniper berries*, ſix *Seville oranges*, roaſted and ſliced, and a pound of diſpumated honey: put all theſe in a ſix gallon pipkin, and pour on them ſix gallons of boiling water, let them ſtand ſix weeks in a warm corner of a room with a fire; ſtrain them off thro' a fine lawn on the cock into well-cork'd bottles for conſtant drink.

for him to leave off wine on a ſudden; an error that has in reality deſtroyed abundance of people. Such a perſon, therefore, in my opinion, ſhould either not uſe the *dietetic apozem* above preſcribed; or, if he be reſolved to take it, ſhould accuſtom himſelf to it by degrees (drinking a glaſs of wine for ſome time at meals) and rather by way of medicine than diet, till it becomes more familiar to him. But *Spaniſh* wine is to be preferr'd here to *Rheniſh*, or *French* wine; theſe laſt being apt to exaſperate the humours, and increaſe the morbific matter, notwithſtanding they are very grateful to the ſtomach (*x*.) To which we may add, that as they are almoſt as crude and indigeſted as our cyder, they are conſequently not ſo warm and cordial, as the caſe demands. And theſe particulars ſhall ſuffice concerning the diet of *gouty* perſons.

Going to bed early in winter recommended.

52. There is another caution to be inculcated, which, tho' it may ſeem trifling, is of great moment, both in order to digeſt the *gouty* matter during the fit, and alſo to prevent the generation thereof in the intervals; and that is, going to bed early, eſpecially in winter. For, next to bleeding and purging, nothing impairs the ſtrength more than ſitting up late a-nights; which every valetudinarian can affirm from his own experience, provided he has only carefully obſerved how much more vigorous and chearful he roſe in the morning when he went to bed early, and how languid and faint he has found himſelf after ſitting up late. And tho' there may ſeem to be no difference betwixt going to bed earlier or later, provided a perſon lies in bed the ſame number of hours; as, for inſtance, whether he goes to bed at nine and riſes at five, or at eleven and riſes at ſeven; yet it is not ſo. and, I concieve, for this reaſon principally, namely, that in the day the ſpirits are diſſipated, either by exerciſes of the body or mind, which are ſo weak, in ſickly perſons, that they require the aſſiſtance of ſleep earlier in the evening

(*x*) The ſame author gives the preference to *French* wines in this diſorder; and obſerves, that thoſe who live very temperately, and drink but a few glaſſes after meals, may content themſelves with old *Spaniſh* or *Portugal* wines, but the *gouty*, who live more freely, ought certainly to chuſe generous *claret*, though it be cuſtom only makes either neceſſary in any quantity; and they who are averſe to, or fly pain at any rate, muſt content themſelves with old *Portugal* wines only.

vening; and, as the approach of night occaſions a kind of relaxation of the animal œconomy, the tone of which was kept up in the day by the heat of the ſun, the warmth of the bed becomes neceſſary to ſupply the place of the ſun, eſpecially in the winter ſeaſon. But the ſpirits being refreſhed and invigorated in the morning by the preceeding night's ſleep, together with the warmth of the bed, and the enſuing day likewiſe ſtrengthening the tone of the parts ſtill more, the riſing early at this time, tho' it may take an hour or two from the morning ſleep, hurts the conſtitution leſs than ſitting up an hour or two later in the evening. For this reaſon I would adviſe ſuch as are ſubject to the *gout* to go early to bed, eſpecially in the winter, and to riſe betimes in the morning; tho' their having had leſs ſleep than uſual may incline them to lie longer, in order to get it up. For the ſleep which is got in the morning will rob them of as much the next night; and thus at length by doing violence to nature, and deſpiſing its wiſe dictates, the night may be prepoſterouſly turned into day, and the day into night.

The mind to be kept eaſy.

53. The patient muſt likewiſe uſe his utmoſt endeavour to keep his mind eaſy, for all diſquieting paſſions, if they once become immoderate, greatly diſſolve the texture of the ſpirits, which are the inſtruments of digeſtion, and ſo of courſe encreaſe the *gout* (*y*.) He ſhould, therefore wiſely reflect on his mortality, and not vainly imagine he is to eſcape the evils that are neceſſarily

(*y*) Whoever, ſays *Hoffman* would live free from gouty pains, ought to refrain from weighty cares, the labours of the mind, much thought, anxiety and ſollicitude. All immoderate paſſions of the mind, eminently and ſpeedily diſturb the regular healthful functions of the body, and throw the animal œconomy into diſorder and confuſion, by more than ordinarily accelerating or retarding the circulation, as either the raiſing or depreſſing paſſions take place, and thus not only occaſion a great variety of obſtinate and dangerous diſeaſes, but likewiſe diſpoſe us much more to the attacks of thoſe, to which we are ſubject from other cauſes.—'Tis of exceeding great moment, therefore, to the general health of the body, to uſe our utmoſt endeavours to keep the mind tranquil, eaſy, and chearful, to render the paſſions ſubſervient to reaſon, and mild philoſophy, and to reſtrain them within the limits aſſigned them by religion; and more particularly ſo to thoſe whoſe frame is weaken'd, and conſtitution impair'd by ſome deep rooted chronic diſorder, and who muſt conſequently be ſo much more grievouſly injured by every pernicious exceſs of this kind.

ceſſarily annexed to this ſtate. For, whether any affliction of mind befals him thro' his own fault, or that of others, certain it is that he will never be able to preſcribe laws to the world, which has not always obey'd any ſingle perſon hitherto, how powerful and wiſe ſoever he hath been; nor will every thing always anſwer any body's expectations ſo exactly, as he vainly hop'd they would, but whilſt he is engaged in regulating his affairs, of a ſudden he becomes an example of human frailty, and unreaſonably deprives himſelf of the tranſitory enjoyments of life. Too much application to ſtudy and buſineſs is likewiſe equally pernicious; for as this diſeaſe is oftener accompanied with melancholy than any other, ſuch as are ſubject to it ordinarily fatigue and oppreſs the ſpirits to that degree, by long and intenſe thought, without the artificial help of reading, ſo that the body cannot longer preſerve itſelf in a healthy ſtate: and hence I conceive it is, that few fools have had the *gout*.

Exerciſe admirable in the *gout*.

54 But nothing ſo effectually prevents the indigeſtion of the humours (which I eſteem the principal cauſe of the *gout*) and conſequently ſtrengthens the fluids and ſolids, as *exerciſe*. It muſt, however, be obſerved, as I have already mentioned, that as there is more neceſſity for making a thorough change in the conſtitution in this than in any other *chronic* diſeaſe, ſo exerciſe, unleſs it be uſed daily, will do no ſervice; for if it be intermitted at times, it will avail little towards changing the conſtitution now reduced to a languiſhing and tender condition by idleneſs and indulgence, and may perhaps do miſchief by cauſing a fit, after leaving it off for a conſiderable ſpace of time. But exerciſe ſhould be moderate, becauſe the contrary in aged perſons, who are chiefly ſubject to the *gout*, waſts the ſpirits too much, and conſequently hurts the concoctive powers, which are ſtrengthened by continued and gentle exerciſe. And tho' a perſon may think this hard, who, beſides old age, inability to motion, and indolence, which is in a manner natural in this diſeaſe, is likewiſe tormented with pain, yet, if exerciſe be omitted, all the remedies which have been hitherto diſcovered will not at all avail. And as the intervals between the fits cannot be long, without conſtant exerciſe, ſo the patient will likewiſe be more

ſubject to the *ſtone*, which is a more dangerous and painful diſeaſe than the *gout*. (z)

The chalky concretions encreaſe without exerciſe.

55. To theſe we ſubjoin another momentous particular, namely, that the chalky concretions are conſiderably encreaſed in the joints, and eſpecially in the fingers, by long inaction; ſo that at length theſe parts quite loſe their motion. For however poſitively ſome may aſſert, that the matter of theſe concretions is only the *tartar* of the blood tranſlated to the joints, it will nevertheleſs eaſily appear, upon conſidering the thing with a little more attention, that when a large quantity of indigeſted *gouty* matter falls upon ſome of the joints, and occaſions a laſting ſwelling of the neighbouring parts, it happens at length, partly from their aſſimilating property being deſtroyed, and partly from the obſtruction cauſed therein by this ſluggiſh humour, that this matter is generated, which is changed into this kind of ſubſtance by the heat and pain of the joint, and encreaſes every day, converting the ſkin and fleſh of the joint into its own nature, and may be pick'd out with a needle, and reſembles *chalk*, *crabs eyes*, or ſome ſimilar ſubſtance. But I have experienced in my own particular, that not only the generation of theſe concretions may be prevented by daily and long continued exerciſe, which duly diſtributes the *gouty* humours throughout the whole body, that otherwiſe readily attacks a particular part, but it alſo diſſolves old and indurated concretions, provided they be not come to ſuch a degree, as to change the external ſkin into their ſubſtance.

Riding on horſeback the beſt kind of exerciſe.

56. As to the kind of exerciſe, *riding on horſeback* is certainly the beſt, provided it be not contra-indicated by age, or the *ſtone*: and indeed I have often thought, if a perſon was poſſeſs'd of as effectual a remedy as exerciſe is in this and moſt *chronic* diſeaſes, and had the art likewiſe of concealing it, he might eaſily raiſe a conſiderable

(z) Exerciſe, ſays the ſame judicious writer, ſhould be recommended to the gouty; for this gives ſtrength and firmneſs to the parts, promotes perſpiration, diſſipates crudities, beſt conduces to change the habit of the whole body, and moſt effectually cleanſes the blood, as by promoting all the ſecretions, it ſeparates the foul, ſaline, ſulphureous parts of the fluid thro' the proper ſtrainers. But they ſhould uſe moderate, and not too violent exerciſe, as riding in a coach, walking, and frequently going up ſtairs and down.

conſiderable fortune. But if riding on horſeback cannot be uſed, frequent riding in a coach anſwers almoſt as well; and in this reſpect, at leaſt, the generality of *gouty* perſons have no cauſe to complain, becauſe their riches, which induce them to live in ſuch a luxurious way as occaſions the diſeaſe, enable them to keep a coach, in which they may take the air, when they cannot ride on horſeback. It muſt be noted, however, that a healthy air is vaſtly preferable to an unhealthy one for this purpoſe; thus the country is better than the town, where the air is full of vapours that exhale from the ſhops of different mechanics, and render'd ſtill denſer by the cloſeneſs of the buildings, as it is in *London*, which is eſteemed the largeſt city in the univerſe. But the great difference there is between uſing exerciſe in the country, or in town, a *gouty* perſon will ſoon find upon trial.

Venery to be refrained.

57. With reſpect to *venery*, if the *gouty* patient be in years, and ſo deſtitute of a ſufficient ſhare of ſpirits to promote the digeſtions, and his joints and the neighbouring parts conſequently too much debilitated and relaxed, without any aſſiſtant from this deſtructive quarter; in this caſe, I ſay, it is as imprudent for ſuch a one, in my opinion, to indulge thoſe pleaſures, as it would be for a perſon, after having engaged to go a long journey, to ſpend all his ſtock of proviſions before ſetting out (*a*.) Moreover, beſides the miſchief he does himſelf for want of reſtraining the languid inclinations of declining age, he loſes the great priviledge of enjoying that exquiſite ſatisfaction, which by the particular indulgence of nature is reſerved for the aged only, who, towards the period of their lives, are freed from the violence of thoſe paſſions, which, like ſo many ſavage beaſts, prey'd upon them perpetually in youth, the gratification of them being by no means an equivalent for the long train of evils, which either accompany, or follow it.—And let this ſuffice for the regimen.

The *gout* not perfectly curable by the method above ſpecified.

58. But tho' a *gouty* perſon by carefully obſerving theſe rules, relating to diet, and the reſt of the *non-naturals*

(*a*) Whoever, ſays the abovementioned author, is deſirous to prevent the gout, or leſſen the number of the fits, muſt refrain, as much as poſſible from venery, eſpecially from an exceſſive indulgence of it, which is ſucceeded by pain, weakneſs and faintneſs; for it ſuddenly waſts the fineſt ſpirits, weakens the head, and diſorders the mind and the ſenſes, and occaſions tremors, and other ſpaſmodic complaints.

naturals, may prevent violent fits, and ſo ſtrengthen the blood and ſolid parts, as to free himſelf from that multitude of evils, which renders the diſeaſe not only intolerable, but in the end fatal; yet, notwithſtanding, after ſome intervals, he will ſometimes be ſeized with the *gout*, eſpecially towards the cloſe of winter. For tho' in the ſummer ſeaſon, whilſt the tone and ſtrength of the blood are encreaſed and preſerved in that ſtate by the heat of the ſun, and perſpiration goes on in a proper manner, the digeſtions muſt needs be much better performed than in winter; yet, as the blood is weaken'd, and perſpiration obſtructed upon the approach of this ſeaſon, there muſt needs be a copious indigeſted matter amaſs'd, which at length, by its long continuance in the habit, will form a *ſpecies*, manifeſting itſelf by proper ſymptoms, and giving a fit upon the firſt occaſion, either by the humours being put into motion by the nearer approach of the ſun, the uſe of wine, violent exerciſe, or any other apparent cauſe.

The cure to be attempted only in the intervals ſo the fit.

59. 'Tis clear, from what has been delivered, that whoever undertakes the cure of this diſeaſe, muſt endeavour to make a thorough change of his habit of body, and reſtore it to its former conſtitution, as far as age and other circumſtances will permit; and this muſt be attempted only in the intervals between the fits. For when the morbific matter is not only generated, but already thrown upon the joints, it will be too late to endeavour to change it, or to expel it any other way; ſince it muſt be expelled by that method only which nature points out, and the buſineſs is to be left entirely to her management. This practiſe obtains in the paroxyſms of *intermittents*; which for the ſame reaſon, we do not attempt to remove till the heat be over. For it is equally abſurd to be ſolicitous to take off the heat, thirſt, reſtleſneſs, and other ſymptoms of theſe fevers, as to think the *gout* is to be cured by endeavouring only to abate the ſymptoms whereas the cure is by this means obſtructed and prolonged. For the more the pain is eaſed, the more the concoctions of the humours are prevented; and in the ſame degree the lameneſs is relieved, and the expulſion of the morbific matter is check'd. Again, the more the violence of the fit is ſuppreſs'd, the longer it will laſt, and the ſhorter likewiſe the interval will be between the fits, and leſs free

from

from every degree of the ſymptoms accompanying this diſeaſe; which will be acknowledged by any perſon who has attentively conſidered what we have delivered above, in our hiſtory of this diſeaſe.

60. But tho' nothing conſiderable muſt be attempted in the fit, excepting only that thoſe ſymptoms are to be relieved which an improper method of cure ſometimes occaſions; yet, as this diſeaſe is unanimouſly held to ariſe from a plenitude of humours, it may not perhaps be amiſs for the patient to forbear fleſh for a few days in the beginning of the fit, and inſtead of it to uſe water-gruel, or ſome ſimilar aliment; for ſuch a ſlender diet will greatly contribute towards leſſening the quantity of the morbific matter, and give nature an opportunity of digeſting it ſooner. But as conſtitutions differ conſiderably, inſomuch that ſome perſons cannot bear to abſtain from fleſh without being immediately ſeized with a diſturbance of the ſpirits, faintings, and other ſymptoms of the *hyſteric* kind; ſuch therefore will recieve hurt by refraining from fleſh any longer than the ſtomach is ſet againſt it, which for the moſt part is only the firſt or ſecond day of thoſe particular fits, all which joined together conſtitute the whole fit, as we have intimated above. But whether the patient eats fleſh ſooner, or later, he muſt be very cautious both of eating more during the fit than is requiſite to ſupport nature, and of the quality of the food. For great care ſhould be had to guard againſt every error, either in the quantity or quality of the diet, both ſolids or liquids, even in the intervals of the fit, and eſpecially in the fit itſelf. And further, no little regard is to be had in the intervals to the reſt of the *non-naturals*, of which we have diſcourſed largely above; and tho' the pain and great inability to motion may ſeem to contra-indicate exerciſe, which I have chiefly extolled in this diſtemper, the labour muſt nevertheleſs be undertaken; for tho' the patient may think himſelf utterly unable to bear to be carried into a coach in the begining of the fit, and much more ſo to endure the motion of it; yet, upon trial, he will ſoon find himſelf more eaſy from ſuch a motion, than he is at home in his chair. Again, if this kind of exerciſe be uſed morning and afternoon for ſome hours, another advantage attends it, namely, it cauſes him to reſt a

A ſlender diet to be uſed in the beginning of the fit.

great part of the night, which he could not do when he kept conſtantly within doors; for very moderate exerciſe fatigues a *gouty* perſon ſo much, that he falls aſleep, beſides, this kind of exerciſe is in ſome degree preventive of the *ſtone*, which an idle and ſedentary life generally occaſions. But the principal advantage reſulting from the conſtant uſe of exerciſe, is the preventing the loſs of motion in the limbs, which ſeizes ſeveral perſons after the firſt or ſecond long fit, occaſioned by the contraction of the tendons of the hams and heels; for when the pain has been ſo violent that they have lain ſtill a long time, not caring to ſtretch out their legs when it has attack'd the knees, they at length loſe the uſe of their legs and feet for the remainder of life, both during the intervals, and in the fits, which nevertheleſs they do not eſcape. Again, in aged perſons, whoſe concoctions are conſiderably vitiated, and who, by the long continuance of the diſeaſe, have the ſubſtance of their bodies in a manner changed into the *gout*, it is not to be expected that the diſeaſe can ever be brought to digeſtion without exerciſe; for when it exceeds the natural ſtrength, they frequently periſh by faintings and ſickneſs, occaſioned by the copious morbific indigeſtible matter, which cannot be aſſimilated, and deſtroys them like poiſon.

Exerciſe not to be uſed in the beginning of a very ſevere fit.

61. But notwithſtanding what has been ſaid of the uſefulneſs of exerciſe in the paroxyſms of the *gout*, yet, if the fit be ſo violent as to ſink the patient in the beginning of it (which happens chiefly in thoſe ſubjects in whom the *gout* is at the height, and hath continued in that ſtate for many years) and confine him to his room, it will likewiſe be proper for him to keep his bed a few days, till the pain abates, as the warmth thereof will in ſome meaſure ſupply the want of exerciſe; for lying conſtantly in bed digeſts the morbid matter more effectually in a few days, then ſitting up does in many, eſpecially in the infancy of the diſeaſe, provided that the patient can forbear fleſh without faintings, and other bad ſymptoms, and be contented only with water-gruel ſmall-beer, and the like. But it is well worth noting, that if the *gout* be inveterate and diſpoſes the patient to faintings, gripings, a looſeneſs, and the like ſymptoms, he is in great danger of being

being deſtroyed by one of theſe fits, unleſs he uſes exerciſe in the open air: for abundance of *gouty* perſons have been carried off by thoſe ſymptoms, which they have been ſubject to, from being confined within doors, and eſpecially in bed, who had lived longer if they would have bore the fatigue of riding in a coach moſt part of the day. For tho' a perſon, who is afflicted only with a pain of his limbs, may keep his room; yet another, who, inſtead of violent pain, is troubled with ſickneſs, and the other ſymptoms above enumerated, cannot do the ſame without endangering his life. And, in effect, it is well for the patient, that there is no great need of motion, or exerciſe, as long as the pain continues ſo ſevere, that he cannot bear it; his life being ſecured by the pain, which is the ſharpeſt remedy in nature.

The dangerous ſymptom to be relieved.

62. But as to the ſymptoms of the *gout*; we are to relieve thoſe which threaten life, the moſt frequent of which are the weakneſs and faintneſs of the ſtomach, with gripings, as if occaſioned by wind; and theſe happen either to thoſe who have had the *gout* many years; or to thoſe, who, tho' they have not had it long have nevertheleſs brought it on too haſtily by quitting ſpirituous liquors, of a ſudden, for thin and very cooling liquors, or by applying repelling plaiſters and other cooling topics to the parts affected, to eaſe the pain; whence the morbific matter, which ſhould have been depoſited in the joints, is tranſlated to the *viſcera*. I have tryed ſeveral remedies in my fits of late years to relieve thoſe ſymptoms; but nothing did me ſo much ſervice as a ſmall draught of *canary*, taken occaſionally, as the ſickneſs and faintneſs required. Neither *French claret*, *Venice treacle*, or any other of the cardiacs I am hitherto acquainted with, is ſo efficacious. But we are not to imagine that *canary* or any other cordial, can wholly ſecure the patient without the uſe of exerciſe (*b*.)

(*b*) The *gout* in the ſtomach, accompanied with a high fever, and frequent violent reachings, requires bleeding and vomiting, gentle purging with *tincture of rhubarb, hiera picra, the aromatic ſpecies, and ſpirit of lavender*, warm ſtomachics, and perſpiratives, as *camomile flowers, virginian ſnake root, aromatic ſpecies, camphire, contrayerva root, zedoary, ginger, galangal, flowers of ſal-ammoniac, volatile ſalts of hartſhorn and amber, the cordial confection,*

The ſtriking in of the *gout*, how remedied.

63. But if ſome violent ſymptoms come on ſuddenly, from the ſtriking in of the *gouty* matter, and threatens death, we are not to truſt to the wine, or exerciſe above commended; but here, provided only the natural, or vital parts, and not the head, be affected, we muſt have immediate recourſe to *laudanum*, and give twenty drops of it in a ſmall draught of *plague water*, and the patient muſt compoſe himſelf to reſt in bed (*c*.)

A looſeneſs in the *gout* beſt carried off by ſweat.

64. But if the *gouty* matter occaſions a *looſeneſs* for want of being tranſlated to the limbs, provided it be not the criſis of a particular fit, and yields not to *laudanum*

ſection, mithridate, and the like, ſpirituous cordials, and ſtrong wines, bliſtering the arms and legs, the application of ſtimulating plaiſters to the feet, an aromatic fomentation to the part, and the injection of oily glyſters, along with a warm reſtorative diet.

A large glaſs of pure brandy has ſometimes removed it, when other medicines had failed. *See* p. 536, *Note (b)*

(*c*) The caſe may be ſo circumſtanced, as to render it dangerous to have recourſe to *laudanum* immediately, ſo that this direction ſeems to be a little too looſe and general. Neither is it eaſy to lay down ſuch rules for the treatment of an internal *gout*, or any other diſorder, as may not admit of variation; the indications therefore are beſt taken from the ſymptoms, which differ exceedingly, according as it attacks various parts, and perſons of different conſtitutions, and therefore require very different management. In general, however, ſome ſort of evacuations ſhould be made before exhibiting opiates, which are rather to be the laſt refuge than the leading medicine.

It may be conſidered, ſays Dr *Cheyne*, whether *opiates* may be ſafely given in a fit of the *gout*, to procure reſt, and eaſe pain. In the general, it is the ſafeſt ſide, not to give any kind of *opiates* in the fits; becauſe they conſtantly pall the appetite, and leave a nauſeating, and perhaps a reaching on the ſtomach, the readieſt way to bring the *gout*. there. But, in extremities when the patient has been many days without reſt, and the pain becomes intolerable, all other means failing, or equally dangerous, *opiates* may be ſo qualified, and their miſchievious effects ſo bridled by joining ſpicy, nervous, and ſtomachic medicines to them, that they may become an excellent remedy. Thus, liquid *laudanum*, with tincture of *caſtor*, of ſnake-weed, of *diambra*, of ſaffron, *ſal volatile*, compound ſpirit of lavender, hyſteric water, and ſome agreeable ſimple water; ſome of theſe mixed in a due proportion, and proper doſe, will not only procure reſt, and eaſe pain, but anſwer all the other intentions in the cure of a fit of the *gout*. Thus alſo, *London laudanum*, with old *Venice* treacle, or mithridate, ſerpentary root, and unſcented ſpecies of *diambra*, made into a *bolus* with any agreeable ſyrup, and cautioned as before, will produce the ſame effect. *Eſſay on the gout*, p. 28.

danum and exercise of all kinds (for this is to be tried first in the cure of a *looseness*) but continues, attended with sickness, gripings, and the like symptoms the only remedy I know in this case, is to raise a sweat by a suitable method and medicines; and if this be done every morning and night for two or three days running keeping it up two or three hours at a time, it generally checks the *looseness*, and forces the morbific matter to the limbs. To this method I owe my recovery from this disease some years since (which I had imprudently occasioned by drinking cold water for my common drink) after having used cardiacs and astringents of various kinds to no purpose. *(d.)*

A translation of the *gouty* matter to the lungs how to be taken off.

65. There is another symptom, which I have often seen, tho' it is not so common, namely a translation of the peccant matter to the lungs, by a cough in the winter season, occasioned by taking cold in the fit, which by degrees invites the matter to those parts, the joints the mean while being in great part, or totally freed from the pain and swelling, from the translation of the morbid matter to another part. In this single case, the curative indication is not to be levelled at the *gout*, but this symptom is to be treated like a true *peripneumony*; namely, by repeated bleeding, and cooling and incrassating medicines and diet, as the blood that is taken away, especially in this symptom, exactly resembles that of pleuritic persons. The patient likewise should be gently purged in the intervals of bleeding, to carry off the matter that is lodged in the lungs. But sweating, how effectual soever it may be in forcing the morbific matter upon the limbs, proves detrimental in this case, by hardening the matter that is driven upon the lungs; whence proceed small abscesses, and in the end certain death. *(e.)*

Nephritic pains during the *gout* how mitigated.

66. It is further to be noted, that most *gouty* persons after the disease has been of long standing, become subject to the *stone in the kidneys*, and are generally seized with

(*d*) The *gout* in the bowels is to be treated nearly in the same manner, as when it attacks the stomach, only having a particular regard to the looseness, which requires a free use of *rhubarb*, joined with moderate *astringents*, and a smaller quantity of *opium* or *laudanum*, than in the former case,

(*e*) In this case bleeding, gentle vomitives, blisters and the medicines ordinarily prescribed in the *asthma*, are highly proper, and often effectual.

with *nephritic pains*, either at the height, or more frequently at the declenſion of the cardinal fit, which are very ſevere, and weaken the patient conſiderably, who was but too much debilitated and exhauſted by the preceding diſtemper. In this caſe, omitting all other remedies, let him immediately drink a gallon of poſſet drink, in which two ounces of marſh mallow roots have been boiled, and inject the following glyſter.

An emollient glyſter.

Take of the roots of marſhmallows and white lillies, of each an ounce; the leaves of mallows, pellitory of the wall, bears-breech, and camomile flowers, of each one handful; linſeed and fenugreek ſeed, of each half an ounce; boil them together in a ſufficient quantity of water to a pint and half; diſſolve in the ſtrained liquor brown ſugar, and ſyrup of marſhmallows, of each two ounces: mix the whole for a glyſter.

As ſoon as the poſſet drink is vomited up, and the glyſter come away, exhibit twenty-five drops of *liquid laudanum*, or fifteen grains of *Matthew's pill. (f.)*

Topics unſafe in the *gout*.

67. If outward applications be enquired after to eaſe the pain in the *gout* I know of none (tho' I have tried abundance both in myſelf and others) beſides *coolers* and *repellents*, which I have already ſhewn to be unſafe. And I ſcruple not to affirm, from a long courſe of experience, that moſt of thoſe who are ſuppoſed to periſh by the *gout* are rather deſtroyed by wrong management, than by the diſeaſe itſelf. But if a perſon be deſirous of trying the efficacy of ſuch external medicines as are eſteemed certain anodynes, to prevent being miſtaken, inſtead of applying them at the declenſion of a particular fit, when the pain is juſt going off ſpontaneouſly, let them be uſed in the beginning, and he will ſoon be convinced of their inſignificancy, and the groundleſneſs of his expectations; as they ſometimes do miſchief, but can never do ſervice. For this reaſon I have laid aſide the uſe of topics for ſeveral years; but I found moſt benefit formerly from a cataplaſm, made of *white bread and ſaffron boiled in milk*, with the addition

(f) *Turpentine* glyſters given every twelve hours, and *opiates* adminiſtered occaſionally in ſmall quantities, will do ſervice here: but aromatics, which are otherwiſe proper in an internal *gout*, muſt be exhibited very ſparingly, for fear of inflaming the parts, and exaſperating the ſymptoms.

dition afterwards of a ſmall quantity of *oil of roſes*; which, however, did not at all relieve me in the beginning of the fit. (*g*.) If, therefore the pain be extremely ſevere, the patient had better keep in bed till it abates a little, than to have recourſe to anodynes; but notwithſtanding it will be proper, if the pain be violent, to take a doſe of *laudanum* in the evening, otherwiſe it were better omitted.

The burning of the part with *moza* or *raw flax*, of little ſervice.

68. But now I am treating of outward applications, I muſt ſay ſomething of a certain *Indian* moſs, entitled *moxa*, which is highly eſteemed of late in the cure of the *gout*, the manner of uſing it being to burn ſlightly the part affected with it. Now, tho' this remedy is ſaid to come from the *Eaſt Indies*, and to have been unknown to the *Europeans* till of late years, it will nevertheleſs appear to be of more antient date with us by conſulting the writings of *Hippocrates*, compiled above two thouſand years ſince. For treating of the *Sciatica*, he adviſes, "*If the pain be fixt in any one* "*part, and does not yield to medicines, in whatever part* "*it be, to burn it with raw flax:*" and a little farther, ſpeaking of the *gout* in the feet, he ſays; "*The ſame* "*things are proper here, that do ſervice in the* gout *of* "*the joints; and indeed this is a long and painful, but* "*not a mortal diſeaſe: if the pain, however, continue* "*in the fingers, burn the veins above the joints with* "*raw flax* (*g*.)" Now I imagine that nobody can think there is ſuch a ſpecific difference between the flame of burning *flax*, and that of *Indian moſs*, as to render the latter more effectual in the cure of the *gout* than

(*g*) Much miſchief has been done in this diſeaſe by improper outward applications: ſo that it is adviſeable not to have recourſe to any without great neceſſity, and in this caſe to be particularly careful to make a proper choice. In general they are to be ſtimulating in the beginning of a fit, and till after the height, and perſpirative and ſtrengthening towards the declenſion. Warm flannel is perhaps the beſt univerſal topic.

The application of outward remedies to the pained parts, ſays *Hoffman*, is ſeldom very ſafe, yet they are much more dangerous in ſuch habits as abound with a foul blood, or lymph, or in the hypochondraical and hyſterical, the ſyſtem of whoſe nerves and fibres is ſubject to ſpaſms; for from ſeveral obſervations it appears, that fatal diſorders have ſucceeded their application, amongſt which it ſuffices to name an apoplexy, a palſy of one ſide, a loſs of memory, a convulſive aſthma, a convulſive colic, and an inflamation of the ſtomach and bowels.

Spirituous

(*b*) *Lib. de adfect. ſect. v. pag.* 524,

than the former; any more than he can ſuppoſe that a fire made with oak billets can do more than another made of aſh. This burning of the part affected bids fair to eaſe the pain, and may ſometimes effect it; the moſt ſubtle and ſpirituous part of the morbific matter depoſited in the part being by this means expelled. But the relief hereby obſtained muſt needs be ſhort, becauſe it does not reach the indigeſtion, which is the antecedent cauſe of the *gout*; and it may ſeem needleſs to obſerve, that it is to be uſed only in the beginning of this diſeaſe. For when the *gout*, either by reaſon of its long continuance, or from wrong management, retreats to the internal parts, which ſometimes happens, and, inſtead of pain, cauſes ſickneſs, gripings, and abundance of the like ſymptoms, no judicious perſon will be for uſing fire.

The author unacquainted with any ſpecifics for the *gout*.

69. And now I have communicated all that I have hitherto diſcovered concerning the cure of this diſeaſe; but

Spirituous and camphorated applications are not ſo prejudicial in phlegmatic habits, but in the reverſe, if they do not repel the gouty matter, yet they diſpoſe to the ſtone, or help to breed chalk-ſtones, or occaſion very troubleſome contractions of the parts affected.

Dr *Cheyne* likewiſe obſerves, that *topics*, or outward applications to relieve the part affected in a fit of the *gout*, are dangerous, unleſs diſcreetly managed. And adds, in the *cardinal* fits of *ſpring* and *autumn*, when thro' ignorance or neglect of proper methods, they ſhall happen *irregular*, I would by no means encourage any ſuch outward application of what kind ſoever hitherto diſcovered, except in the very laſt extremities of pain.——For let pretenders brag what they will, I know of no outward application hitherto diſcovered, but what by its ſluggiſhneſs ſtops the natural perſpiration; or by its activity counter acts the direction of the circulation; and, conſequently, repels the humour in ſome degree or other.—But in the fits falling out of theſe ſeaſons; in the tedious and lingering fits of thoſe broken with age, and habitual *gouts*; a well-choſen outward application may be ſafely and ſucceſsfully uſed-eſpecially, if at the ſame time gentle ſtomachic purges be adminiſter'd; or a bliſter on the ancles or wriſts be opened, to let out what may be repell'd by the *topic*, and thereby to ſecure the noble organs.——For this purpoſe I would recommend a decoction of *butter-burr*, *ground-pine*, or *camomile* flowers, or any *aromatic* bitter plant in milk, for a *fotus*; or a *pultic* of the head of a ſack-whey poſſet, or any ſuch ſoft and active application, to moiſten, ſoften, relax, and open at firſt; and towards the decline of the fit, a *mithridate*, or *Venice treacle* plaiſter; the *emplaſtrum ſtomacicum magiſtrale*, or the like, to ſtrengthen, warm, and comfort; eſpecially, if with theſe laſt, a ſtomachic warm purge be join'd. *Eſſay on the gout*, p. 121.

but if it be objected, that there are many ſpecific remedies for the *gout*, I freely own I know none, and fear that thoſe who boaſt of ſuch medicines are no wiſer than I am. And, in effect, it is to be regretted, that the excellent art of medicine ſhould be ſo much diſgraced by ſuch trifles, with which the credulous are decieved, either thro' the ignorance or knavery of authors; remedies of this kind being extravagantly extolled in moſt diſeaſes by ſuch as make a trade of theſe trifles. But what is more ſurpriſing this ridiculous fondneſs does not only obtain in ſuch diſeaſes as are regularly formed, but in thoſe likewiſe which are not formed, and proceed from ſome injury of the organs, or from an external cauſe, and it impoſes upon perſons that in all other reſpects are men of judgment. We have ſufficient proof of this in ſuch medicines as are commonly deemed ſpecifics in contuſions; ſuch as *ſperma ceti*, Iriſh *ſlate*, *&c.* which only miſlead us from the method required in theſe caſes, as will appear by trying how much more ſafely and expeditiouſly theſe accidents may be cured by bleeding and purging alternately, without having recourſe to theſe inſignificant remedies, which are generally given after the firſt bleeding, and likewiſe to the raiſing of a ſweat, which ordinarily continues during the uſe of them and heats the parts already diſpoſed to an inflammation, ſo as to endanger the life of the patient without neceſſity.

70. To conclude; the method I have here laid down is founded upon a ſearch into the above mentioned ſigns and ſymptoms of the diſtemper, and by purſuing it I have relieved myſelf and others: but the radical cure of the *gout* is yet a ſecret, nor do I know when, or by whom it will be diſcovered. I hope, nevertheleſs, that I have contributed in ſome degree to the good of mankind by this treatiſe, by faithfully pointing out thoſe rocks whereon myſelf and many others have ſplit, ſubjoining likewiſe the beſt method of cure which I have hitherto diſcovered. which is all I promiſe, tho' after long conſideration I cannot help thinking that ſuch a remedy will be found out hereafter; and if ever this ſhould happen it will betray the ignorance of the theoriſts, and clearly ſhew how notoriouſly they are miſtaken in the knowledge of the cauſes of diſeaſes, and in the medicines

The foundation of the author's method.

medicines they give to cure them. We have a plain proof of this in the *Peruvian* bark, the beſt ſpecific in intermittents; for, how many ages had the moſt acute phyſicians ſpent in ſearching into the cauſes of intermittents; and adapted ſuch methods of cure as were beſt ſuited to their ſeveral theories! But how little honour thoſe methods did to the theories whereon they were founded, appears from a late inſtance in the practice of thoſe, who, aſcribing the various kinds of intermittents to the redundancy of different humours in the body, ordinarily attempted the cure by altering and evacuating thoſe humours; which ſucceeded ill with them, as is manifeſt from their failure, but eſpecially from the more ſucceſsful uſe of the bark, by the help of which, if given in a proper manner, we commonly anſwer the end effectually, without regarding thoſe humours, diet, or regimen; unleſs the patient be unneceſſarily kept in bed whilſt he is taking it; in which caſe, however, ſo efficacious is this medicine, that it ſeldom fails curing the patient, notwithſtanding this inconvenience of encreaſing the diſeaſe by the warmth of the bed: In the mean time, till the radical cure of the *gout* be found out, which all phyſicians, and myſelf in particular, ought to wiſh for, I intreat the reader to receive this little treatiſe in a favourable manner; but if he ſhould not, I am ſo well acquainted with the tempers of mankind, that it will be no great diſappointment to me; and I know my duty ſo well, that I ſhall not be diſcouraged thereat. And, if the racking pains, unfitneſs for motion, and other diſorders which I have been afflicted with during the greateſt part of my life, together with the loſs I have ſuſtained in my buſineſs by ſickneſs, may be a means of relieving others, I ſhall have ſome reward for the miſeries of this kind, which I have ſuffered in this life, now I am leaving it for another.

A TREA-

A TREATISE *of the* DROPSY.

1. THE *dropſy* attacks perſons of all ages, and of both ſexes; but women are more ſubject to it than men. It chiefly happens to men when they are advanced in years, and to women when they are paſt bearing children; though ſometimes young women alſo, whilſt they continue childleſs, are ſeized with it. One of the firſt ſigns of the *dropſy* is the *pitting of the ancle*, diſcovered by preſſing the finger againſt it, eſpecially towards night, for in the morning the ſwelling is down, which, however, is not ſo certain a ſign of a beginning *dropſy* in women as it is in men, as being frequently found in pregnancy, and a ſuppreſſion of the *menſes*, from whatever cauſe the ſuppreſſion proceeds. Nor is the ſwelling of the legs a certain ſign of the *dropſy* in men; for when an antient perſon of a groſs habit has had an *aſthma* ſeveral years, and is ſuddenly freed from it in the winter, a conſiderable ſwelling ſoon ariſes in the legs, reſembling a *dropſical* ſwelling, and, like that, is larger in winter than in ſummer, and in moiſt than in clear weather, and yet without cauſing any remarkable inconvenience laſts the remainder of life. Nevertheleſs the ſwelling of the legs in men is generally ſpeaking, to be accounted a ſign of an approaching *dropſy*, eſpecially if it be attended with a difficulty of breathing; and it encreaſes every day in quantity and ſize, till the feet will receive no more water, and then the thighs ſwell, and afterwards the belly fills with the *ſerum*, which is continually ſeparated from the blood, and by degrees ſtretches it as much as it will bear; ſo that it frequently contains ſeveral gallons of water, which falling upon the navel, ſometimes occaſions a *navel* or *umbilical rupture*.

Whom the *dropſy* chiefly ſeizes, and at what time of life.

2. This diſtemper is accompanied with three ſymptoms; (1.) *a difficulty of breathing*, proceeding from the compreſſion of the *diaphragm*, by the water which obſtructs its natural motion; (2.) *a voiding of little urine*, occaſioned by the ſerous parts of the blood being emptied into the belly, and other parts fitted to recieve it, which ſhould naturally have been evacuated by the urinary

Attended with three capital ſymptoms.

urinary paſſages; (3.) *great thirſt*, cauſed by the putrefaction of the lymph, which, by its long continuance in the body, grows hot and acrimonious, and occaſions a kind of continual fever and thirſt.

As the ſwelling increaſes, the other parts waſte.

3. In proportion as the ſwelling of the parts affected increaſes, the other parts become more emaciated, and waſte away, and at length, the quantity of the extravaſated watergrowing too large to be contained in the belly, it is tranſlated to the vital and noble parts, and the patient periſhes by a kind of deluge.

This diſeaſe cauſed by the weakneſs of the blood.

4. This diſeaſe in general proceeds originally from the weakneſs of the blood, which being unable, in this ſtate, to change the element into its own ſubſtance, neceſſarily throws it off upon the extremities, and depending parts of the body, and ſoon after alſo into the belly, where, ſo long as the quantity is not conſiderable, nature forms ſome ſmall veſſels to contain it, till it increaſes to that degree at length, as to be included only by the *peritonæum*.

Whence that proceeds.

5. Now the blood is moſt commonly debilitated by (1.) an immoderate evacuation of it by bleeding, or (2.) any other way, (3.) a diſeaſe of long ſtanding, or (4.) the deſtructive cuſtom of drinking ſpirituous liquors to exceſs, which deſtroys the natural ferments of the body, and waſtes the ſpirits (*i.*) Hence great drinkers are moſt ſubject to the *dropſy*, notwithſtanding its being a cold diſeaſe: and, on the contrary, water-drinking, in ſuch as have been long accuſtomed to generous liquors, is equally prejudicial to the blood.

Is ſometimes produced by a different cauſe in women.

6. It muſt be noted, however that in women this diſeaſe does ſometimes proceed from a very different cauſe, namely, from an obſtruction of one of the *ovaries*, which by degrees deſtroys its tone, whence its coat being ſtretched to ſuch a degree, by the lymph firſt depoſited there, as to be ready to burſt, nature forms ſome ſmall

(*i*) The immoderate uſe of ſpirituous liquors is attended with ſeveral ill conſequences; for being drank in this manner, they render the fibres over rigid and tenſe, communicate an acrimony to the animal fluids, and not mixing readily therewith, are apt to thicken and coagulate them, whence they obſtruct their circulation, eſpecially in the ſmall veſſels, and cauſe the liver and glands of the meſentery to grow, ſcirrhous, and by this means contribute greatly to the generation of *humoral* dropſies, and other chronic diſeaſes.

Strong

ſmall veſſels to receive it, and at length one or more of them breaks, empties its contents into the cavity of the belly, and occaſions the ſame ſymptoms, as in the *dropſy*, which we have ſpecified above. But I have already treated of this ſort of *dropſy*. (*k*)

7. There are likewiſe two other kinds of ſwellings of the belly, reſembling a *dropſy*, both which often affect women. The firſt is a preternatural fleſhy excreſcence generated in the inner parts of the belly, which ſwells it

Two other kinds of ſwellingsof the belly, reſembling a *dropſy* in women.

Strong *fermented* liquors ſays the laſt mentioned author, contract and bind together the *blood globules*, and ſtuff them with their *oils* and *ſpirits*, ſo that they become lighter, and ſwim on the top of the ſeparating maſs, fill the *ſerum* with their ſalts, and weaken and break the coheſion and *elaſticity* of the *ſolids*, by their too ſtrong *ſtimulus* ſo that they are non ſufficient to circulate and mix in due proportion the ſeveral principals, and continue the maſs of blood, ſo as it ought to be, in a ſound ſtate of health, and hence obſtructions, diſtempers, and death.

The cuſtom of drinking ſpirituous liquors by drams, ſays Dr *Lobb*, the having recourſe to them daily to keep up the ſpirits, the taking a glaſs of them after meals to promote digeſtion, and ſuch like practices, are *immoral* and *deſtructive*; for if continued, they will diſable the ſecreting organs from performing their reſpective offices, and totally deſtroy the appetite: they will hinder the excretion of urine, make it in time to become little in quantity, and high-colour'd; and will produce the *jaundice*, or *dropſy*, or ſome other diſeaſe, that will haſten an untimely death: and what is worſe, they will bring on ſuch perſons the horrid guilt of deſtroying themſelves. A miſerable preparation this! for the appearance of their ſouls before the holy God, who gave them their lives, and will demand of them an account of what care they took of them, as well as how they employ'd, and improv'd them. *Treatiſe on diſſolvents of the ſtone, &c.* p. 204.

No more powerful and ſtriking arguments can, I think, be brought to combat this hateful epidemical vice, and to diſſuade and deter men from a practice which is ſo highly and notoriouſly criminal, than ſuch as certainly evince that it is deſtructive of the health of their bodies, and imminently endangers the ſalvation of their ſouls; which, what have been juſt alledg'd, puts beyond all doubt, and leaves thoſe that are guilty of it without excuſe. 'Tis to be hoped, therefore, that theſe weighty and affecting conſiderations may awaken ſome from their ſtupid inſenſibility, to a ſenſe of their crime and danger, and prevail with them ſpeedily to quit a habit, which has manifeſtly ſo fatal a tendency, and which, like all other vicious habits, the longer it is indulged, the deeper root it takes, and the greater will be the difficulty of ſubduing it:—but the victory, whioh by calling in the aids of reaſon and religion may unqueſtionably be attained, will abundantly recompenſe all the pains that can be taken in the attempt.

(*k*) *See* p. 384. *par.* 92.

it as much as water included therein does *(l.)* The other kind proceeds from *flatus*, and, beſides a ſwelling, cauſes the ſigns of pregnancy; and happens chiefly to widows, or women that did not marry till they were advanced in years. And ſuch, in their own and midwife's opinion, feel the child move from the cuſtomary time, to the uſual time of delivery, and withal are ſick between times, as pregnant women commonly are, and their breaſts ſwell and have milk in them, inſomuch that they frequently provide child-bed-linnen: but at length the ſwelling of the belly diminiſhes in the ſame proportion it encreaſed, and fruſtrates their hopes *(m.)*

Neither

(l) The author here ſhould ſeem to mean what the writers in medicine term a *mole*, or *falſe conception*, which is apt to impoſe upon women for a time, ſo as to make them believe they are pregnant. For a further account of this diſorder we refer the reader to Dr *Shaw*'s practice of phyſic, and *Heiſter*'s ſurgery, where he will find a ſatisfactory account of it.

(m) This is that kind of *dropſy*, which authors diſtinguiſh by the name of a *Tympany*, or *flatulent dropſy*, in which the belly frequently contains only a ſmall quantity of water.

This is a diſtemper which rarely happens, and *Hoffman* is of opinion that it ſhould rather be pronounc'd a ſymptom of the *anaſarca* and *aſcites*; then denominated a certain ſpecies of the dropſy. To cure it he ſtrongly recommends the uſe of glyſters made of carminative ingredients, and affirms that purging pills, join'd with an opiate, have done great ſervice in this caſe; and further adviſes to anoint the whole abdomen with oil of camphire prepared with oil of almonds, for ſome days running, which gives ſome relief.

Powerful evacuations, *Juncker* obſerves, are not ſo uſeful in this diſorder as in the *aſcites*; but gentle evacuations by ſtool, urine, and ſweat, are beneficial.

In a *tympany* ſays *Heiſter*: which is owing to watery humours, the relax'd tone of the *viſcera*, and wind, which greatly diſtend the flaccid bowels and *abdomen*, ſtrengthening and carminative medicines ſhould be mixed with reſolvents, bitters, and ſaline medicines, or both given alternately. *Filings of ſteel* made into pills, of an electuary along with *bitter extracts*, according to *Sydenham*'s method are very uſeful for ſtrengthening the tone of the parts.——Every third or fourth day for a fortnight or three weeks, or longer, if there is occaſion, let a gentle purgative be given, *viz.* either *laxative purging pills*, joined with *balſamics*, or *jalap* with a ſmall proportion of *ſweet mercury ſublimed* or *Glauber's purging ſalt*; and afterwards adminiſter ſtrengthening medicines, and let the diet and regimen be the ſame as in a cachexy and dropſy. The *abdomen* ſhould be frequently anointed with diſtilled oils, and carminative balſams, warm'd; or a plaiſter made of the *cummin* or the *ſoap* plaiſter ſpread on leather may be applied to it. Whenever the belly is obſtinately coſtive, give one of the abovementioned purgatives, or a carminative glyſter to open it.

Neither of theſe diſorders is to be referr'd to the diſtemper under conſideration.

8. The genuine curative indications, in a manner naturally ariſing from the ſymptoms above enumerated, are either (1.) to carry off the water contained in the belly, and other parts, or (2.) to ſtrengthen the blood, ſo as to prevent a freſh drain of water into the parts affected (*k*.) The curative indications,

9. (1.) With reſpect to the evacuation of the water it is well worth obſerving, that weak purgatives do more miſchief than good in *dropſical* caſes; for as all cathartics are prejudicial to nature, whence it is that they purge, they in ſome meaſure impoveriſh the blood; for which reaſon, unleſs they operate, and run off expeditiouſly, they increaſe the ſwelling, by moving thoſe humours which they cannot carry away with them, and raiſing a tumult in the blood, as appears manifeſtly in the legs of thoſe who are thus gently purged. To make purging therefore beneficial to the patient, it ſhould be known whether he is eaſy or hard to purge, inſomuch as the cure depends entirely on this particular, and will accordingly be very eaſy or difficult to effect. Hence, if *hydragogues* are neceſſary, great regard muſt be had to the patient's being eaſy or hard to purge, which can only be learnt with certainty by enquiring carefully in what manner other purgatives have operated with him formerly. For as ſome perſons are endued with a prevailing *idioſyncraſy*, or peculiarity of conſtitution, which renders them eaſier or harder to be operated on by cathartics, whoever makes the ſenſible temperament of the body the ſtandard in this caſe, will often endanger the patient's life; as it frequently happens that ſome perſons of a ſtrong conſtitution are eaſy to purge, whilſt others of a weak one Gentle purgatives more pernicious than ſerviceable.

(*k*) The genuine method of cure conſiſts firſt in evacuating the ſtagnating water, either by vomits, purgatives, or diuretics, or by the operation, as ſhall be judged moſt proper, and ſecondly in ſtrengthening the whole habit, ſo as to prevent a freſh collection of water in the parts affected.—Both theſe indications muſt be attended to in their order, otherwiſe no cure can be made; for 'tis not enough to accompliſh either, as our author ſeems to think, as only half the work would thus be done; beſides the hazard alſo of beginning at the wrong end, by which means the cure would be ſo far from being advanced, that the diſtemper would, on the contrary, be rendered more obſtinate thereby.

find the ſtrongeſt purgatives of little effect. And in reality this caution reſpecting the unfitneſs of the habit to bear purging is to be attended to in preſcribing *hydragogues*, and all other purgatives; for I have frequently found a ſuper-purgation occaſioned by lenient draughts, for want of enquiring beforehand into the diſpoſition of the patient, with reſpect to purging. But becauſe of all diſeaſes, the *dropſy*, as I have already remarked, requires the roughest and quickeſt purgatives, and gentle purging, which does ſervice in ſome other diſtempers, ought by no means to be admitted here, inaſmuch as mild purgatives rather increaſe than leſſen the ſwelling, it follows that rough and plentiful purgation is to be preferr'd, eſpecially as we have *laudanum* to check the operation of the medicine, in caſe it proves too violent [*o*].

The water to be carried off, as faſt as the ſtrength will bear.

10. Again, with reſpect to purging for the cure of the *dropſy*, great care muſt be had to carry off the water as ſpeedily as the ſtrength will permit: it being proper to purge every day, unleſs great weakneſs, or the too

(*o*) *Hoffman* obſerves that tho' it be ſometimes neceſſary in a *leucophlegmacy* and an *anaſarca* to give a ſtrong purgative, in a larger doſe than ordinary, to diſcharge the copious ſerum; yet there is nothing more dangerous in an *aſcites*, than violent purgatives, as he found by frequent experience, and it appeared by opening the bodies of ſuch as have been thus treated, that a ſphacelous inflammation of the bowels is ſuddenly occaſioned hereby. Therefore, he adds, with reſpect to the uſe of ſtrong purgatives, which may indeed be adminiſtered in the beginning, whilſt the ſtrength of the patient is no ways impaired 'tis my ſerious advice that they be not frequently repeated, for inſtance, not above once in ſix or ſeven days time, and that the ſtrength mean while be ſupported by ſuch medicines and aliments as afford good nouriſhment. 'Tis beſt to refrain entirely from the very violent ones, ſuch as *gamboge*, the *fæcula of wild cucumber*, *coloquintida*, *helebore*, &c. which are poſſeſſed of a certain colliquative virtue, prejudicial to the ſtrength, which a weak conſtitution, and an eaſy irritable ſtomach cannot well bear, and to give purgatives mix'd with gentle emetics in the room of them, in the form of pills or an infuſion, which have as good an effect, and are much ſafer.

Arbuthnot is of opinion that violent purgers, by diſſolving the blood, have often proved pernicious.

And *Juncker* tells us, that tho a conſiderable quantity of water is frequently carried off by ſtrong purges, yet inſtances often occur where they do no ſervice, tho' repeatedly adminiſter'd, but rather miſchief; for they greatly irritate the bowels, weaken their tone, and promote the burſting of the lymphatics.

too violent operation of the preceding purgative ſhould require a day or too to be interpoſed. For if purging be uſed only at diſtant intervals (tho' the laſt purge brought away plenty of water) we ſhall allow time for a freſh collection of water and by ſuch a delay (as if we knew not how to improve the advantage obtained) inſtead of accompliſhing the cure, leave it unfiniſhed. Moreover, the bowels are in danger of putrifying from the long continuance of the water in the belly; to which may be ſubjoined an obſervation of great importance, namely, that the waters being thus put into motion by the former purgatives, are more apt to injure the body, than whilſt they remain at reſt. So that for this reaſon, as well as the foregoing, this intention reſpecting the evacuation of the waters contained in the belly, muſt be anſwered with the utmoſt expedition; nor is purging to be left off, without an abſolute neceſſity, till the whole quantity is diſcharged.

Hydragogues, their uſe, and how to be given.

11. It is further to be noted, and is verified by practice, that moſt *hydragogues*, by their peculiar nature, if given alone to ſuch as are hard to purge, ſeldom anſwer our expectations; and being taken in a large doſe, inſtead of purging, raiſe a diſturbance in the blood; whence the ſwelling, which ſhould be leſſened thereby, is found to increaſe. They are of no other uſe, therefore, in ſuch conſtitutions, than to quicken the operation of lenient cathartics; but, nevertheleſs, they operate ſpeedily and effectually in ſuch as are eaſy to purge.

Syrup of buckthorn a ſafe and effectual one.

12. For this reaſon, in ſuch habits, *ſyrup of buckthorn* alone evacuates water plentifully, and little elſe, without diſturbing the blood, or rendering the urine high-coloured, as other purgatives generally do, and has only the ſingle bad quality of occaſioning great thirſt during the operation. But if it be given in the largeſt doſe to ſuch as are hard to purge, it will never give many motions, nor carry off enough water.

Verified in a caſe.

13. I remember well, for it was my firſt *dropſical* patient, that I was called about twenty ſeven years ago to Mrs *Saltmarſh* in *Weſtminſter*, who had the *dropſy* in the greateſt degree I have yet ſeen, her belly being ſwell'd to an incredible ſize. I gave her an ounce of *ſyrup of buckthorn* before dinner, according to the cuſtom of that time, and it brought away an almoſt inconceivable quantity of water, without cauſing any diſtur-

bance, or faintneſs. Encouraged by this ſucceſs I gave it every day, only interpoſing a day or two occaſionally, when ſhe ſeemed weaker than ordinary. And the water being by theſe means carried off by degrees, the ſwelling of the belly diminiſhed daily, and ſhe recovered.

The author conceives too highly of it

14. And now, being young and unexperienced, I could not help thinking that I was poſſeſs'd of an infallible medicine for the cure of any kind of *dropſy*: but in a few weeks I diſcovered my error. For being called ſoon after to another woman afflicted with the *dropſy*, which ſucceeded an inveterate quartan, I gave this ſyrup, and repeated it frequently, increaſing the doſe by degrees; but having ineffectually attempted to evacuate the waters, inaſmuch as the medicine did not operate, the ſwelling of the belly increaſed, and ſhe diſmiſſed me; and, if my memory does not fail me, recovered by the aſſiſtance of another phyſician, who adminiſter'd more powerful remedies.

Lenient cathartics failing, ſtronger muſt be us'd.

15. When the conſtitution of the patient appears to be ſuch, that lenient cathartics will not cure with eaſe and expedition, recourſe muſt be had to ſtronger: in which caſe, as I have juſt hinted, it ſhould be remarked, that tho' few *hydragogues* adminiſter'd alone will anſwer the end, yet by mixing them with lenients to quicken the operation of theſe, they prove ſufficiently effectual. In ſuch habits, for inſtance, I have frequently ordered the following potion with ſucceſs: it muſt be given, however, to none but ſtrong perſons, whom it purges when nothing elſe will, as I have learnt from a long courſe of experience.

A purging potion.

Take of tamarinds, half an ounce; the leaves of ſenna, two drams; rhubarb, a dram and half; boil them together in enough water, ſo as to leave three ounces when ſtrain'd off, in which diſſolve manna and ſolutive ſyrup of roſes, of each an ounce; ſyrup of buckthorn, half an ounce; and electuary of the juice of roſes, two drams: mix them together for a potion.

Or,

Another.

Take of white wine, four ounces; jalap finely powder'd, a dram; ginger, in powder, half a ſcruple; ſyrup

of

of buckthorn, an ounce: mix the whole together for a potion, to be taken betimes in the morning, and repeated every day, or every other day, as the ſtrength will bear (*p*.)

16. The following is another form of medicine which I frequently uſe, and may be commodiouſly given to ſuch as cannot bear the repitition of other purges, inaſmuch as it both warms and ſtrengthens the patient during the operation.

A purging tincture.

Take of the roots of jalap and harmodactyls, bruis'd, each half an ounce; ſcammony, three drams; the leaves of ſenna, two ounces; liquorice root, and the ſeeds of aniſe and caraway, each half an ounce; the tops of wormwood, and the leaves of ſage, each one handful; infuſe them together without heat, in three pints of common aqua vitæ, *and ſtrain off the tincture only when wanted. Let a ſpoonful of it be taken at bedtime, and two the next morning, increaſing or diminiſhing the doſe, in proportion to its operation.*

Elaterium commended for ſuch as are hard to purge.

17. But the two beſt medicines, in my opinion, for ſuch as are hard to purge, both which are ſtronger than any of thoſe above ſpecified, are *elaterium*, and the in-

(*p*) There is not a better and more agreeable general purgative in all the *materia medica* than *jalap*: it is ſcentleſs, not ill-taſted, nor bulky, works pleaſantly and expeditiouſly, and particularly carries off watery humours, It is indeed improper in acute fevers, and in rigid, warm, dry, and bilious habits, but may be ſafely and advantageouſly given in lax, moiſt, and leucophlegmatic conſtitutions, and in children. It is beſt in ſubſtance, and requires no corrective, provided it be given in ſuch a doſe, as is ſkilfully adapted to the diſeaſe, habit, and age of the patient. Aromatic oils, which are ordinarily mixed with it by way of correctives, ſhould ſeem to occaſion a greater irritation than the purgative itſelf, by the heat and pungency of their parts, ſo as ſometimes to cauſe an inflamation, and by drawing the bowels into ſpaſmodic contractions, rather obſtruct than promote the operation of the medicine. As to alcaline ſalts, as the ſalt of wormwood, tartar, and the like, which are uſed for the ſame purpoſe, they diſſolve and increaſe the ſurfaces of the reſinous parts of the root, whence it touches in abundance leſs points, and of courſe operates more gently, or in other words leſs effectually, which end might be anſwered as well perhaps by diminiſhing the doſe. May not the cuſtom of preſcribing it always with correctives proceed from prejudice and want of conſideration, rather than an abſolute certainty of their uſefulneſs, founded on a competent number of trials, duly verified?

fuſion of *crocus metallorum*. *Elaterium*, or the *fæces of the wild cucumber-juice*, operates powerfully in a ſmall quantity, and carries off abundance of foul and watery humours. Two grains of it is, generally ſpeaking, a ſufficient doſe for moſt perſons. I uſually order this quantity to be mixed with a ſcruple of *pil. ex duobus*, and made into three pills, to be taken in the morning (*q*).

And the infuſion of *crocus metallorum*.

18. As to the infuſion of *crocus metallorum*, if an ounce and half, or, to ſuch as are hard to purge, two ounces of it be given in the morning, and repeated every day, as the ſtrength will bear, tho' at firſt it ſhould only ſeem to evacuate the water contained in the ſtomach, it will, nevertheleſs, at length empty the belly. For beſides its uſually going downwards, after the vomiting ſtops, the conſiderable agitation and the ſhaking of the ſtomach and bowels, in a manner ſurrounded by a current of water, occaſioned by ſo violent an effort, muſt needs be followed with an evacuation of the water, thro' ſuch paſſages as naturally are not ſufficiently open to ſuffer it to run off that way. But if this emetic does not work enough downwards, I ſometimes, but not often, add to it, after the third or fourth doſe, a quantity of the *electuary of the juice of roſes*, and *ſyrup of buckthorn*, after the following manner:

A ſtrong purging potion.

Take of the diſtill'd water of carduus benedictus, *three ounces*; *the infuſion of* crocus metallorum, *an ounce and half*; *ſyrup of buckthorn*, *half an ounce*; *the*

(*q*) The antients are ſaid to have given this from ſix to thirty grains, but the moderns ſeldom exceed four or five. Dr *Liſter* indeed, in a diſſertation on the *dropſy*, tells us, that he has given it ſucceſsfully in the quantity of ten grains, once a week, for three months running; and has many curious particulars concerning it. However as it is univerſally eſteem'd a very acrimonious, inflammatory and rough purgative, it ſhould rather be given in a ſmall doſe at firſt, increaſing it by degrees as the patient can bear it, and the ſtate of the diſeaſe may require; for fatal conſequences often reſult from purging too violently both in this and other diſeaſes, where the tone of the veſſels is ſo much injured, and the fluids ſo poor and ſpiritleſs.

I have known five grains of *elaterium* frequently given with a ſcruple of the *ſimple pills of coloquintida*. *Boerhaave* eſteems it a very violent purgative, but ſays it may be given from a grain and half to twelve grains. The *mercurial pills* in the late college diſpenſatory are an admirable hydragogue.

the electuary of the juice of roſes, two drams: mix them together for a potion (*r*).

19. Now, that there are ſecret paſſages, thro' which the waters are convey'd from the cavity of the belly to the inteſtines is manifeſt; for daily experience ſhews that *hydragogues* carry off as much water downwards, as if it were originally contained in the inteſtines themſelves. But as it is not eaſy to account for this fact, it brings into my mind an excellent paſſage of *Hippocrates*, who is univerſally eſteemed the moſt knowing phyſician the world ever had. His words are theſe: "Some phyſicians and pretenders to learning, hold it "impoſſible to underſtand phyſic, without being ac- "quainted with the nature of the human body, and "the manner of its formation; but, I am of opinion, "that what philoſophers and phyſicians have either "ſaid or wrote concerning nature, relates more to "painting, than to the art of medicine (*s*).

Secret paſſages for the waters to paſs from the belly to the inteſtines, prov'd from fact.

20. But leſt this admirable author ſhould be accus'd of error, or empirics endeavour to patronize their ignorance from this paſſage, I freely own, that as far as I am able to judge of practice, which ought to be reckon'd the teſt of phyſicians, it is abſolutely neceſſary a phyſician ſhould be well acquainted with the ſtructure of the human body, to enable him the better to form right conceptions of the nature and cauſes of ſome diſeaſes. For without a knowledge of the ſtructure of the kidneys and urinary paſſages, one cannot conjecture whence thoſe ſymptoms ariſe, which proceed from a ſtone's being lodged in the *pelvis*, or ſticking faſt in the ureters. Surgeons likewiſe ought to underſtand *anatomy*, that they may more ſurely avoid thoſe veſſels, or

Hippocrates defended, and the uſe and neceſſity of *anatomy* ſhewn

(*r*) Dr *Liſter*, in the diſſertation before quoted, ſpeaking of this remedy, ſeems to apprehend it will occaſion a great thirſt, as being of a very drying nature, and attributes its working downwards, after it has done operating upwards, to the vaſt quantity of liquor, which muſt neceſſarily be drank during its operation, rather than to its being poſſeſſed of any purgative quality. And as perſons in an *aſcites* have generally a very difficult reſpiration, he thinks they cannot bear the operation of an emetic, which takes up two hours, without falling into ſwoonings.—

The virtue of this medicine therefore ſeems to ſtand upon a very precarious foundation, and, like many others, wants to be ſettled by well-conducted and competent experience.

(*s*) *See lib. de priſc. med.*

or parts in their operations, which cannot be hurt without deſtroying the patient. Neither can they reduce diſlocated bones to their natural ſituation, without a careful examination, and thorough knowledge of the poſition of the bones in a human ſkeleton.

Eaſily acquired.

21. Such a knowledge of the human body, therefore, is ſo abſolutely neceſſary, that whoever wants it will treat diſeaſes hoodwinked. Beſides, this ſcience may be acquir'd without much trouble, and in a ſhort time; for it may be ſooner learnt than other more difficult matters by perſons of no great acuteneſs, by inſpecting the human body, or the bodies of ſome animals. But in all acute diſeaſes (which comprehend more than two thirds of diſtempers) and moſt chronic ones, it muſt be owned, that there is ſomething *divine*, or ſome ſpecific property, which is not diſcoverable by a ſearch into the ſtructure of the human body. Accordingly, it is my opinion, that *Hippocrates*, in the paſſage above quoted, means no more than to caution againſt depending ſo entirely on the diſſection of dead bodies, as if the art of medicine might receive greater improvement from thence, than from an accurate obſervation of the natural ſymptoms of diſtempers, and thoſe things which do ſervice or miſchief, and that he did not intend to explode or depreciate a general knowledge of *anatomy*.

But only a general knowledge of it to be obtained.

22. And, in effect, it may be preſum'd, that ſo wiſe a man could not but know that all the diſcoveries that can be made by mankind, cannot reach beyond ſuch a general knowledge. For tho' a careful diſſection of dead bodies exhibits the greater organs, employed by nature in her operations, and certain veſſels, likewiſe, thro' which the fluids are convey'd from theſe to other parts, yet the original and primary cauſe of this motion remains inviſible; nor can the eye, aſſiſted by the beſt microſcope, diſcover thoſe veſſels, for inſtance, thro' which the chyle is ſtrained through the inteſtines into the chyliferous veſſels, or the ducts thro' which the blood paſſes from the arteries into the mouths of the veins. Again, there are numberleſs veſſels and pores in the human body, the ſtructure whereof is ſtill more delicate, which no one yet has ſo much as conceived: ſo deficient and groſs is our knowledge, which is in a manner limited to the ſurface of things, but can by no means

means attain to diſcover their cauſes. However, notwithſtanding this, there needs no very difficult enquiry to come at the knowledge of what is ſufficient (as far as the nature of things will allow) to direct us in the cure of thoſe diſeaſes, which require this kind of ſkilfulneſs, as we have intimated above, and eſpecially ſuch a ſhare of it as may induce us to revere the creator with the greateſt humility, whilſt we contemplate his wonderful workmanſhip in thoſe things we are able to account for, and that excellent contrivance in others, which we do not in the leaſt comprehend.

The uſe and abuſe of *chemiſtry* hinted.

23. And as *Hippocrates* cenſures ſuch as ſpend more time in ſtudying the more curious and leſs uſeful parts of anatomy, than in practical obſervations, and conſequently in ſtudying nature; ſo there is the ſame reaſon in this age to cenſure thoſe, who maintain that the art of medicine cannot be better improved, than by new diſcoveries in *chemiſtry*. For tho' gratitude requires us to own the helps we have received from chemiſtry, whence we have been ſupplied with ſome good and well-adapted medicines to anſwer indications, amongſt which the infuſion of *crocus metallorum*, the vomitive under conſideration, is no contemptible one; ſo that for this reaſon chemiſtry is to be held a very uſeful art, provided it be reſtrained within the bounds of pharmacy: yet they are guilty of a fault, or at leaſt a miſtake, who work their imagination up to ſuch a pitch, as at length to ſuppoſe the chief deficiency of medicine to be a want of efficacious remedies, only procurable from chemiſtry. Whereas, whoever conſiders the matter thoroughly will find, that the principal defect in the practical part of phyſick proceeds, not from a ſcarcity of medicines to anſwer particular intentions, but from the want of knowing the intentions to be anſwer'd. For an apothecary's prentice can tell me, in a very ſhort time, what medicines will purge, vomit, ſweat or cool: but a man muſt be much converſant in practice to be able to inform me, as certainly, which is the propereſt time of adminiſtering any particular remedy, in all the different ſtages of diſeaſes, and throughout the courſe of the cure.

Medicine, how beſt improved.

24. And, in reality, I am fully perſuaded, that nothing tends more towards the forming a true judgment of this, than an accurate obſervation of the natural ſymptoms

ptoms of diſeaſes, and the medicines and regimen which appear from practice to be beneficial or detrimental. From a careful compariſon of all theſe things together the nature of the diſtemper appears, and the curative indications are much better and more certainly deduced, than by endeavouring to find out the nature of any determinate concrete principle of the body to direct myſelf by. For the moſt curious diſquiſitions of this kind are only ſuperficial reaſonings, artfully deduced, and cloathed in a beautiful dreſs, which, like all other things that have their foundation in the fancy and not in the nature of things, will be forgot in time, whereas thoſe axioms which are drawn from real facts will laſt as long as nature itſelf (*t*).

25. But tho' all *hypotheſes* founded in philoſophical reaſonings are quite uſeleſs, ſince no man is poſſeſſed of intuitive knowledge, ſo as to be able to lay down ſuch principles as he may immediately build upon, yet when they reſult from facts, and thoſe obſervations only which practical and natural phænomena afford, they will remain fixed and unſhaken: ſo that though the practice of phyſick, in reſpect of the order of writing, may ſeem to flow from the *hypotheſes*, yet if the *hypotheſes* be ſolid and true, they in ſome meaſure owe their origin to practice. To exemplify this remark: I do not uſe chalybeates and other medicines that ſtrengthen the blood, and forbear evacuants in *hyſteric* diſorders (unleſs in ſome particular caſes, where I rather exhibit opiates) becauſe I firſt took it for granted, that theſe complaints proceeded from the weakneſs of the animal ſpirits; but when I learnt, from a conſtant obſervation of practical phænomena, that purgatives always increaſed the ſymptoms, and medicines of a contrary kind ordinarily quieted them, I deduced my hypotheſis from this and other obſervations of the natural phænomena, ſo as to make the philoſopher in this caſe ſub-

(*t*) Phyſic undoubtedly had its origin from obſervations, whether made by accident or with deſign, and was not the effect of human invention; whence experience ſhould ſeem the moſt direct and effectual means of improving it. The phyſician, therefore, till phyſic can be made more ſcientifical, would do well to conſider himſelf as the ſervant and interpreter of nature; for without obſerving her ways, and purſuing them cloſely, nothing great can be done in the cure of diſeaſes, but much miſchief.

ſubſervient to the empiric. Whereas to have ſet out with an hypotheſis would have been as abſurd in me, as it would be in an architect to attempt to cover a houſe before he had laid the foundation, which only thoſe who build caſtles in the air have a privilege of doing, as they may begin at which end they pleaſe [*u*].

26. But to reſume our ſubject: whatever paſſages thoſe are through which the water paſſes from the cavity of the belly into the inteſtines, I am ſure that the vomiting occaſioned by the above-mentioned emetic does powerfully evacuate it, both upwards and downwards. For after the ſecond or third puke, the waters do not ſeem to be forced out ſo much by the ſecretory virtue of the medicine, as to run with a full current, the obſtruction being in a manner broken down, and the ſluices opened, as manifeſtly appears by the frequent impetuous evacuation of the waters in the intermediate ſpaces of vomiting [*w*]. The infuſion of *crocus metallorum*, an excellent *hydragogue*.

27. A poor woman, about fifty-five years of age, begg'd my aſſiſtance in *Auguſt* laſt. She had long been afflicted with an intermittent fever, and afterwards lain Verified in a caſe.

(*u*) In this our judicious author is worthy of the cloſeſt imitation; for whoever ſets out to practice with the ſtrong biaſs of a favorite hypotheſis on his mind, is ſure to be bewilder'd and confuſed, and commit a thouſand miſtakes. Againſt ſo prepoſterous and wrong a ſtep, the young practitioner cannot be too ſtrenuouſly caution'd, nor too earneſtly adviſed to lay the greateſt, I had almoſt ſaid, the whole ſtreſs on experimental knowledge, and not to quit the leſs agreeable, perhaps, but the ſure and ſafe road of obſervation, ſo long as there are any traces of it to be met with in this way.

Sydenham, it muſt be confeſs'd, ſometimes ſo far forgot himſelf, as to depart from it, notwithſtanding the frequently repeated, and cogent remonſtrances contain'd in his writings, to the contrary; but hardly ever without betraying his judgment, and leaving his readers in the dark: ——which makes this hint ſo much the more needful, as well as more important. *See his preface. Sparcim.*

(*w*) If p. 477. par. 29.—p. 478. par. 32. and p. 481. par. 38. be conſulted, our author's opinion of vomits, and in what kinds of dropſy they are proper, will appear more clearly.

Vomiting, in ſtrong conſtitutions, has often proved very effectual, ſays Dr *Arbuthnot*, for the concuſſion of the ſolid parts diſſolves and diſpels the ſtagnating humours and even clyſters of proper ingredients are very beneficial.

Sydenham does not once mention bleeding in this diſtemper, which is frequently neceſſary, becauſe the blood is thick and inflam'd; and wherever it is ſo, is always perform'd with advantage.

lain in priſon three years: ſhe had ſuffered much from cold, and her belly was more ſwelled than I had ever ſeen any perſon's before. I gave her an ounce and half of the infuſion of *crocus metallorum* for three days running, and afterwards every other day, as her ſtrength would bear, till ſhe had taken ſix doſes. The firſt puke occaſioned a total ſuppreſſion of urine, which ſhe afterwards voided ſometimes, tho' very rarely, by intervals; and the oftner the vomitive was repeated, the more water uſually came away, and, towards the end of the operation, both upwards and downwards. But after the third doſe the ſwelling began to fall, and in a fortnight her belly appeared to be ſhrunk a yard, by the thread with which I had ordered it to be meaſured at firſt, and ſhe aſſured me that ſhe had computed ſhe had voided ſeveral gallons of water. This enabled her to lay her head upon the pillow, and turn from ſide to ſide, as ſhe pleaſed, whereas before ſhe was conſtrained to ſleep in an upright poſture, for fear of being ſuffocated by the weight of the waters. But the vomits by their violent operation raiſed the vapours ſo much, as to render their further uſe unſafe, whilſt, notwithſtanding, the remaining ſwelling of the belly, and the motion of the waters which ſhe perceived upon turning herſelf in bed, and likewiſe the pits in the legs, which kept depreſſed after any thing was preſſed againſt them, fully manifeſted that there was ſtill much water in her belly; for theſe reaſons, I ſay, I was forced to finiſh the cure with purgatives. Accordingly, I afterwards preſcribed either the above-mentioned purging potion, or ſome other *hydragogue*, ſeldomer or oftner, as her ſtrength and the vapours would permit; for purgatives do in ſome meaſure cauſe *hyſteric* diſorders, tho' of a gentler kind than vomitives ordinarily do. I continued this method till ſhe ſeemed to be recovered.

Remarkable particulars happening during the courſe.

28. During the courſe the following remarkable particulars happened. (1.) On the intermediate days of purging, ſhe ſometimes voided water plentifully downwards, and, towards the latter end, by urine alſo, to the quantity of a gallon in a day, tho' I allowed her only a pint and half, or a quart of liquor, during that ſpace of time: ſo that all the paſſages ſeemed to be open [*x*]. (2.)

(*x*) Two drams of ſalt of tartar diſſolv'd in two quarts of a light

(2.) Towards the concluſion of the cure the purgatives raiſed the vapours, and the belly ſwell'd much towards the breaſt, as if it had been fill'd again with water, which yet I knew could not be, becauſe ſhe drank ſo little, and conſequently that the ſwelling proceeded only from *flatus*, occaſioned by the hurry raiſed by the purges: and the event verified my opinion. For tho' ſhe parted with a gallon of water in a day when ſhe purged, yet her belly ſoon began to ſwell upwards, cauſing a difficulty of breathing, and did not fall till the diſorder occaſioned by the purgative was gone off, and the body had recovered its natural ſtate and reſt; then the ſwelling and other ſymptoms vaniſhed ſuddenly, and returned not till they were again occaſioned by the ſucceeding purge. (3.) Laſtly, tho' this woman, who was above fifty years of age, had not had her *menſes* for ſeveral years paſt, they now flowed again violently, and this diſcharge, coming upon the preceding evacuations, greatly increaſed the number of hyſteric ſymptoms, *viz.* the ſevere pain in the back, in the region of the ſpleen, and in the head, joined with a ſevere cough. And further, tho' it might ſeem highly probable that but little water remained in the body, after ſo large a quantity had been diſcharged upwards and downwards, and by urine likewiſe, yet the belly continued as much ſwell'd as it uſually was before any evacuation had been attempted. In order, therefore, to quiet theſe motions, which made her uneaſy for a week after the laſt purge, I was conſtrained to give an ounce and half of *diacodium*, for four nights running, and to order the doſe to be repeated in three hours, in caſe ſhe got no reſt: and by this means theſe ſymptoms were quieted, and the ſwelling vaniſhed (*y*).

29. In the mean time it muſt be noted that if the belly be not much ſwelled, the waters are not ſo readily evacuated by the infuſion of *crocus metallorum*, as in caſe of a large ſwelling thereof: for the very bulk of the

In what caſe *purgatives* are beſt.

light decoction of the woods, makes a good common drink in this caſe, and is much better than ſmall beer.—Or ſometimes barley-water, acidulated with the acid elixir of vitriol, may be uſed for the ſame purpoſe. *See* p. 480. par. 36.

(*y*) The ſimple ſyrup, with a few drops of the thebaic tincture, makes an extemporaneous diacodium of a certain ſtrength, and which may therefore be better depended on than the ſyrup which uſually goes by that name. *See* p. 480, par. 36.

the water, whilſt it is agitated and ſhaken by the operation of the vomitive, wonderfully promotes its own evacuation; ſo that for this reaſon, unleſs the belly be conſiderably ſwelled, it is beſt to rely entirely on cathartics.

A decoction of the *inner bark of elder*, curative of the *dropſy*.

30. There is another pretty common and ſimple medicine, which cures the *dropſy* in the ſame manner as the emetic; it is made by boiling three handfuls of *the inner bark of elder* in a quart of *milk and water* to a pint, half of which is to be taken morning and night every day, till the cure be compleated. This medicine works upwards and downwards, like the infuſion of *crocus metallorum*, and therefore cures the diſtemper in the ſame manner, and not by any *ſpecific* virtue: for in caſe it does not vomit or purge at all, or but gently, it does no ſervice; but if it operates effectually either way, and eſpecially both ways, it proves an admirable medicine in the *dropſy* (z).

When *ſtrengthening medicines* are to be preferred to *evacuants*.

31. But, in reality, it is well worth noting, and a common caſe, that water is depoſited in the legs, thighs, and even in the belly, which nevertheleſs muſt by no means be evacuated either upwards or downwards. As for inſtance; (1.) in caſe a ſwelling of this kind ſucceeds a conſumption of long ſtanding; or (2.) proceeds from the putrefaction and diſorder of ſome of the bowels; (3.) from poor weak blood; (4.) old fiſtulas in the muſcular parts, accompanied with a conſiderable diſcharge; (5.) great weakneſs, and an immoderate evacuation of the juices, and ſpirits by a ſalivation, ſweating, or purging; or (6.) from too ſlender a diet in the cure of the venereal diſeaſe. In theſe and other diſorders ariſing from ſuch cauſes, purging not only avails not, but increaſes the diſtemper by further weakening the tone of the blood; ſo that in theſe caſes the cure depends entirely upon ſtrengthening the blood and bowels in the moſt effectual manner. And, amongſt other things of this kind, beſides the ſtrengthening medicines hereafter to be enumerated, experience hath taught me that this intention is admirably anſwered by change of air, and exerciſe ſuited to the ſtrength of the patient; the ſpirits being hereby revived, and the excretory organs reſtored to their proper functions.

32. There

(z) An ingenious phyſician of my acquaintance tried the inner bark of the common elder, but did not find it anſwer his expectation.

32. There are other caſes, likewiſe, where the waters are not to be diſcharged by vomiting nor purging; for inſtance, in weak conſtitutions, and hyſteric ſubjects, they cannot be evacuated by *purgatives*, and much leſs by *vomitives*, but are to be carried off by *diuretics*. Several of this kind are extolled in the writings of phyſicians, but the moſt, if not the only efficacious ones, in my opinion, are thoſe prepared from *lixivial* ſalts, from whatever plant the aſhes be obtained, But as *broom* is eaſily procurable, and much eſteemed in this diſeaſe, I generally order a pound of the aſhes of it to be infuſed cold in two quarts of *rheniſh* wine, with one or two pugils of *common wormwood*, and preſcribe four ounces of the filtred liquor to be taken conſtantly every morning, and at five in the afternoon, and at night, till the ſwelling diſappears; and by this remedy alone I have known this diſtemper cured, in perſons of too weak a conſtitution to bear purging, when the caſe was judged deſperate (*a*). When *diuretics*.

33. (2.) To proceed now to the ſecond intention: after the waters, whence this diſeaſe immediately proceeds, are wholly evacuated, in general only half the work is done, inaſmuch as the weakneſs of the blood, whence it originally proceeds, remains to be removed by a long and daily uſe of heating and ſtrengthening medicines, in order to prevent a freſh collection of water, or, in other words, a relapſe. For though young perſons frequently recover, after the waters are ſufficiently carried off, without any other help, their natural heat ſupplying the place of the abovementioned remedies, yet the antient and infirm, under theſe circumſtances, muſt have immediate recourſe to ſuch ſimples as warm and ſtrengthen the blood (*b*). The blood to be ſtrengthened after the waters are carried off.

(*a*) The fix'd alcaline ſalts are the moſt powerful diuretics; but where there is a fever, the neutral ſalts, and eſpecially the diuretic ſalt, commonly called the foliated earth of tartar, are preferable to all others.

Boerhaave reckons all aqueous dilutents, as *diuretics*, and all ſalts, without excepting a ſingle one of any kind, all ſaponaceous medicines, the ſaline parts of animals, all ſuch acrid remedies as chiefly ſtimulate the kidneys, and ſome balſamic aromatics, eſpecially thoſe of the turpentine kind.

(*b*) When the extravaſated ſerum is evacuated, ſays Dr *Arbuthnot*, the diet ought to be ſuch as ſtrengthens the ſolid parts, allowing ſpices and generous wine, and eſpecially the uſe of chaly-

The medicines proper in this caſe.

34. And here, beſides thoſe hereafter to be ſet down, recourſe may be had to ſuch as I have commended above in treating of the *gout*, whether of the medicinal or dietetic kind, or belonging to the reſt of the non-naturals, inaſmuch as theſe two diſeaſes have this property in common, namely, that the ſame ſtrengthening remedies tend to remove the original cauſe in both; only *wine*, which ſhould be wholly refrained in the *gout*, may be advantagiouſly uſed in the *dropſy* for common drink. It muſt, however, be owned, that as we only learn from the apparent ſymptoms, and the effects of whatever does good or harm, that both theſe and ſeveral other *chronic* diſeaſes proceed from the weakneſs of the blood and indigeſtion, we have yet but a ſuperficial knowledge of diſtempers, and cannot find out their eſſential differences, and the *ſpecific* ill qualities of the juices, ariſing from ſuch indigeſtions, the common cauſe of all *chronic* diſeaſes. Add to this, that we are utterly ignorant of the various peculiar alterations in acute *diſeaſes*, proceeding from the ſame cauſe, namely, the inflammation of the blood. Since, therefore, we have no *ſpecifics* for theſe and other *chronic* diſeaſes, we are conſtrained to adapt the curative method to the more general cauſe, rather than the eſſential nature of diſeaſes; varying the procedure occaſionally, conformably to the ſpontaneous indication uſed by nature in expelling diſeaſes, or being guided by experience, which teaches the beſt method of cure in every diſtemper.

Wine to be drank freely, after the water begins to paſs off.

35. Again, in order to anſwer the intention under conſideration, *viz.* the ſtrengthening the blood, whether the evacuation of the water be procured by this diuretic medicine, or by purging, or vomiting, in the manner above ſpecified, the patient, if able to purchaſe it, muſt be ordered to drink *wine*, during the courſe of the cure, after the paſſages are in ſome meaſure opened, and way is made for the water to paſs off. Or, otherwiſe, inſtead of wine he ſhould drink good ſtrong beer, becauſe all ſmall and cooling liquors, how agreeable ſoever they may be to the palate, by reaſon of the thirſt which generally accompanies this diſeaſe, render

chalybeate waters, abſtinence from all other ſorts of liquids, dry food and aſtringent vegetables, exerciſe and eſpecially riding, and, in general, ſuch a diet as breeds good blood.

render the patient more phlegmatic, and increaſe the water, and for this reaſon are ſeldom or never to be allowed. Whereas, contrariwiſe, ſtrong liquors, excepting diſtill'd ſpirits, promote the recovery ſo much, as ſometimes to effect a cure alone, in the beginning of the diſeaſe, when there is but little water in the belly, and eſpecially if they be impregnated with heating and ſtrengthening herbs. Thus I have ordered perſons of low circumſtances, who could not purchaſe better remedies, to infuſe a ſufficient quantity *of horſe radiſh root, the leaves of common wormwood, ſcurvy-graſs, ſage, the leſſer centory, and the tops of broom in ſtrong beer*, and uſe it for common drink. Perſons of fortune may infuſe the ſame ingredients in *canary*, and drink a ſmall draught of it twice or thrice a day at proper times, with the above-mentioned medicines: Or *wormwood wine*, if more agreeable, may be uſed inſtead of this, taking nine ſpoonfuls of it, after two drams of the *digeſtive electuary* above ſet down, every morning, at four in the afternoon, and at night. This electuary ſufficiently anſwers this intention, and is much the beſt ſtrengthening medicine (*c*).

36. But it is of great moment in this caſe to drink very ſparingly of ſmall liquors, inaſmuch as all of this kind in ſome meaſure increaſe the waters; and ſome perſons have been cured by refraining from potables entirely: for which reaſon, if ſmall liquors be ſometimes indulged, they muſt be drank very moderately. However, as this diſeaſe is generally attended with great thirſt, which is further increaſed by forbearing ſmall liquors, it may be proper to waſh the mouth often with *cold water*, acidulated with *ſpirit of vitriol*, or to hold a few *tamarinds* in the mouth between whiles, or chew a ſlice of *lemon*: but none of theſe muſt be ſwallowed, by reaſon of their coldneſs, which is prejudicial in this caſe.

Small liquors to be drank very ſparingly.

Thirſt, how allayed.

37. *Steel* is an excellent ſtrengthener in the beginning of the diſeaſe, inaſmuch as it warms and ſtrengthens the blood: and for the ſame reaſon *garlic* is very ſerviceable: I have known the *dropſy* cured by *garlic* alone, by the direction of other phyſicians.

Steel and *garlic* good ſtrengtheners.

38. It muſt be obſerved, that that kind of the *dropſy*, in which only the legs or the belly ſwell moderately,

(*c*) *See* p. 481 *par.* 31.

Emetics and cathartics not required in all *dropsies.*

does not immediately require to be cured by *emetics* and *cathartics*, but frequently yields to the above-mentioned heating and strengthening liquors. It is, however principally to be noted, that whenever the cure is attempted by *strengthening* or *lixivial* medicines only, both rough and gentle purging must be forborn, because purgatives destroy the effects of strengthening medicines, as a person must needs own, who has observed the swelling fall from the use of strengtheners, and increase immediately upon purging. For though whilst we attempt to carry off the waters, it may be proper to give strengthening medicines between times; yet, when the cure depends altogether on strengthening the blood, we must not meddle with cathartics (*d*).

An inveterate *dropsy* incurable.

39. It must also be remarked, that the *dropsy* is not always cured by answering both indications; *viz.* (1) by carrying off all the water contained in the belly, and (2.) administring heating and strengthening medicines to prevent a fresh collection of water. For it often happens in an *ascites* of several years standing, that the waters, by lying a long time upon the bowels, alter their substance, and putrefy them and the neighbouring parts, breed preternatural glands, and form small bladders full of a corrupted *serum* (*e*), and reduce all the parts situated in the cavity of the belly into a kind of putrefactive state, as appears upon dissecting the bodies of those that die of an inveterate *ascites*. The distemper in this state is incurable in my opinion, but nevertheless, as the physician cannot certainly tell how much the bowels are injured, he ought to do his best to forward the cure by evacuating and strengthening medicines, and not to lose all hope himself, or cause the patient to dispond. And it is for this reason his duty to act thus, because in abundance of diseases, when the morbific matter is quite carried off, nature, which perpetually helps us, contrives spontaneously, in a wonderful manner, to expel the pernicious remains of the distemper. Hence every kind of *dropsy*, how obstinate soever it prove, and how much soever it may have injured the bowels, may be treated in the same manner as if it was recent.

40. As to *topics*, or external applications, according to

(*d*) *See* p, 428 *note* (*i*)

(*e*) These are usually called *hydatids*.

to the beſt of my obſervation, they never do much ſervice in this diſeaſe. The leaſt pernicious are thoſe which are applied by way of cataplaſm or liniment to the belly to diſcuſs the ſwelling; tho' I do not ſee how the waters can be diſcuſſed. But there are other things preſcribed by ſome inſtead of internal medicines, which are ſo far from being ſerviceable, that they generally prove detrimental; as ointments made of ſtrong purgatives, and applied to the belly, and bliſters to the legs and thighs, to diſcharge the water when the parts are conſiderably ſwelled. But both theſe applications are unſafe; for by the former the purgative quality of the ingredients is ſo deeply fixed in the muſcles and membranes, as to occaſion an incurable *hypercatharſis*, or ſuper-purgation; and as to bliſters, which empirics commonly apply to the above mentioned parts, they quite extinguiſh the natural heat, much diminiſhed already by the ſtagnation of the water, and thus often cauſe a gangrene, which is too common an accident in this caſe. For the ſlighteſt wound is very difficultly healed in dropſical ſubjects, eſpecially in a depending part, becauſe the ſubſtance of the fleſh in theſe parts is ſo ſurcharged with moiſture, that the *ſerum* flows continually through any paſſage it finds, and thereby obſtructs the healing of the wound. And in my opinion the operation of the *paracenteſis*, commonly called *tapping*, which ſome practitioners commend, is not leſs hazardous, or more ſucceſsful than bliſters *(f)*.

Outward applications of little ſervice.

(f) The operation of *tapping* was not ſo commonly practiſed in our author's time, as it has been ſince, and is at preſent, and beſides, was generally deferred ſo long, till the weakneſs of the patient, and the ſcirrhous, corrupt ſtate, or eroſion of the *viſcera* rendered it uſeleſs, ſo that it ſhould not ſeem ſtrange that he entertained ſo unfavourable an opinion of it. Sir *Theodore Mayerne*, who was for ſometime cotemporary with him, has not once mentioned it in his chapter on the *dropſy*, to be found in his works.

But to demonſtrate its uſefulneſs, we cannot do better than recommend to the reader's peruſal, the deſcription given of the operation, and the ſucceſs attending it, by Mr *Sharp*, in his treatiſe of the operations of ſurgery, who concludes the chapter of of the *paracenteſis*, with theſe words: This operation, though it does not often abſolutely cure, yet it ſometimes preſerves life a great many years, and even a pleaſant one, eſpecially if the waters have been long collecting. I have known ſeveral inſtances of people being tapp'd once a month, for many years, who felt no diſorder in the intervals, till towards the time of the opera-

41. To conclude: tho' when this diſtemper is become a true *aſcites*, it has always been held incurable, it will nevertheleſs be found as certainly curable, provided it be treated according to the method above delivered, and the bowels be ſound, as ſeveral other diſeaſes that are ordinarily eſteemed leſs dangerous (*g*).

The remedies not contemptible for their ſimplicity.

42. But if any one ſhould find fault with theſe remedies, as being ſimple and evidently artleſs, I may with more reaſon reprove him, for his vicious turn of mind, in exclaiming againſt curing other perſons with ſuch ſimple medicines, when he would wiſh to be cured himſelf, or have his wife, or children cured, in caſe of ſickneſs, by the ſimpleſt and cheapeſt remedies. To which we may add, that he expoſes his weakneſs by making ſo trifling an objection, as the luſtre and excellence of the art of medicine are not ſo clearly ſeen in elegant preſcriptions, as in curing diſeaſes.

The author vindicates his other works

43. Theſe are the obſervations I had to communicate on theſe two diſeaſes, the *gout* and *dropſy*, and I believe I ſhall hardly meddle with any others. And as to the works I have already publiſhed, if a perſon will only give them a ſingle reading, I am ſorry I ſhould be the means of making him loſe his time; but if he will peruſe them often, and commit them to memory, I dare ſay he will reap ſuch advantage from them, as may in ſome meaſure equal my wiſh, and the great pains I have been at, in making and compiling them. (*h*). And, indeed, the faithfulneſs wherewith they have

operation, when the diſtention grew painful; and there are inſtances where the patient has not relaps'd after it. Upon the whole, there is ſo little pain, or danger in the operation, that in conſideration of the great benefits ſometimes received from it, I cannot but recommend it as exceedingly uſeful.

(*g*) An *Aſcites*, coming upon other diſeaſes, in which the *viſcera* were actually tainted, or approach'd that ſtate, and attended with an extravaſation of *ſerum*, occaſioned by a rupture of ſome lymphatic veſſels, or hydatids, a waſting of the upper parts, great thirſt and an evacuation of a very high-coloured urine, in a ſmall quantity, which drops a ſediment upon ſtanding, may in general be reckon'd incurable.

(*h*) Our author's writings contained ſo many important practical remarks and obſervations in abundance of diſtempers, a fund of uſeful knowledge ſo neceſſary to a phyſician, that they deſerve to be diligently ſtudied, well digeſted, and carefully remember'd; for which purpoſe a ſingle peruſal of them can never be judg'd ſufficient. Were I to prefix a mottoe to his works,

have been delivered, can only be learnt by being converſant in practice, and as accurate and diligent an obſerver as I have been. But if, in the few things I have wrote, I have kept cloſe to nature, without embracing the opinion of any man, tho' of the greateſt eminence, I am perſuaded the judicious part of mankind will not condemn me, who cannot but know that the improvement of medicine is alike obſtructed by two ſorts of men. The firſt are thoſe who do not at all contribute to improve the art they profeſs, but hold thoſe in contempt who do ſo in the ſmalleſt degree; and theſe men ſcreen their ignorance and idleneſs with the ſpecious pretence of an extraordinary reſpect for the antients, from whom, they contend, we ought not in the leaſt to depart (*i*).

The improvement of medicine, by whom obſtructed.

works, therefore it ſhould be the celebrated one that *Horace* uſes on a like occaſion.

Nocturna verſate manu, verſate diurna.
Read them by day, and ſtudy them by night.

MR FRANCIS.

(*i*) This is indeed an idle and abſurd pretence, and deſerves to have a ſeverer cenſure paſſed upon it. Several of the antients were, without doubt, men of ſuperior abilities, as abundantly appears from the writings they have left behind them, eſpecially in what relates to the hiſtory of diſtempers, whence we are furniſh'd with ſo excellent a ſet of the diagnoſtics and prognoſtics. *Hippocrates* perhaps (not to particularize the excellencies of the reſt) has ſurpaſs'd all that went before, or have ſucceeded him in this particular, having been an indefatigable and and accurate obſerver of nature. To the antients, likewiſe, we are indebted for the methods of curing ſome inveterate chronic diſeaſes, by a proper and long continued uſe of the *non naturals*, the introduction of bathing into medicine, lately revived, and now ſo univerſally and ſucceſsfully practis'd, cupping, and many other capital remedies.

But it would be a great piece of partiality to deprive the moderns of that ſhare of reputation, to which they have ſo juſt a title, for the many uſeful diſcoveries they have made from time to time, among which the circulation of the blood, found out by our ingenious countryman Dr *Harvey*, deſerves to be mentioned in the firſt place: a diſcovery which reſcued medicine from the contempt it had lain long under, on account of its obſcurity and myſtery, and let in ſo much light into the theory and practice of the art, as to ſet it upon a ſurer foundation, and recommend it more effectually than ever, to the protection and encouragement of men of genius and candid diſpoſitions.

Is not the preſent improv'd ſtate of chemiſtry, pharmacy, anatomy, and ſurgery, wholley owing to the labour and application of the moderns? How much we ſurpaſs the antients in theſe

44. But why do we own that all other arts, which are of leſs importance to mankind, have been conſiderably improved without doing any injury to the antients, and hold phyſic alone to be entirely perfect? Could not the inventors of the ſurer way of ſailing, now practiſed, try the uſe of the compaſs, which ſucceeds ſo well, without contemning the antient mariners, who being leſs ſkilful directed their courſe by obſerving the ſtars, and the windings of the land? Or why muſt the more accurate and perfect art either of building ſhips, or commanding them in engagements, in which the inhabitants of the *weſtern* parts of *Europe* are beſt ſkill'd, be a reflection on thoſe ſhip-carpenters, who built the fleets that engaged at *Actium*; or on *Auguſtus* and *Mark Antony*, who were ſuch great commanders both by ſea and land? Beſides, there are almoſt numberleſs examples of things diſcovered by the moderns, which eminently excel the inventions of the antients, the inventors whereof are no more to be excuſed of leſſening

branches of medicine, will appear to any ſkilful and impartial enquirer, upon comparing the figure they now make, with the deſpicable one they made in their time.

To pay, therefore, an unlimited and ſervile deference to the antients, is to inſinuate that the art of medicine hath attain'd its ultimate degree of perfection, the improbability whereof will be manifeſt upon taking a view of the advancements it has made in good hands for a century or two paſt, and ſufficiently intimate, that if ſkill and application be not wanting, it will continue to improve daily. In effect, if we are blindly and implicitly to decide in favour of the antients, and adhere ſtrictly to their opinions in all matters alike, our underſtanding will lie uncultivated, and reaſon be of as little uſe to us in theſe particulars, as if we had none at all: error may claim perſcription from its antiquity, and latediſcovered truth be rejected for its novelty; which would be taking ſo prepoſterous and irrational a method of cultivating a ſcience, that is to grow up from facts chiefly, and receive its beſt improvements from rigorous and well-warranted experience, as would certainly and juſtly be condemned by the conſiderate and judicious part of mankind.

To draw a parallel between the antients and moderns, I neither intend, nor am able; but right reaſon requires a juſt medium to be obſerved in paſſing a judgement on either, ſo as not to betray an obſtinate attachment, to the antients, or a groundleſs and partial contempt of the moderns.

For further light into this intereſting matter, *Dr Barker's eſſay on the agreement betwixt antient and modern phyſicians, &c.* may be conſulted. And the learned reader is referred to *Ramazzini*'s works for an entertaining oration on the ſame ſubject.

ſening our opinion of the antients, than a ſon is of leſſening the reputation of his father, who by his prudent management and induſtry, improves his inheritance.

45. There is likewiſe another kind of men, who, out of a vain affectation to paſs for perſons of a ſuperior underſtanding, plague the world with ſpeculations, that do not at all contribute towards the cure of diſeaſes, but rather tend to miſlead, than to direct the phyſician. It ſhould ſeem that nature has given theſe men wit enough to reaſon in a ſuperficial manner about her, but denied them judgment, to teach them that all the knowledge of her is to be had only from experience; the human mind being reſtrained to the narrow limits of knowledge, derivable from the ſenſes. Whence, tho' a man may become as wiſe as his ſtate will allow, yet no one will ever attain to be a philoſopher, at leaſt, in the degree that great name imports. But all the philoſophy of a phyſician conſiſts in ſearching into the hiſtory of diſeaſes, and applying ſuch remedies as experience ſhews to be curative thereof; obſerving, as I mentioned elſewhere, the method of cure, which right reaſon, founded on the trite and natural way of thinking, and not on vain ſpeculations, points out (*k*).

POST-

(*k*) The ridiculous vanity of being eſteemed perſons of a happy invention and prolific genius, has prevailed with ſome men in all ages, to launch out into philoſophical ſpeculations, and form ſyſtems, rather than to illuſtrate the hiſtory of diſeaſes, and eſtabliſh the methods of cure on a more ſolid baſis, by the more painful way of making new obſervations, and verifying ſuch as were tranſmitted by their predeceſſors.

Theſe men have wholly employ'd themſelves in ſearching into the *minutiæ* of anatomy the latent, remote, and abſolutely inexplicable cauſes of diſeaſes, the ſhape and bulk of the conſtituent parts of medicines, and their manner of operating, ſtudying the mathematics, and endeavouring to account for what paſſes in the human body, by applying the principles of this ſcience thereto, which in moſt caſes impoſe upon them, and render matters more obſcure and perplexed than before.

'Tis certain that we have received no innate knowledge of the nature of bodies, or of the inviſible and inſcrutable cauſes of natural effects; and it being impoſſible to find them out by experience, as they do not fall under the notice of the ſenſes, we ſhall look upon they as things abſolutely undiſcoverable, and an attempt to diſcover them, a fruitleſs labour. And indeed the different opinions we meet with in ſyſtematic writers upon the ſame ſubjects, is of itſelf ſufficient to make us diſtruſt this method of coming at a knowledge of nature, to ſet lightly by the pretended diſcoveries hence ariſing, and to ſtand continually on our guard to prevent being led into error thereby.

The

POSTSCRIPT,

Treating of the Cauſes, Signs, and Cure of the WINTER-FEVER.

The riſe and continuance of the *winter-fever.*

1. WITH the readers leave I will here ſubjoin an obſervation of moment, concerning the diſcovery and cure of fevers, which eſcaped my memory, or otherwiſe had been mentioned in a proper place. I have found a certain fever prevail from the beginning of winter to the beginning of ſpring, which, both in the ſymptoms and method of cure, manifeſtly differs from the then reigning *ſtationary*, or *epidemic* fever of the general conſtitution, and is therefore to be reckoned amongſt thoſe fevers I call *intercurrents*.

Its cauſes.

2. It ſeems to proceed from the coldneſs, denſity, and moiſtneſs of the air, whence the pores of the ſkin are cloſed, and the blood, from an obſtructed perſpiration, loaded with a copious *ſerum*, which, by its long continuance in the veſſels, becomes prejudicial, putrefies, and eaſily raiſes a fever upon taking cold, or from ſome other ſlight cauſe. And if there be much morbific matter, it occaſions ſuch a fever as we have deſcribed, under the title of the *baſtard peripneumony* (*l*). But if there is only a ſmall quantity of morbific matter, it only produces the ſymptoms I proceed to enumerate.

Symptoms

3. (1.) Paroxyſms of heat and cold ſucceed alternately for a day or two after the beginning of the fever; (2.) a pain in the head and limbs, and an univerſal reſtleſneſs accompany it; (3.) the tongue is white; (4.) the pulſe much the ſame as in a healthy perſon; (5.) the urine turbid and high coloured, and (6.) the blood like that of *pleuritic* perſons; (7.) it is alſo generally attended with a cough, but not with ſuch a difficult reſpiration,

The truly ſcientifical knowledge of a phyſician conſiſts not only in being able to diſtinguiſh diſeaſes from one another, but the ſymptoms, which require the treatment thereof to be varied, and knowing the propereſt remedies for curing them, and the manner of preſcribing them to the beſt advantage. A knowledge of all theſe particulars is ſo eſſentially requiſite in a phyſician, that whoever is ignorant of any one of them, tho' he knows every thing elſe, may be pronounced a bad one, as, on on the contrary, he may be reckoned a good one, who is thoroughly acquainted with them, and nothing more. *See pag. note (a) and the* Preface, p. 5.

(*l*) *See* p. 267

ration, ſtraitneſs of the breaſt, and ſo violent a pain in the head in coughing, as ordinarily happen in a *baſtard peripneumony:* Hence this fever has none of the diſtinguiſhing and capital ſymptoms of a *peripneumony*, tho' it differs from this diſtemper only in degree: I call it the *winter-fever*.

4. Tho' this fever in the beginning is only attended with the ſymptoms proceeding from taking cold, yet abundance of pernicious ſymptoms ariſe from treating it in an improper manner, which at length prove mortal. For if the patient be confined in bed, and tormented with cardiacs to raiſe ſweat, and carry off the fever, which however is ſeldom affected, it is frequently accompanied with a delirium, a lethargy, a weak and irregular pulſe, a dry tongue, and an eruption of red, and ſometimes livid ſpots. Theſe and the like ſymptoms, tho' they are reputed by ſome to proceed from the *malignity* of the diſeaſe, as they affect to term it, are in reality to be aſcribed to ill treatment. For this fever being naturally highly inflammatory, cordials, and lying always in bed, add to the inflammation of the blood, which hurries and diſturbs the ſpirits, and occaſions a tranſlation of the morbific matter to the brain, and of courſe increaſes all the ſymptoms.

Ill treatment of it produces ſeveral bad ſymptoms.

5. To cure this fever, I endeavour to make a revulſion of the copious *ſerum* collected by the diminution of inſenſible perſpiration in the winter, by bleeding, and to carry it off by repeated purgation. With this view, as ſoon as I am call'd, I order nine or ten ounces of blood to be taken away from the arm; and the next day I exhibit my common purging potion.

The method of cure particulariz'd.

Take of tamarinds, half an ounce; the leaves of ſenna, two drams; rhubarb, a dram and half; boil them together in a ſufficient quantity of water to leave three ounces of ſtrain'd liquor, in which diſſolve manna and ſolutive ſyrup of roſes, of each an ounce: mix them together for a purging potion, to be taken betimes in the morning.

A purging draught.

I repeat this potion twice more, interpoſing a day between each purge, provided all the ſymptoms do not go off before. And in the evening after the operation I give an ounce of *ſyrup of poppies*, for an opiate. On the intermediate days of purging, if the patient has a cough,

cough, I preſcribe the *pectoral decoction*, and a *linctus* made of freſh-drawn *oil of ſweet almonds*, *ſyrup of maiden-hair*, *and ſyrup of violets* mixt, to be taken between whiles. And to allay the exceſſive heat of the blood, if the fever be very violent, I preſcribe an emulſion of the cold ſeeds, and alſo the following julap.

A cooling julap.

Take of the diſtill'd waters of water lilly, purſlain, and lettuce, each four ounces, ſyrup of lemons, an ounce and half; ſyrup of violets, an ounce: mix them together for a julap, a draught of which may be drank at pleaſure.

The regimen.

6. In the mean while I order the patient to keep from bed in the day-time, and to forbear fleſh: but after the firſt or ſecond purge, I allow him a draught of thin chicken broth now and then. It muſt, however, be noted, that if any violent ſymptom, as a difficulty of breathing, or a ſharp pain in the head on coughing, ſhews that this diſtemper nearly reſembles a *baſtard peripneumony*, both bleeding and purging muſt be repeated at proper intervals, till the ſymptoms vaniſh entirely; and the patient is to be carefully treated according to the method laid down in our diſcourſe on that diſeaſe (*m*). But the fever under conſideration very ſeldom proves ſo violent, as to require any farther evacuation after bleeding once, and purging thrice.—But enough of this, which, however, I thought proper to mention, that this *winter-fever* might not be reckon'd a *ſtationary*, or an *epidemic* fever of any general conſtitution; being certain abundance of perſons have loſt their lives, for want of attending to, or knowing this particular (*n*).

(*m*) *See ſect. vi chap. iv.* p. 267

(*n*) *Huxham*, in his book intitled *Obſervationes, de Aere & Morbis Epidemicis*, p. 136. has given us a deſcription of a fever much like this, and aſſerts, that it is nearly of the ſame kind. And the kindly catarrhal fever which *Hoffman* ſo accurately deſcribes, and treats ſo judiciouſly, does likewiſe greatly reſemble it.

Schedula Mortifera;

OR, AN

ESSAY

ON THE

Rife of a NEW FEVER.

To which is added,

TWO DISSERTATIONS,

One, on the Putrid Fever, happening in the confluent SMALL-POX; and the other, on voiding Bloody-Urine, from the Stone in the Kidneys.

Schedula Monitoria:

OR, AN

ESSAY

ON THE

Rise of a NEW FEVER.

To which is added,

TWO DISSERTATIONS.

One, on the PUTRID FEVER, happening in the confluent SMALL-POX; and the other, on voiding Bloody-Urine, from the Stone in the Kidneys.

TO

Dr *CHARLES GOODALL.*

Fellow of the COLLEGE of PHYSICIANS.

AS ſoon as I came to a reſolution of publiſhing my late remarks on the fever of the preſent conſtitution, I thought myſelf obliged to dedicate the performance to you, principally, for two reaſons. The firſt is, becauſe you are my intimate friend, and have conſtantly defended me againſt all my opponents; not ſo much for my own ſake, as out of an inherent generous diſpoſition, and great integrity of mind, which induced you to ſupport me in what you knew was truth, tho' at a time when moſt of the faculty exclaimed againſt me.

I ought not however to be, nor indeed am I, offended with them; for as many vile pretenders to the art of medicine, by extolling their fanciful ſpeculations, in order to increaſe their reputation, have ſo frequently impoſed upon mankind, it was altogether becoming wiſe and ingenious men not to admit haſtily, and without a previous examination, the particulars delivered by me, which were very oppoſite to the received method of practice. Notwithſtanding this, as I am not leſs indebted to you, I judge it my duty to make you a public acknowledgment; gratitude being the diſtinguiſhing mark of a great and noble ſoul.

The other reaſon of my addreſſing this treatiſe particularly to you, is the intimate acquaintance and correſpondence which hath been between us for ſeveral years, whence you muſt needs be the beſt judge of the pains I have taken to collect the obſervations I have already publiſh'd, relating to the hiſtory and cure of various diſeaſes. And tho' they were printed ſeparately, and at the diſtance of ſome years from each other, according as I came to the knowledge of them, yet they are, in my opinion, ſo deficient and imperfect, that I ought rather to be aſhamed of, than expect any reputation from them. But this may be at leaſt pleaded in my behalf, that tho' the ſpace of thirty years, which I have diligently employed in obſerving diſeaſes, ſhould ſeem ſufficient to give a perſon a compleater knowledge of them than I have attained, yet I ſcruple not to affirm, that though the ſame compaſs of time is more than enough to perplex the mind with ſpeculative and fictitious reaſonings, borrow'd from books, which contribute no more to the cure

of

of diſeaſes, than painting does to the improvement of navigation, yet, four times the number of years would be too little, even for a phyſician in full practice, to carry every branch of medicine to perfection. I have uſed my beſt endeavours to collect the moſt accurate obſervations, and ſent them to the preſs without delay, that the public might immediately reap the benefit of them, in caſe they contained any thing of uſe: and having thus done my duty, my mind is at reſt, and I am not at all ſollicitous what reception my writings may meet with. To this give me leave only to add, that as a perſon who does not eſteem them will do me no prejudice, ſo, whoever gives them but a ſingle reading will be but little the better for them.

But enough of this: and now, worthy Sir, let me intreat your kind acceptance of this performance, which I intend as a publick acknowledgment of the great reſpect I bear you, in which others alſo join with me, who are leſs acquainted with your merit than I am. As I have not the leaſt dependance upon you, I cannot juſtly be ſuppoſed to flatter you, by openly profeſſing as I do (to ſpeak within compaſs) that there is not a better phyſician living, and that I never knew an honeſter man.

It is my wiſh, that you may outlive me many years, and be at the head of the profeſſion, not ſo much to raiſe a fortune for your heirs (which, in compariſon with the ſubſequent reaſon, betrays more of the brute than the man) as to teach mankind the methods of overcoming thoſe difficulties in curing diſeaſes, which have hitherto perplexed the art of medicine, and hindred its improvement. And, in order to this, you may, if you think fit, build upon the foundations I have laid, but yet, ſo as to correct, with your uſual humanity, the miſtakes I may poſſibly have made in my obſervations on the hiſtory and cure of any particular diſeaſe, when any ſuch ſhall appear manifeſt to you from a long courſe of experience. Nor will this be doing the leaſt injury to the memory of one after his deceaſe, who, in his life-time, had nothing more at heart than the improvement of medicine, by whomſoever it was effected, not ſo much, indeed, by learned diſcourſes on the nature of diſtempers (of which we have already too many) as by a certain and genuine method of curing them. Adieu, worthy Sir, and continue your friendſhip to

Your moſt oblig'd humble ſervant.

THO. SYDENHAM.

Schedula Monitoria:

OR

An ESSAY *on the Riſe of a* NEW FEVER.

The riſe of a new conſtitution and fever.

1. THO' my declining age, and a conſtitution much broken, by long illneſs, might juſtly excuſe me from any great application of mind, yet I cannot forbear my endeavours to contribute towards the health of others, though at the expence of my own, by advertiſing my countrymen of the entrance of a new conſtitution, which has given riſe to a new and very different kind of fever from thoſe which lately prevail'd.

Preceded by a ſharp froſt.

2. It muſt be remember'd that intermittent fevers began firſt in *autumn*, in the year 1677, and increaſed daily, and became epidemic till they came to their ſtate or height; and afterwards gradually decreaſed, ſo far as in the latter years of this conſtitution to appear ſo ſeldom, that they could ſcarce be reckoned epidemic (*o*). And for this reaſon it muſt alſo be obſerved, that the two laſt years of this conſtitution, now in its declenſion, were reſpectively attended with a very ſevere winter, eſpecially the former, *viz.* in 1683, in which the cold was ſharper, and laſted longer than the oldeſt perſon living remembered it had done before: for the *Thames* was froze over ſo hard, as to bear the weight of carts, and booths with different ſorts of merchandize, and vaſt crouds of people. Tho' the cold was neither ſo ſevere, nor laſted ſo long, the following year, namely, in 1684, yet, as ſoon as it began to thaw in *February* 1685, the fever I intend to treat of here appeared, which I eſteem a new ſort of fever, and altogether unlike the fever of the eight foregoing years.

When the fever firſt appeared.

Whence the change of the conſtitution.

3. Now, whether the change of this conſtitution is to be aſcribed to the alteration of the manifeſt qualities of the air, which happened during theſe two winters, I know not, as having obſerved that no alterations of the ſenſible qualities of the air, however different, have produced ſpecies of *Epidemic* diſeaſes; and that a certain

(*o*) *See* p. 274, 275, *par.* 10, 11.

tain ſucceſſion of years, tho' they have differed from one another in their outward appearance and temperature, have, notwithſtanding, all conſpired in producing the ſame ſpecies of *ſtationary* fevers. Having, therefore, maturely conſidered theſe particulars, I concluded, as I have elſewhere remarked, that the change of a conſtitution depends principally on ſome ſecret and hidden alteration in the bowels of the earth, communicated to the whole atmoſphere, or on ſome influence of the planets, (*p*.) It muſt, nevertheleſs, be noted, that upon the departure of the *depuratory* fever ſome time ago, a ſevere froſt happened in the beginning of winter in 1664, which abated not till towards the middle of *March*, and was ſoon ſucceeded by a *peſtilential* fever, and, in a ſhort time afterwards, by the *plague* itſelf. But however this may be, the fever under conſideration, which began at the above mentioned period of time, namely, in *February* * 1684, has ſpread itſelf all over *England*, both laſt year and this, and been much more epidemic in other places than at *London*.

The author at firſt miſtakes the ſpecies of this fever.

4. When I was firſt call'd in this fever, I firmly believed it was not one of that ſpecies of fevers I call *ſtationary*, but rather of the claſs of *intercurrents*, which happen promiſcuouſly in moſt years: ſo that I eſteemed it the ſame kind of diſtemper as the *baſtard peripneumony*, which I have deſcribed above (*q*); with this difference only, that this fever was ſometimes not attended with thoſe ſymptoms which characteriz'd and diſtinguiſh'd that diſeaſe; as (1.) a violent cough; (2.) a ſevere head-ach in coughing; (3.) a giddineſs upon the leaſt motion, and (4.) a great difficulty of breathing; all which are the general attendants of a *baſtard peripneumony*. But as my bookſeller preſs'd me, at that time, to give a new edition of my writings, I judg'd it proper to publiſh my conjecture by way of poſtſcript, in which I now find I was miſtaken; having, indeed, been led into it by the manifeſt likeneſs there appeared between this *fever* and the *baſtard peripneumony*, which happens now and then every winter: but in the beginning of ſummer, which ſeaſon commonly terminated thoſe peripneumonic fevers, this fever ſtill continued, whence, ſoon perceiving my error, I was fully perſuaded

(*p*) See p. 301 *Note* (*g*) * 1685. *I think*. (*q*) *See ſect.* vi. *chap.* iv. *p.* 267.

ſuaded that this fever was to be referr'd to a new conſtitution.

Its ſymptoms enumerated.

5. This fever, from the juſteſt obſervation I could make, was generally accompanied with theſe ſymptoms. (1.) Intervals of heat and cold ſucceeding each other, and (2.) frequently a pain in the head and limbs; (3.) a pulſe not much unlike that of a healthy perſon; (4.) the blood taken away commonly reſembling pleuritic blood; (5.) a cough moſtly, which, with the other concomitants of a mild peripneumony, goes off ſo much the ſooner, as the diſeaſe comes on at the greater diſtance from winter; (6.) ſometimes a pain in the neck and throat in the beginning of the illneſs, but not ſo violent a one as in the quinſy; (7.) tho' the fever be continual, yet it often encreaſes towards night, as if it were a double tertian, or quotidian; (8.) lying always in bed, tho' with few cloaths on, is dangerous; for the fever being thereby tranſlated to the brain, a *coma* or phrenſy ſoon ſucceeds. And, to ſpeak the truth, there is ſo great a tendency to a phrenſy here, that it frequently comes on ſpontaneouſly of a ſudden, without any ſuch occaſion, but riſes not to ſuch a height as it does in the ſmall-pox, and other fevers: the patient being rather calmly, than furiouſly delirious, and talking wildly between whiles. (9.) *Petechiæ*, or eruptions frequently appear, occaſioned by an unſeaſonable uſe of cordials, and a hot regimen, and in young perſons of a warm conſtitution purple ſpots, which are certain ſigns of a conſiderable inflammation, both in this and all other kinds of acute diſeaſes; (10) and ſometimes ſuch ſpots as are term'd *miliary* eruptions come out all over the ſurface of the body, appearing much like the meaſles, only they are redder, and when they go off, do not leave branny ſcales behind them, as in that diſeaſe: tho' theſe eruptions do ſometimes come out ſpontaneouſly, yet they are frequently driven out by the warmth of the bed, and cordials. (11.) The tongue is either moiſt or dry, according to the regimen which hath been uſed; when dry, it is brown in the middle, and white round the edges; but when moiſt it is white and foul. (12.) Sweat, likewiſe, depends upon the regimen; for if that be over-heating, it is in a manner viſcous, eſpecially about the head, and, tho' it flows plentifully and univerſally,

affords

affords little relief; whence it follows, that ſuch ſweats are only *ſymptomatic*, not *critical*. The raiſing a ſweat by medicine in the beginning of the diſtemper ordinarily tranſlated the morbific matter, if not to the head, at leaſt to the limbs. But when the fever has ſeized the head, and the phrenſy prevailed, the ſigns of the former vaniſh, only the pulſe beats ſometimes quick and ſometimes ſlow; at length, however, when the ſpirits are exceedingly hurried by wrong management, the pulſe intermits with ſtartings of the tendons, and death ſoon follows.

How to be cured.

6. As to the cure; thoſe ſigns of the peripneumony which accompanied this fever at its riſe, ſoon after the beginning of winter, convinced me, as I ſaid before, that it was to be referr'd to the claſs of peripneumonic fevers; and, therefore, I had immediate recourſe to that method which I formerly recommended in the cure of a baſtard peripneumony, in the poſtſcript to my epiſtle on the dropſy. And, indeed this method agreed pretty well with the few patients which my ill ſtate of health ſuffered me to attend, and with others, alſo, who uſed it upon my recommendation. Whatever motive it was that induced me to follow this method, I have ſince conſidered the ſymptoms of this diſeaſe, and the temperateneſs of the laſt year, which ſucceeded the two hard winters (eſpecially of the winter ſeaſon, which, in reality, on account of its mildneſs, ſcarce deſerved the appellation) and it appears manifeſt to me, that this fever is only a ſimple inflammation of the blood, and conſequently, that the curative indications are to be entirely levell'd at removing the inflammation by a ſuitable method, and medicines.

The method particulariz'd

7. In order to this, I firſt direct ten ounces of blood to be taken away from the arm, and, in effect, tho' the blood in this fever generally reſembles pleuritic blood, yet it does not well bear repeated bleeding. But if a difficulty of breathing, a violent pain in the head in coughing, and other ſymptoms of this kind, ſhew the great tendency of this diſeaſe to a baſtard peripneumony, bleeding and purging are to be repeated, till the ſymptoms entirely diſappear, as we have intimated above, in treating of the latter diſtemper (*r*): and this I would have carefully noted.

(*r*) *See ſect. iv. chap. vi. pag.* 267.

8. In the evening I lay a bliſter between the ſhoulders, and next morning exhibit this lenitive potion.

A gentle purging draught.

Take of tamarinds, half an ounce; the leaves of ſenna, two drams; rhubarb, a dram and half; boil them together, in enough ſpring-water, to three ounces; in the ſtrain'd liquor diſſolve manna and ſolutive ſyrup of roſes, each an ounce: mix all together for a draught, to be taken early in the morning.

I order this draught to be repeated every other day, till three have been taken, and the following, or a like opiate, to be given at bed-time after the operation.

A compoſing draught.

Take of the diſtill'd water of cowſlips, two ounces; ſyrup of white poppies, an ounce; freſh lemon-juice, two ſpoonfuls; mix the whole for a draught.

This I do to prevent a *coma*'s coming on, from the diſturbance of the ſpirits, which purging often occaſions, by the tumult it raiſes in the blood and juices of perſons in fevers, which ſymptom yields to opiates, tho' they ſeem to promote it. For this reaſon, as I durſt not venture to give a purge in the *comatous* fever of 1673, I perſiſted in the uſe of glyſters, well knowing, that purgatives did then immediately cauſe a *coma*, which might perhaps have been prevented, if I had thought of adminiſtring an opiate after the operation of a cathartic (*ſ*).

9. But on the intermediate days of purging, an opiate muſt not be given at bed-time, for fear of ſtopping, or at leaſt checking the operation of the purgative to be taken the next day, which uſually happens, tho' it be given late. It is a rule with me, in this, or any other *epidemic* fever, to forbear purging in the beginning or ſtate of the diſeaſe, unleſs bleeding hath been previouſly uſed; and for want of attending to this rule of practice, or from acting contrary to it, abundance of perſons have been deſtroyed, eſpecially children, as I have elſewhere obſerved by way of caution (*t*).

10. It

(*ſ*) *See ſect. v. chap. ii. pag.* 203.

(*t*) *See pag.* 321, 322, *par.* 47

The reaſon of *Sydenham*'s ſo frequently inculcating this practical direction, ſeems to be, becauſe not a few phyſicians were of opinion that bleeding is prejudicial, unleſs the *primæ viæ* be

10. It muſt, nevertheleſs, be noted, that tho' all the above-mentioned evacuations ought in general to be uſed in the cure of this fever, yet young perſons and children, often ſoon recover after being once blooded and purged, and require no more purging, the fever being conquer'd by the firſt cathartic: whereas, on the contrary, it is ſometimes neceſſary to purge oftener than we have intimated above. For it happens, tho' not frequently, that the patient relapſes in a few days after recovering by this method, occaſioned by a freſh ſupply of febrile matter, which, however, is ſoon carried off by repeating the purgative a fourth time. But a return of this fever, when it is treated by this method, ſeldom happens, unleſs it be cauſed by the *aphthæ*, ſucceeding the former fever, now come to their height: which fever is, in reality, only ſymptomatic, and often accompanied with a hiccup at intervals, that continues alſo ſome days after the fever is gone off, and at length ceaſes ſpontaneouſly, as the patient recovers ſtrength; which is well worth noting, inaſmuch as the hiccup happening at the declenſion of this fever, is no way dangerous, unleſs ſeveral medicines be over-officiouſly and ineffectually adminiſtred, in which caſe it proves fatal. But both the *aphthæ* and hiccup, or either of them, if they do not go off ſpontaneouſly, but prove obſtinate, readily yield to the *bark*; an ounce of it being made into an electuary, or pills, with a ſufficient quantity of the *ſyrup of red poppies*, and taken in the manner I formerly directed in my epiſtle to Dr *Brady*, drinking a draught of whey after every doſe (*u*). I have found this the ſureſt medicine in this caſe, provided it be not rendered ineffectual by the patient's keeping his bed, which too often happens.

11. On the intermediate days of purging, I ſometimes preſcribe the following, or the like remedies.

be firſt cleanſed, as the apprehended that the emptied veins would attract the morbid humours from theſe parts, as will appear upon conſulting *Sennertus*, *Foreſtus*, and other medicinal writers. *Van Swieten Comment. in Aphor. Boerh. Vol.* 2. p. 32.

Dr Barker, *in his eſſay on the Agreement betwixt Antient and Modern Phyſicians*, has ſome uſeful cautions and obſervations relating to bleeding in acute diſtempers, which are well worth the reader's notice.

(*u*) *See pag.* 279. *par.* 21.

A cooling electuary.

Take of the conſerves of wood-ſorrel, and of hips, each an ounce; conſerve of barberries, half an ounce; cream of tartar, a dram; ſyrup of lemons enough to make them into an electuary; of which the quantity of a nutmeg is to be taken thrice a day, with ſix ſpoonfuls of the following julap after each doſe.

A cooling julap.

Take of the diſtill'd waters of purſlain, lettuce, and cowſlips, each three ounces; ſyrup of lemons, an ounce and half; ſyrup of violets, an ounce: mix the whole together for a julap.

Or,

Another.

Take of ſpring-water, a pint; the diſtill'd water of roſes, lemon-juice, and fine ſugar, each four ounces: boil them together over a ſoft fire, till the ſcum be quite clear'd away. Let three ounces of it be taken at pleaſure.

I add no ſpirit of vitriol to any of theſe medicines, tho' it is very cooling, by reaſon of its remarkable ſtyptici-ty, whence it is improper in all diſeaſes requiring to be cured by purgatives; to ſay nothing here of the mineral nature of this ſpirit.

Sweating not to be depended on in this fever, and therefore not to be promoted.

12. It frequently happens, eſpecially in the declenſion of this fever, that the patient, when treated in this manner, ſweats now and then ſpontaneouſly, in the night, which greatly abates all the ſymptoms; but notwithſtanding, as ſuch ſweats are not to be depended on, the above-mentioned method muſt by no means be diſcontinued, becauſe, if thoſe ſweats ſhould be promoted longer, the fever, which had been in ſome meaſure check'd by the preceding purgatives, will increaſe again. For, if the ſweat be prolonged beyond that ſpace of time, wherein the febrile matter, prepared by due concoction, is entirely carried off, the following ſweats will do nothing but raiſe a freſh inflammation. Hence, tho' thoſe ſweats which flowed ſpontaneouſly, might, perhaps, be critical, with reſpect to the expulſion of the febrile matter, fitted to be carried off, yet the ſubſequent ſweats may be only ſymptomatic, and ſo do more miſchief than good. In ſhort, the gentle warmth of the bed in the night ſeaſonably favours the ſweat which flows ſpontaneouſly at that time, and, for this reaſon, the patient ſhould have no more, nor thicker

ker clothes laid on him than he uſually had when in health, and no heating medicines ſhould be given to him, only let him lie later than ordinary the next morning, and afterwards perſue the methods of cure above delivered.

13. The diet in this caſe ſhould be water-gruel, or barley-gruel, and now and then a roaſted apple, and after the ſecond purge, weak chicken broth. I order ſmall beer to be drank cold for common drink, and the *white decoction*, made by boiling an ounce of burnt hartſhorn in three pints of ſpring water, afterwards ſtraining off the liquor, and ſweetening it with fine ſugar. The regimen.

14. I have elſewhere obſerved, that when the patient hath been twice purged, there is no neceſſity to forbid his eating chicken, and the like food of eaſy digeſtion; this indulgence being allowable on account of purging, which otherwiſe could not be granted. Again, after the laſt purge, provided the fever be ſomewhat abated, and not yet entirely degenerated into an intermittent fever, three or four ſpoonfuls of canary may be given every morning, and after dinner, and again in the evening, for ſome days, which may promote the recovery of the patient's ſtrength, and prevent the fever fits.

15. As this kind of fever is more apt to ſeize the head than any I ever yet ſaw, and cannot be removed thence without great difficulty and danger, I adviſe my patients to lie without their clothes only a-nights; but if they are ſo much debilitated by the diſeaſe that they cannot ſit upright, I allow them to lie down upon the bed, or a couch, with their clothes on, and the head a little high: neither do I ſuffer a greater fire to be kept in the room, than they were uſed to, whilſt in health. Sitting up a days recommended.

16. This regimen is not only to be ſtrictly follow'd from the beginning, in all that have this fever, except in women ſeized with it a few days after delivery; but muſt be indiſpenſably enjoined, when the patient is attack'd with a phrenſy, *petechiæ*, purple ſpots, or any other ſign of a violent inflammation, occaſioned by an over-heating regimen. For, in this caſe, neither bleeding, nor covering the patient thinly in bed, nor the uſe of any kind of cooling liquors will remove the fever, without ſitting up in the day-time, inaſmuch as the heat Eſpecially if the inflammation be violent.

heat of the ſurrounding air, included in the bed by the coverings, puts the blood into too violent a motion, and the ſupine poſture of the body hurries it violently to the head. But in this fever, when a phrenſy comes on from ill management, it cannot be removed immediately, neither is it ſafe to attempt the cure by repeated bleeding and purging, beyond the limits preſcribed, whereas it will at length go off at its own time, and ſpontaneouſly by means of the above-mention'd method (*w*). Nothing, however, ſeconds the removal of this ſymptom more than ſhaving the head, and therefore I always order it, without applying a plaiſter, but only a cap thick enough to ſupply the loſs of the hair, or at leaſt to keep the head warm. By this means the brain is greatly cool'd and refreſh'd, ſo as by degrees to be able to overcome the heat occaſioning the phrenſy.

And in a coma.

17. What hath been ſaid of the phrenſy is alſo applicable to the *coma* ſucceeding this fever, in which the febrile matter, as it happens in that diſorder, is tranſlated to the head, whence, except the whiteneſs of the tongue, no ſigns of a fever appear, ſo that the patient ſeems perfectly free therefrom. In this diſorder, therefore, as well as in the former, purgatives, ſudorifics, bliſters, and the like remedies, are not only unſucceſsfully uſed, but do much hurt: for ſuch evacuations oftener kill then cure here. Having, therefore, uſed the general evacuations of bleeding and purging, the cure of this diſorder, tho' it may terrify the attendants, is to be truſted to nature and time. For tho' the patient ſhould be afflicted with a *ſtupor* for ſome days, he will, nevertheleſs, at length recover his health, provided he be not conſtantly kept in bed, but is ſuffered to riſe in the day-time, and lie down on the bed, or couch, with his clothes on. In the mean time, however, it is proper to ſhave the head, and, towards the declenſion of the diſtemper, to give three or four ſpoonfuls of canary twice a-day: but I have treated of this diſorder at large in another place (*x*).

18. The phyſician muſt not be diſcouraged by the fever from making the above-ſpecified evacuations, tho', upon feeling the pulſe, he ſhould perceive a ſtarting,

(*w*) By this means there will be a free circulation carried on by the branches of the external carotid artery, whence a violent attack from this ſymptom will be prevented.

(*x*) *See ſect. v. chap. ii. pag.* 204.

ing, and a convulſive motion of the body, becauſe both bleeding and repeated purging are abſolutely required, and do ſervice in ſome nervous diſeaſes. To prove this, I ſhall relate what I have experienced in a certain kind of convulſion, which is uſually call'd St *Vitus*'s dance, of which I have cur'd five perſons by bleeding and purging at due intervals. And ſince this diſorder opportunely falls in my way, and manifeſtly confirms the truth of what I have aſſerted, I will ſay ſomething concerning it.

St *Vitus*'s dance deſcribed.

19. This diſorder is a kind of convulſion, which chiefly attacks children of both ſexes, from ten to fourteen years of age. It firſt ſhews itſelf by a certain lameneſs, or rather unſteadineſs of one leg, which the patient draws after him like an ideot, and afterwards affects the hand of the ſame ſide, which, being brought to the breaſt, or any other part, cannot be held in the ſame poſture a moment, but is diſtorted, or ſnatch'd by a kind of convulſion into a different poſture and place, notwithſtanding all his efforts to the contrary. If a glaſs of liquor be put into his hand to drink, he uſes a thouſand odd geſtures before he can get it to his mouth; for not being able to carry it in a ſtrait line thereto, becauſe his hand is drawn different ways by the convulſion, as ſoon as it has happily reached his lips, he throws it ſuddenly into his mouth, and drinks it very haſtily, as if he only meant to divert the ſpectators. As this diſorder appears to me to proceed from ſome humour thrown upon the nerves, which, by its irritation, occaſions ſuch preternatural motions, I conceive that the curative indications are to be directed (1.) to leſſen thoſe humours by bleeding and purging, and (2.) to ſtrengthen the nervous ſyſtem. To anſwer theſe ends, I uſe the following method. Firſt, I order ſeven ounces of blood to be taken away from the arm, or ſuch a quantity, whether more or leſs, as beſt ſuits the age of the patient: next day I give half, or a little more, of my purging potion (*y*), according to his age, or his being eaſier or harder to be purged, and in the evening the following draught.

Its cauſe and cure.

Take of black-cherry water, an ounce; compound piony water, three drams; Venice *treacle, a ſcruple; liquid*

A compoſing draught.

(*y*) *See pag.* 31. *par.* 35.

quid laudanum, eight drops: mix them together for a draught.

20. I order the purge to be repeated thrice, with the interpoſition of a day between each time of taking it, and the opiate to be given always in the evening after the operation. Afterwards I preſcribe bleeding and purging, as before. And thus I bleed and purge alternately, till the patient has been blooded three or four times, and purg'd after every bleeding, as often as the ſtrength will admit: for it is to be carefully obſerved, that there muſt be a ſufficient ſpace allow'd between every evacuation, that the patient may be no ways injur'd by them. On the intermediate days I preſcribe the following remedies.

A ſtomachic electuary.

Take of the conſerves of Roman *wormwood, and orange-peel, each an ounce; conſerve of roſemary, half an ounce;* Venice *treacle, and candied nutmeg, each three drams; candied ginger, a dram; ſyrup of citron juice enough to make them into an electuary; of which the quantity of a nutmeg is to be taken in the morning, and at five in the afternoon, drinking after each doſe five ſpoonfuls of the following infuſion.*

A cephalic infuſion.

Take of the roots of piony elecampane, maſter wort, and angelica, each an ounce; the leaves of rue, ſage, betony, germander, white hore-hound, and the tops of the leſſer centory, each an handful; juniper berries, ſix drams; the peel of two oranges: ſlice and infuſe them without heat in ſix pints of canary, and ſtrain it off as it is uſed.

A cephalic julap.

Take rue water, four ounces; compound piony and compound briony water, each an ounce; ſyrup of piony, ſix drams: mix them for a julap, of which let four ſpoonfuls be taken every night going to bed, with eight drops of ſpirit of hartſhorn. Apply a plaiſter of gum caranna, ſpread on leather, to the ſoles of the feet.

21. According as the recovery advances, the foot and hand grow more ſteady, ſo that the patient can bring the glaſs in a ſtraiter line to his mouth, which certainly ſhews how much better he is. But tho', to finiſh the cure, I do not adviſe bleeding more than three

three or four times at moſt, yet purgative and alterative medicines are to be uſed till the patient is quite well. And, becauſe ſuch as have once had this diſeaſe are very ſubject to a relapſe, it is proper to bleed and purge them for ſome days about the ſame ſeaſon the next year, or a little earlier than it firſt began. And I can hardly help thinking but the epilepſy in grown perſons will yield to the ſame method, provided the remedies preſcribed be properly adapted to the age of the ſeveral patients; tho', having ſeldom met with this diſtemper, I have not yet made trial of it (z).—But this by way of digreſſion.—

22. It

(z) Few writers mention this diſtemper, nor is it common: for my own part I have never met with an inſtance of it. Dr *Shaw*, in his practice of phyſic, *vol.* 1. p. 12. takes notice of it, and eſteems it a convulſive diſorder, and exhibits the method of cure as ſuch.

Dr *Pitcairne* informed Dr *Mead* that he remembered to have cured two young women, whoſe fits followed the change of the moon; and that they were of that kind of epileptic fits, which are commonly called St *Vitus*'s dance. Their geſtures were very odd and uncertain, and ſomewhat like dancing: and they were deprived of ſpeech during the paroxyſm. In fine, other phyſicians had tried in vain to cure theſe diſorders by *Sydenham*'s method, for want of attending to their monthly periodical returns. And elſewhere the doctor obſerves that St *Vitus*'s dance is generally called a convulſive diſorder; but he looks upon it to be rather paralytic, and to take its riſe from a relaxation of the muſcles, which being unable to perform their functions in moving the limbs, ſhake them irregularly by jerks. And it is for the moſt part but a ſlight evil, and commonly ſeizes weak habits of body, girls more frequently than boys, and ſeldom adults; wherefore I never found it difficult to be cured by the cold bath, and chalybeate medicines. *Influence of the ſun and moon upon human bodies, tranſlated by* Stack.

Dr *Cheyne* obſerves that it very often ariſes out of an *epilepſy*, eſpecially in young people, when the original diſtemper is overcome, and a greater degree of ſtrength is obtained, tho' ſometimes it is only a *prelude* to that ſevere diſtemper, and may itſelf ſometimes be an original diſeaſe. *Engliſh malady* p. 244.

In his *eſſay on the gout*, p. 113. he further remarks, that it is a caſe of *relaxed nerves*, which happening tho' but ſeldom, yet, has the moſt melancholy appearance: And is not as yet, for ought I know, (he adds) brought to ſo eaſy, and ſo certain a method of cure, as is here laid down. But by treating it after the following manner, I never failed of a ſtanding cure, in all thoſe that came under my care, as ſome now living can witneſs: The party being young and otherwiſe healthy; elſe the proper method for the cure of a *cachexy* was premiſed. To anſwer the firſt intention of the general cure, I order'd a vomit (generally I combined either the *emetic wine* with an infuſion of

22. It ſometimes happens in women ſubject to hyſteric complaints, when the cure hath been attempted by the evacuations above-ſpecified, that the fever continues even after bleeding and repeated purging. And in this caſe its continuance is manifeſtly owing to the commotion of the ſpirits, occaſioned by the evacuations; and, conſequently, if there be no ſigns of a peripneumony or inflammation about the vital parts, the curative indications are only to be levell'd at quieting the tumultuary motion of the ſpirits: for which purpoſe a ſufficiently powerful opiate muſt be given every night, and hyſteric medicines taken twice or thrice a day. Of this kind are pills made of *galbanum*, *aſa fetida*, *caſtor*, and ſimilar ingredients, and julaps of the ſame nature, of which I have ſet down ſome forms in my treatiſe on hyſteric diſeaſes. Furthermore, to recruit the ſtrength, and ſuppreſs the vapours, it is neceſſary to allow ſuch food, both of the ſolid and liquid kind, as is moſt palatable.

23. We have already obſerved, that this fever in the preceding, but eſpecially in the current year, encreaſed every day towards night, when a fit came on like that of an intermittent. The phyſicians, therefore, who had learnt from experience, that all ſuch fevers as did in the leaſt intermit, and thoſe frequently which did not, throughout the courſe of years, from 1677 to the beginning of the year 1685, certainly yielded to the *peruvian* bark, treated this fever with the ſame medicine. But, however rational this procedure was, it nevertheleſs did not ordinarily ſucceed ſo well as in the foregoing years. For having made the ſtricteſt enquiry I could into this matter, I found, that tho' the bark was given in great plenty, yet it ſo ſeldom cured the diſ-

The bark ineffectual in this fever.

of the *Ipecacuanha*, or the *tartar emetic* with the powder of the *root*, wherein the latter adds certainty and expedition; the former force and ſtrength to the operation) to be repeated regularly on the ſame day of the week, for a conſiderable time, till the diſtemper began to decline (and then I lengthened its intervals) together with an *anticachectic* diet, already explained. To anſwer the ſecond intention, I preſcribed for a month, or ſix weeks, on all the intermediate days, a large doſe of *æthiops mineral*, with bath waters to waſh it down. And *laſtly*, after this courſe finiſhed, to anſwer the third intention, I gave an electuary of the *bark*, *orange peel*, powder of *acorns*, and *crocus martis aſtringens*, to brace the nerves inwardly; and ordered cold bathing every other day, for producing the ſame effect outwardly; and the cure ſeldom exceeded three months.

diſtemper, that I ſhould rather aſcribe the patient's recovery to ſome happy termination of it, than to the efficacy of the medicine: ſo entirely it ſeem'd to have loſt the effectually curative virtue it was poſſeſs'd of in the years above-ſpecified, at leaſt, in reſpect of the fever under conſideration, which reſembles a quotidian. But in a genuine tertian, or an intermittent that comes every other day, the bark does as much good now as it ever did. Hence it clearly follows, that this fever totally differed from the fevers of the preceding conſtitution, inaſmuch as the bark avails not at all now, and that it is likewiſe increaſed by wine, cordials, and other heating things; all which agreed well-enough with the uſe of the bark, and the fever itſelf

This fever often ſhews itſelf by gripings or vomiting.

24. It is further to be noted, that this fever throughout the ſummer, eſpecially of the preſent year, wherein it prevail'd, did often ſhew itſelf, not ſo much by the diſtinguiſhing ſigns of a fever, as heat and reſtleſneſs, but by gripings, ſometimes with, and ſometimes without a looſeneſs; whilſt, notwithſtanding the fever of this ſeaſon lurk'd under this diſguiſe, in which the inflammatory exhalations of the blood were not driven as ordinarily to the habit of the body, but thrown off inwardly by the meſenteric arteries upon the *viſcera* of the lower belly, or inteſtines, and ſometimes upon the ſtomach, by the ramifications of the celiac arteries, which exhalations commonly occaſion vomiting, eſpecially ſoon after drinking, or eating. But tho' this fever lies concealed under the kind and form of the ſymptoms above enumerated, it muſt be treated by the general method we delivered above, in the ſame manner as if it had appeared in its own ſhape, and that with reſpect both to bleeding and repeated purging: only it muſt be obſerved, that when the fever affects the ſtomach ſo much as to prevent its retaining a draught, the greater *pil. cochia* muſt be ſubſtituted inſtead of a lenitive potion, two ſcruples of which always makes its way through the bowels: but the pills muſt be taken at four in the morning, ſo that the patient may ſleep after them, and at night an opiate exhibited in a large doſe, *viz.* a grain and half of ſolid *London* laudanum, made into two pills, with as much maſtich, or eighteen, or twenty drops of liquid laudanum, in an ounce of ſmall cinnamon water, or any other generous vehicle. The

ſto-

ſtomach being by this means ſtrengthened, and not irritated by the ſmalneſs of the quantity, will be leſs apt to throw it up. But if the purging draught and diacodium can be retained in the ſtomach, they are to be preferred to the above-mentioned pills and the laudanum, becauſe they produce their effect without heating the body ſo much as the pills.

25. And now having mentioned the gripes, I muſt admoniſh my readers of the great danger which I have frequently found attend the preſcribing mineral waters in any kind of gripes, looſeneſs, or vomiting, or any other diſorder ſuſpected to proceed from a fever. For in a diſtemper of ſo ſubtile and ſpirituous a nature as a fever is, mineral waters invert the order of nature to that degree in every particular, that, inſtead of the ordinary attendants of a fever, they occaſion quite irregular ſymptoms, and in the mean time contribute not in the leaſt towards the cure of the fever, as I have learnt from a long courſe of experience.

Mineral waters bad in the gripes attended with a fever.

26. It muſt, however, be carefully noted, as it may be a means of ſnatching abundance of perſons from imminent death, that, notwithſtanding what hath been already delivered, when the gripes degenerate into a confirm'd dyſentery (which, beſides the gripes, is attended with a diſcharge of a ſlimy matter ſtreak'd with blood downwards) it is apparently very dangerous to treat the diſeaſe by that tedious method, which conſiſts (1.) in evacuating the humours, and (2.) in ſmoothing their acrimony; not to mention the internal uſe of aſtringent medicines of various kinds and forms, and the injection of aſtringent and healing glyſters between whiles; having learnt from experience that a dyſentery is moſt expeditiouſly and certainly cured by checking the flux immediately by *laudanum*. For ſo violent is this diſeaſe, that if the purging be continued when it is confirmed, it is much to be feared it may be increaſed thereby, and by its wonderful ferment laſt longer, whatever methods are afterwards us'd, or, perhaps, prove fatal.

To be treated with laudanum, if they degenerate into a dyſentery.

27. For this reaſon, as ſoon as I am call'd to a perſon in this diſtemper, I give twenty drops of *liquid laudanum* in *plague-water*, *aqua mirabilis*, or the like vehicle, and order the doſe to be repeated twice in twenty four hours; or oftner, if, being given in this quantity

tity and manner, it ſuffices not to eaſe the gripes, and check the bloody diſcharges downwards. But when theſe grow thicker, which is the firſt ſign of the approaching recovery, and the ſymptoms are overcome, I reckon it ſafeſt for the patient to perſiſt in the uſe of the above-mentioned medicine morning and night for ſome days, leſſening the number of drops every day, till there is no more occaſion for them. It muſt alſo be carefully obſerved, that I order the patient to lie longer in bed after taking the opiate, becauſe an erect poſture ſoon diſturbs the head, unleſs ſleep be indulged long enough after it.

The regimen in this caſe.

28. With reſpect to diet, if the patient hath been uſed to wine, I allow him canary well diluted with water, in which a cruſt of bread hath been boiled, which I order to be kept in readineſs for that purpoſe, cold in a proper veſſel. The *white decoction* made with burnt hartſhorn, boil'd in ſpring water, drank plentifully, is alſo beneficial in this caſe. Barley-gruel, or chicken-broth, a poach'd egg, or any thing elſe of eaſy digeſtion, may ſerve for diet in the beginning of the diſeaſe. But, afterwards, we may riſe by degrees to ſtronger liquors, and a more copious and ſolid diet, leſt too ſtrict an abſtinence ſhould cauſe a relapſe, or ſome other ſymptoms, the effects of inanition. It muſt, however, be noted here, that tho' *laudanum* alone overcame the dyſentery of the preſent conſtitution, yet in thoſe years wherein this diſeaſe is epidemic, and prevails more than the reſt, it ſhould ſeem proper to uſe thoſe evacuations, which I have already ſet down in treating of the dyſentery (*l*).

An iliac paſſion from hot medicines in the beginning of a fever.

29. I proceed now to mention another caſe, where a cure can no more be immediately made by that method which ſuits the fever whence it proceeds, than in the confirm'd dyſentery juſt ſpecified. Thus, for inſtance, the patient is ſometimes ſeiz'd with a chilneſs and ſhivering, and fits of heat and cold ſucceeding by turns, which certainly manifeſt an approaching fever, violent gripings come on ſuddenly, occaſioned by the ſpeedy tranſlation of the febrile matter to the bowels, and, inſtead of being blooded and purged, according to our former directions, as he ought to be, he hath recourſe to hot medicines, both internals, and externals, in order to expel the wind, whence he conjectures

(*l*) *See ſect. iv. chap.* 3. *pag.* 151.

the diſorder proceeds; till at length the pain increaſes, and being by its long continuance deeply fixed in the bowels, begins to cauſe an inverſion of their periſtaltic motion (whereby, according to the law of nature, every thing ſhould be protruded downwards) and a great inclination to vomiting; the diſeaſe now terminating in the iliac paſſion. In this caſe, I ſay, the phyſician can perſue the method of cure, which the fever, the primary cauſe of this ſymptom requires, no further than to order a ſingle bleeding in the arm; inaſmuch as all purgatives, how often ſoever repeated, ſoon become emetic, and by this means increaſe the inverted motion of the bowels; neither the ſtrongeſt cathartics, nor the leaſt part of them, being able to force their way thro' the inteſtines, and procure a ſtool.

How to be treated.

30. Here, therefore, I conceive it moſt proper to bleed firſt in the arm, and an hour or two afterwards to throw up a ſtrong purging glyſter; and I know of none ſo ſtrong and effectual as the ſmoak of tobacco, forced up thro' a large bladder into the bowels by an inverted pipe, which may be repeated after a ſhort interval, if the former, by giving a ſtool, does not open a paſſage downwards. But if the diſorder yields not to this remedy, 'tis neceſſary to give a ſtronger purgative, tho' the making way by theſe means be attended with extreme difficulty.

Strong purging pills.

Take of the pills of two principal ingredients, thirty five grains; ſweet mercury, a ſcruple; balſam of Peru, *enough to make the whole into four pills; to be taken in a ſpoonful of ſyrup of violets, drinking nothing after them for fear of their coming up.*

If theſe pills be thrown up, give twenty-five drops of *liquid laudanum* in half an ounce of *ſtrong cinnamon water* immediately, and repeat the doſe in a few hours; but as ſoon as the vomiting and pain of the bowels are abated by this remedy, give the above-mentioned purge again, for it will be kept down by the *laudanum* now, and at length finiſh its operation. If the vomiting and pain, however, ſhould return as ſoon as the effect of the opiate is worn off, and the cathartic lodge in the body; then, laying aſide all hopes of opening a paſſage this way, we muſt return to the uſe of the opiate before

fore deſcribed, and repeat it every fourth or ſixth hour, till the bowels be quite free from pain, and their natural motion downwards of courſe reſtor'd, when the cathartic, which had hitherto been ſtopt in the body by the oppoſite motion of the inteſtines, will operate in the uſual manner; tho' the repeated uſe of opiates ſhould ſeem to have a contrary effect. An inſtance of this I met with very lately in a gentleman afflicted with a violent iliac paſſion, which was afterwards ſucceeded by *aphtbæ*, occaſioned by an over-long retention of the morbid humours, and rough purgatives in the habit; but they were readily enough cured by the *peruvian* bark, and the frequent uſe of the following gargariſm.

Take of verjuice, half a pint; ſyrup of raſp-berries, an ounce; and make a gargariſm. A cooling gargariſm.

31. But when theſe paſſages have recover'd their ordinary natural openneſs, purgatives may be omitted for ſome days, till the diſturbance lately raiſed in the bowels be entirely quieted, which ſpace of time may be advantageouſly enough allow'd for diluting, cooling, and ſmoothing the ſharp humours; which being done, if the leaſt ſigns of a fever ſtill remain, purgatives muſt be exhibited every other day, as above directed.—And let this ſuffice for the cure of this diſorder (*m*).

32. If a child be ſeized with this fever, two leeches muſt be applied behind each ear, and a bliſter between the ſhoulders, and it muſt be purged with an infuſion of rhubarb in beer. And if the fever ſeems to intermit after purging, give the julap made with the *peruvian* bark, above ſet down (*n*). Children, how to be managed in this fever.

33. It is further to be noted, that tho' children are as ſubject to this kind of fever, as grown perſons, and conſequently ought to be cured by the ſame method; yet leſs blood muſt be taken away according to their age, to which purging likewiſe ought to be adapted, and perhaps need not be ſo often uſed: the diſtempers of children and young perſons frequently yielding to the firſt or ſecond purge. Nevertheleſs, it ſhould be well conſider'd whether the fever which is treated in this manner does certainly belong to this conſtitution, or is of a different kind; which ought likewiſe to be

(*m*) *See* p. 46, *note* (*d.*) (*n*) *See pag.* 282. *par.* 29.

attended to with the ſame exactneſs in all conſtitutions of years. For it is commonly known that children are often ſeized with fevers from dentition, which are not eaſily diſtinguiſhed from thoſe of another kind. And, for my own part, I have been long diſſatisfied with reſpect to the cure of theſe fevers; nor could I be perſuaded, till of late years, that any of thoſe who were committed to my care, were recovered ſo much by art as by accident, till having been often informed of the ſucceſs of a medicine not very famous, but rather little eſteem'd for being in common uſe, I likewiſe order'd it, and found it ſucceeded better than any I had ever experienced before. The medicine I ſpeak of is three or four drops of *ſpirit of hartſhorn*, according to the age of the child, given in a ſpoonful or two of *black-cherry water*, or any proper julap, every four hours, to a fifth or ſixth time (*o*).

A fever from dentition cured by ſpirit of hartſhorn.

34. Children are ſubject to another very troubleſome diſorder, which differs much from the fevers of various conſtitutions of years, and from that laſt-mentioned: It is a kind of hectic, which holds them a long time, and they languiſh with little heat, a loſs of appetite, and a waſting of the whole body. In this caſe I have recourſe to the following plain method. I order two drams of good *rhubarb*, ſlic'd thin, to be infuſed, in a glaſs bottle well-cork'd, in a quart of ſmall-beer, or

A hectic in children cur'd by an infuſion of rhubarb in ſmall beer.

(*o*) The ſymptoms accompanying dentition ſhould ſeem to proceed from the tenſion, puncture, and laceration of the nervous membranes of the gums, becauſe upon dividing them with an inſtrument to make way for the teeth, they ſoon ceaſe: Abundance of children die of this diſorder.

Spirit of hartſhorn, tho' a good medicine in convulſions from dentition, will not always anſwer the end, as they may proceed from various cauſes and conſequently require different remedies; and for the ſame reaſon it will not always remove the fever. For evacuations are neceſſary in caſe of repletion, gentle laxatives in caſe of coſtiveneſs, which often occaſions convulſions, and in a looſeneſs, aſtringents by the mouth and glyſterwiſe having firſt given a mild purgative of rhubarb, with a drop or two of any carminative oil: teſtaceous powders are likewiſe good here.

Neither are the gums in the mean time to be neglected, but if ſwell'd, inflamed, thin and whitiſh on the upper part to be fomented often with an emollient fomentation, and anointed with a liniment made of ſperma ceti, ſyrup of white poppies, oil of ſweet almonds, and a little nitre; and theſe not relieving, a paſſage muſt be made for the teeth to come out, by cutting the gums with a proper inſtrument. A warm regimen, and heating medicines are prejudical.

or any other liquor which the child uſes for common drink, to be drank in the ſame manner both at meals and at other times. And this being finiſh'd, I order another quart to be pour'd on the ſame rhubarb, and this being alſo drank, I add a third quart of liquor to it, after which the rhubarb loſes its virtue, and the child generally gets well. But leſt the firſt infuſion ſhould have too much of the purgative quality of the rhubarb, and operate too ſtrongly, it is better, after having drank half the liquor, immediately to add another pint to the remainder; but no more freſh beer muſt be afterwards added, till the whole quantity be uſed (*p*).

35. But to return to the fever under conſideration, *viz.* that of the preſent conſtitution: it muſt be carefully obſerved in this kind of fever, in the ſame manner as in the rheumatiſm, and ſeveral other diſtempers, only curable by evacuations, that if we obſtinately perſiſt in the uſe of the above-mentioned evacuations, till the ſymptoms go quite off, the diſeaſe will often prove fatal. For it is not uncommon to find ſome ſlight ſymptoms remain a-while, even after the diſorder vaniſhes, which, notwithſtanding, do not endanger a relapſe, inaſmuch as they go off by degrees ſpontaneouſly, as the patient recovers. In effect, theſe ſymptoms are frequently nothing more than the genuine product of the repeated evacuations, by which the phyſician endeavoured to cure the diſeaſe, and partly proceeding from the emptineſs occaſioned by the patient's abſtaining from his common food and liquors: all which, when they affect ſuch ſubjects as are much debilitated, and in a manner worn out with diſtempers, give riſe to vapours, as in women, and manifeſtly from the ſame

Evacuations not to be continued in this fever till the ſymptoms go quite off

(*p*) In this diſorder it ſhould ſeem proper to take away blood in a ſmall quantity, and adminiſter teſtacious powders, along with ſalt of wormwood and nitre, in a ſmall doſe. The diet ſhould be ſmooth, nouriſhing, eaſy of digeſtion, and moderately cooling: riding on horſeback every day, if the weather will permit, and warm bathing, uſed between whiles, are good aſſiſtants in the cure. The infuſion of rhubarb is, however, no contemptible medicine, but may not perhaps be ſufficient to anſwer the purpoſe alone: it may be uſed occaſionally during the courſe here preſcrib'd.

The rhubarb infuſion may be mended by adding a few coriander ſeeds bruiſed, and raiſins or liquorice root to ſweeten it.

cauſe, namely the weakneſs and low ſtate of the animal ſpirits. For this reaſon, therefore, after uſing ſuch evacuations as are ſufficient to remove the diſeaſe, a judicious phyſician ought to forbear the unreaſonable uſe thereof, and wait a-while to ſee what time will contribute to this end, which frequently proves the beſt and moſt ſucceſsful phyſician in conquering theſe ſlight ſymptoms; and I have, indeed, often known them go off in the declenſion of ſuch a diſeaſe, without any thing more than an opiate, taken two or three nights running (*q*).

The author's method either cures this fever, or brings it to intermit.

36. The method juſt commended is the beſt I ever tried in curing this fever; and if it fails of effectually removing it, at leaſt brings it to intermit, and then it always yields to the bark. But as purging, as it is here directed, in order to cure this fever, may perhaps ſeem detrimental to ſome perſons, I aſſert, from experience, that nothing cools ſo much and ſo ſurely, as purging after bleeding, which ſhould be uſed firſt in all caſes (*r*). For tho' a purge, whilſt it operates, may for the preſent, raiſe a greater commotion in the blood and juices than there was before, and of courſe increaſe the fever, yet that miſchief will be much over-balanced by the immediately ſubſequent benefit. For experience ſhews, that purging after bleeding, checks a fever ſooner and better than any other remedy whatſoever, inaſmuch as it carries off the foul humours whence the fever originally proceeded, which, ſuppoſing them not to have been vitiated before, are at length inflam'd, concocted, and thickened by the heat of the fever, and ſo contribute to render it more laſting; and likewiſe, as it makes way for an opiate, which operates with more ſpeed and ſafety, than if the morbid humours, which might otherwiſe leſſen its virtue, had not been expelled by purging.

Sweating here leſs certain and more tedious, and not void of danger.

37. Whereas, on the contrary, the method which conſiſts in carrying off the febrile matter thro' the pores of the ſkin, is not only leſs certain, but more troubleſome and tedious, as prolonging the diſeaſe ſeveral weeks, and bringing the patient's life into imminent danger; and, ſuppoſing he at length happens to eſcape death,

(*q*) Dr *Barker* highly applauds our author's caution concerning evacuations deliver'd in this paragraph, and concludes with heartily wiſhing it were engrav'd upon every phyſician's mind.

(*r*) *See pag.* 21. *par.* 14.

death, reduces him to the mortification of taking a multitude of medicines, during the long continuance of the fever, to remove thoſe ſymptoms which proceed from ill management, by attempting to cure it by an extremely hot regimen and heating medicines, which of its own nature requires the cooleſt of both kinds. And thus, while men of unſound judgment tie themſelves up to follow rules of art, as they are, falſely, term'd, deſpiſing the contradictory teſtimony of their ſenſes, and perplexing the cure by their hurry and apprehenſion, they change a diſeaſe, which of itſelf goes off in a little time and eaſily yields, into a laſting and difficult diſorder.

38. For theſe reaſons, therefore, I hope I may aſſert upon good grounds that the method of cure above delivered, which conſiſts in bleeding and purging, is the moſt effectual one to conquer moſt kinds of fevers. Sweating, is indeed, properly ſpeaking, nature's method of expelling the febrile matter, and beſt adapted to the end, whenever nature unaſſiſted firſt digeſts the morbid matter, and, after it is ſufficiently concocted, carries it off gently thro' the pores; which ſucceſsful manner of curing fevers by nature, having been often obſerved by practical phyſicians, the theoriſt thence took occaſion to make this rule, *that all fevers may, and ought to be cured only by ſweating* (*s*). The method above recommended beſt in moſt fevers.

39. But admitting this concluſion, it is manifeſt that art, how nearly ſoever it may ſeem to imitate nature, cannot always certainly cure fevers by ſweat. For (1.) art is unacquainted with the manner of duly preparing the morbific matter for expulſion; and tho' this were no ſecret, yet there are no certain ſigns, indicating its due preparation; whence the fitteſt time of raiſing a ſweat muſt needs likewiſe be unknown. And ſure none but an obſtinate perſon will deny it to be highly dan- Difficulty of curing fevers by ſweat.

(*s*) *Van Helmont*, an arrant enthuſiaſt in phyſick, confidently maintain'd this aſſertion, and it may be our author glances at him and his wild theory in this place; be that as it will, the doctrine is pregnant with mighty evils; for all fevers cannot be treated undiſtinguiſhingly in this manner, without great danger; not inflammatory ones certainly, as this would be adding oil to the flame; nor colloquative ones, for in theſe the patients melt too faſt already; nor ſlow ones, leſt nature already greatly debilitated ſhould ſink under an evacuation, which in this ſtate could be ill ſupported.

gerous to excite ſweat inconſiderately, before the due concoction of the febrile matter, as the tranſlating the unconcocted matter to the brain muſt increaſe the diſtemper. Beſides, as I have elſewhere obſerved, the judicious aphoriſm of *Hippocrates*, viz. "*that concocted* "*and not crude matters are to be evacuated*," ſeems to relate more to ſweating, procur'd by art, than to purging. For a man muſt be but little converſant in the practice of phyſic, not to know what numbers of perſons are injur'd every day by old women and unſkilful pretenders to medicine, by this prepoſterous uſe of ſudorifics; it being cuſtomary with them, when a perſon complains of chilneſs and a pain of the head and bones, which are the general fore-runners of a fever, to put him to bed immediately, and uſe their utmoſt endeavours to promote ſweat. But this ill-tim'd attempt is ſo far from preventing the fever, which might perhaps have gone off ſpontaneouſly, or upon taking away a little blood, that, contrariwiſe, it is much increaſed thereby, and becomes a laſting and inveterate diſeaſe.

40. (2.) It is further to be obſerved, that as thoſe ſweats which appear ſpontaneouſly in the beginning of the fever are entirely ſymptomatic, and not at all critical, ſo thoſe, likewiſe, which are forced out at this time by ſudorifics, do generally forward the cure no more than the former, which avail nothing to this purpoſe. (3.) Again, as the proper time of promoting ſweat is not known, ſo neither can we tell how long we ſhould perſiſt in this way; for if the ſweat be continued beyond the due time, that is, longer than is requiſite to carry off all the morbific matter, the waſte of thoſe fluid particles which ſhould ſerve to dilute and cool the blood, will be a means of prolonging and increaſing the fever. Hence, therefore, the precariouſneſs of this method appears; whereas, on the contrary, the phyſician hath it in his power to regulate the other method, which conſiſts in expelling the febrile matter by bleeding and purging, as he ſhall judge moſt convenient. (4.) Furthermore, this method deſerves the preference for this reaſon, namely becauſe it will do no miſchief, tho' it ſhould fail of curing; whereas ſudorifics are pernicious, unleſs they complete the cure: for the warmth of the body, when a perſon hath been kept in bed ſome time contrary to his uſual cuſtom,

not

not to mention cordials, which are always adminiſtered in this method of cure, diſturbs the animal œconomy, and cauſes convulſive motions of the limbs, and other irregular ſymptoms, which cannot be deſcribed, becauſe they do not come under the hiſtory of the diſeaſe, as is common in ſeveral ſymptoms in all diſeaſes, but proceed originally from the tumult and diſorder ſuper-induced, which frequently oppreſs nature when the diſtemper is treated according to this method: all which are ordinarily aſcrib'd to I know not what malignity.

The miſtaken notion of malignity, how fatal to mankind.

41. The invention of the term, or opinion of malignity, has been far more deſtructive to mankind, than the invention of gun-powder. For, as thoſe fevers are principally entitled malignant, which are found moſt inflammatory, hence phyſicians have recourſe to certain cordials and alexipharmics, in order to expel the imaginary poiſon by the pores; for ſo it muſt be call'd, unleſs they had rather trifle about words, than propoſe in earneſt what may be underſtood; and upon the ſame foundation they have adapted the warmeſt regimen and medicines to thoſe diſeaſes which chiefly require the reverſe. This in reality appears manifeſtly enough in the cure of the *ſmall-pox*, which is one of the moſt inflammatory diſeaſes, as well as of other fevers; phyſicians having, perhaps, been led into this miſtake by the *petechiæ*, purple ſpots, and the like ſymptoms, which in moſt ſubjects proceed originally from an inflammation ſuper-induced upon the blood, already overheated by the fever: becauſe they ſeldom come out ſpontaneouſly, except in the beginning of the *plague*, or that ſort of confluent *ſmall-pox*, attended with the higheſt inflammation. In this kind, indeed, the purple ſpots ſhew themſelves in different parts of the body, intermix'd with the eruptions, at their coming out, and are accompanied at the ſame time with a flux of blood from the lungs, or urinary paſſages, and a cough. if the fever be ſo high as to put the blood into a very violent motion, and cauſe it to burſt the veſſels, and empty itſelf into the cavities of the body. And tho' the purple ſpots in this fever proceed not from ſuch a conſiderable heat of the blood, as that which occaſions ſuch bleedings; yet they are produced by the ſame inflammation, with this difference only, that it is not ſo violent,

Prov'd from reaſon.

lent, and when not accompanied with ſuch a flux of blood (the only ſymptom in the ſmall pox which hitherto baffles the art of medicine) eaſily yield to a cooling regimen.

42. But if it be infer't'd, that there is ſome malignity in the caſe, not only from the purple ſpots, but alſo from finding the ſymptoms of the fever milder ſometimes than ſhould ſeem agreeable to its nature, whilſt, notwithſtanding, the patient is more debilitated than could be expected for the time; I anſwer, that all theſe ſymptoms only proceed from nature's being in a manner oppreſs'd and overcome by the firſt attack of the diſeaſe, ſo as not to be able to raiſe regular ſymptoms, adequate to the violence of the fever; all the appearances being quite irregular. For the animal œconomy being diſorder'd, and in a manner deſtroy'd, the fever is thereby depreſs'd, which in the true natural order generally riſes high. I remember to have met with a remarkable inſtance of this ſeveral years ago in a young man I then attended; for tho' he ſeem'd in a manner expiring, yet the outward parts felt ſo cool, that I could not perſuade the attendants he had a fever, which could not diſengage and ſhew itſelf clearly, becauſe the veſſels were ſo full as to obſtruct the motion of the blood. However, I ſaid, that they would ſoon find the fever riſe high enough upon bleeding him. Accordingly, after taking away a large quantity of blood, as violent a fever appear'd as I ever met with, and did not go off till bleeding had been uſed three or four times (*t*). And this may ſuffice, with reſpect to theſe particulars.

And experience.

43. But if the reaſons alledg'd be not ſufficient to prove that I am certainly right in what I have aſſerted, yet, if experience teaches me that this fever does not readily yield to ſweating, it is enough for my purpoſe, ſince it is not reaſoning, but experience, that ſhews what ſorts of fevers will yield to, and ought to be cur'd by ſweat, and what kind by other evacuations. And, indeed, no judicious perſon, who is ſufficiently acquainted with the nature of men and things, would haſtily embrace

(*t*) In ſuch a caſe, tho' the fever is on the point of increaſing, yet moſt of the ſymptoms are deceitfully quiet; but the latent violence of the diſeaſe is manifeſt enough to a ſkilful phyſician, when he finds the ſtrength of the patient more diminiſh'd than it ought to be for the time it has laſted.

embrace the ſentiments of another perſon, tho' of the greateſt authority in matters of meer ſpeculation, not demonſtrable by any certain experiment. Such a one ſhould reflect, that there is ſo much difference and ſubtilty in arguments, that tho' a theory may be propoſed by a perſon which ſhall appear to be founded upon ſuch ſolid reaſonings as to command the aſſent of all that are preſent, yet, ſoon after, another perſon of greater abilities, perhaps, coming to conſider the hypotheſis that ſeem'd ſo well eſtabliſh'd, ſhews its inconſiſtencies, and clearly proves, by more cogent arguments, that it is no more than an imaginary notion ,not the leaſt trace of it being diſcoverable in nature, and ſubſtitutes a new and ſeemingly more probable and artful hypotheſis in the room of it, which, notwithſtanding, meets the ſame fate as the former, as ſoon as ſome third perſon, as much ſuperior in parts to the ſecond, as he was to the firſt, ſtands up to oppoſe it. And there will be no end of the diſpute, till we come at length to him, who is arriv'd at the height of human knowledge: but the great difficulty of finding this perſon, and diſtinguiſhing him from the reſt of mankind, will ſoon appear to any one, who is not ſo extravagantly vain, as to lay claim to the character himſelf. For, as it is no improbable ſuppoſition, that there is an almoſt infinite number of beings in thoſe vaſt orbs plac'd above us in different parts of the firmament, poſſeſs'd of much more penetration than weak men; ſo it is not certainly known, whether the brain, which is the repoſitory of thought, may not be ſo form'd by nature, that mankind cannot ſo clearly diſcover what is abſolutely true, as what is beſt adapted to their nature. But we ſhall ſay no more to thoſe phyſicians, who regulate their practice more by idle ſpeculations, than experience founded on the ſolid teſtimony of the ſenſes (*u*).

44. But

(*u*) Truth and nature being always the ſame, to be convinc'd of the vanity of ſyſtems, we need only attend to the vaſt number that have been invented, and the revolutions they have all undergone. Thoſe which prevail at preſent, were either not invented fifty years ago, or at leaſt were little, or not at all followed at that time,; tho' it muſt be allow'd that nature was the ſame then, ſhe is now: and doubtleſs theſe will meet the ſame fate with thoſe which have gone before them. Upon a cloſe enquiry, it will be found that moſt of our real knowledge of nature, is the reſult of obſervation and experience only; but as

to

The difference ſtated between the author's and the oppoſite method, ſhewing which is beſt.

44. But if it be objected here, that this fever frequently yields to a quite contrary method to that I have laid down; I anſwer, that the cure of a diſeaſe by a method which is attended with ſucceſs only now and then in a few inſtances, differs extremely from that practical method, the efficacy whereof appears both from its recovering greater number, and all the practical phenomena happening in the cure. Thus, for inſtance, abundance of perſons have recover'd of the ſmall-pox, notwithſtanding their having been treated by a hot regimen and heating medicines; and, on the contrary, ſeveral have recover'd by the oppoſite method. Now, by what means is this diſpute to be decided; and which of the two methods is to be preferred? The ſureſt way of judging in this caſe, I take to be this: if in perſuing the former method, I find, that the more I heat the patient, the more I increaſe the fever, reſtleſneſs, delirium, and other ſymptoms; and, on the contrary, if it ſhould appear, upon being moderately cooled, that he is ſo much the calmer and freer from the fever, and other ſymptoms; and further, that by keeping the fleſhy parts in ſuch a degree of warmth as beſt ſuits with the riſing and ſuppuration of the puſtules, they grow larger and fuller, than by keeping him overhot: Having, I ſay, thus ſtated both caſes, I conceive it cannot be doubted which method merits the preference.

45. So likewiſe, if I find, in the fever under conſideration, that the more the patient is heated, the more he is diſpoſed not only to a frenzy, purple-ſpots, *petechiæ*, and the like ſymptoms; but further, that the fever by this procedure is attended with all ſorts of irregular and violent ſymptoms: And, on the other hand, if it

to the manner of accounting for her operations, it hath ever chang'd with the times, and will continually do ſo; ſo that little ſtreſs is to be laid on it, ſo far as it is unſupported by fact, and the teſtimony of the ſenſes.

We cannot help obſerving further here, that our great author is not always conſiſtent with himſelf; otherwiſe he would not ſo frequently attempt to account for diſtempers and their ſymptoms, and make ſuch notorious miſtakes in theory, which he ſo juſtly, in this and many other paſſages of his works, cenſures and condemns. But his judicious practical obſervations are an over balance for all his errors of this kind, few or none of which had any influence on his practice which has fixt his reputation upon too ſure a foundation to be ſhaken by theſe occaſional and trivial inadvertences.

it appears that another patient, by treating him according to the method here propoſed, is quite free from theſe ſymptoms, reaſon ſhews that the latter method of practice is much the beſt; tho' both the ſubjects recover by ſuch different treatment. But if more recover by this method than the other, the diſpute is ſo much the more eaſily determined; which, however, I will not go about to decide, for fear of ſeeming too partial to my own opinions.

46. And theſe particulars ſhall ſuffice concerning this kind of fever; how long it will laſt I know not, and cannot tell but it may be ſome ſubtile and ſpirituous beginning of that depuratory fever, now aboliſhed, which the dreadful plague ſucceeded. In reality, there are ſome phenomena which rather incline me to embrace this opinion, inſomuch as not only intermittent fevers, eſpecially quartans, ſtill continue in a few places, but likewiſe ſome of thoſe continued fevers do ſometimes turn to intermittents, eſpecially during this autumn; not to mention now the increaſe of this fever towards night, which a little reſembles the fits of intermittents: And what further confirms me in this ſentiment is, that perſons in this diſorder are much ſubject to vomiting. I do not, however, pretend to abſolute certainty in this point, for want of knowing how the depuratory fever began, as I intimated before in the following terms: 'How long this continued fever had pre-
'vail'd, I cannot ſay, my time having been hitherto
'ſufficiently taken up in obſerving the general ſymp-
'toms of fevers, and not having yet found that fevers
'might be diſtinguiſhed with regard to the various
'conſtitutions of different years, or the different ſea-
'ſons of the ſame year (*w*).'

(*w*) *See page* 14, *par.* 4.

A DISSERTATION

Concerning the putrid, or ſecond Fever, happening in the Small-pox.

1. AS my declining age, and the ill ſtate of health I have long labour'd under, may poſſibly deprive me of the opportunity of publiſhing ſome recent obſervations I have made (tho' too late in my life) concerning the *ſecond* fever happening in the *ſmall-pox*, I truſt the reader will not be diſpleaſed to find them added here, tho' they have not the leaſt relation to the diſtemper we have juſt been treating of.

Wherein the diſtinct and confluent ſmall-pox differ.

2. I have long ſince ſhewn, in another place, wherein the great difference conſiſts between the diſtinct and confluent ſmall-pox; namely, that the former ſort is ſo void of danger, as to ſtand in need of very little aſſiſtance from medicine, the patient recovering ſpontaneouſly by the help of nature, unleſs he happens to promote ſweat in the beginning, by lying always in bed. For, as I formerly obſerved, when a perſon ſweats freely in the diſtinct ſmall-pox, he thinks himſelf in a very promiſing way, as hoping the malignity of the diſeaſe will be expelled by this means thro' the pores of the ſkin, and, therefore, diligently promotes the ſweat by cordials and a hot regimen, as ſhould ſeem proper; and he purſues this method the more willingly, becauſe it appeared to relieve him in the beginning, and agrees better likewiſe with the ill-grounded opinion of the attendants. But thoſe particles being at length carried off by ſweat, which ſhould have contributed to raiſe the puſtules, and ſwell the face, the conſequence is, that the face, which on the eighth day ought to ſwell, and be inflamed in the intermediate ſpaces, on the contrary appears ſunk, and thoſe ſpaces white, whilſt the puſtules yet look red, and continue elevated even after the death of the patient. The ſweat, which flowed freely to this day, ceaſes ſpontaneouſly of a ſudden, and cannot be raiſed again by the warmeſt cordials; and in the mean time the patient is ſeized with a delirium, great reſtleſneſs, ſickneſs, and a frequency of making urine in ſmall quantities, and dies in a few hours unexpectedly. Whereas he might have recover-

ed,

ed, and not been at all endangered, if he had truſted the cure to nature, without confining himſelf ſtrictly to any regimen *(a)*.

3. But in the confluent ſmall-pox the caſe is very different: For tho' this kind does not terrify the attendants ſo much, and does not in the leaſt endanger life, in the firſt days of the illneſs, unleſs there happens a flux of blood from the lungs, or urinary paſſages at this juncture, yet afterwards, in the declenſion of the diſeaſe, on thoſe days which I formerly obſerved were moſt dangerous, the patient is brought to ſuch an extremity on a ſudden, that whether he will live or die appears equally uncertain and precarious.

4. In the number of thoſe days, I reckon the *eleventh* day incluſive from the beginning of the illneſs, that is, in the mildeſt, but moſt common ſort of the confluent ſmall pox, the *fourteenth* in the middle kind, and the *ſeventeenth* in the worſt ſpecies, which we frequently meet with; tho', it ſometimes, but ſeldom happens, that the patient ſurvives to the *twenty-firſt* day; the eruptions continuing ſo dry and hard to this time, and ſo deeply fixed in the fleſh, eſpecially in the face, as by no art to be brought to fall off *(b)*. But the patient ſeems generally to be firſt endangered on the *eleventh* day, a high fever, attended with reſtleſneſs, and other ſymptoms, coming on then together, which foreſhew immediate death, and ordinarily prove deſtructive, unleſs medicine interpoſes to prevent it. But if the patient out-lives this day, the *fourteenth* and *ſeventeenth* are ſtill to be apprehended; for a very vehement fit of reſtleſneſs comes on every day towards evening, between the *eleventh* and *ſeventeenth*, and there is great difficulty in ſaving the patient. The moſt dangerous days.

5. I have likewiſe ſhewn, that the greater or leſs impending danger, in this ſort of ſmall-pox, proceeds from hence; namely, that the diſtinct ſmall-pox is accompanied with fewer *phlegmons*, or tumors with inflammation, of which kind all puſtules are when they firſt appear, whence of courſe only a ſmall quantity of *pus* is to be taken back into the blood by the circulation, when they begin to ſuppurate; ſo that we need not fear the fever's riſing too high from this quarter, nature Whence the greateſt danger in the confluent ſmall-pox.

(a) *See pag.* 108. *par.* 20.
(b) *See pag.* 370. *par.* 5.

nature being able to preſerve the blood from the taint communicated thereto by ſo ſmall a quantity of matter. Whereas, in the confluent kind, the greateſt part of the body being covered with theſe phlegmons, which afterwards degenerate into abſceſſes, ſo much *pus* is tranſmitted from the veins into the blood on the abovementioned days, in which nature generally brings them to their height, or fit ripeneſs, and ſuch a plenty of putrid *effluvia* inſinuate themſelves into the maſs from the ſurface of the whole body, now in a manner univerſally ſuppurated, that the fever hereby occaſioned oppreſſes nature entirely, and thus the patient dies at length, partly from the fever, and partly from the infection which hath tainted the blood (*c*).

Why a hot regimen and cordials are bad.

6. Since then the ſafety of the patient depends ſo much on the paucity of the eruptions, and the danger, on the contrary, on the abundance of them, both reaſon and common ſenſe intimate that a ſkilful phyſician ought not to force out the variolous matter in a violent manner, at the beginning of the diſeaſe, by a hot regimen and cordials, whence too great an aſſimilation of the morbific matter lodged in the blood is occaſioned, and the whole ſubſtance of the body in a manner changed into ſupplies for the diſeaſe; but ſhould rather uſe all his endeavours to check ſo exceſſive and ſubtile an inflammation. To anſwer this purpoſe, bleeding in the arm is to be firſt performed, if there be the leaſt ſuſpicion that the ſmall-pox, on the point of coming out, will prove of the confluent kind, (1.) either from the patient's being in the prime of life, or (2.) the blood having been inflamed by ſtrong liquors, or (3.) violent pain attacking ſome part of the body, or (4.) laſtly, if the diſtemper be joined with vehement vomiting: And after bleeding a vomit will conduce to the ſame end. But as nothing heats the patient ſo much, and conſequently promotes the too copious aſſimilation of the variolous matter to that degree as lying conſtantly in bed, I always enjoin him to ſit up a-days till the *ſixth* day from the beginning of the diſeaſe, and the *fourth* from the eruption, when all the puſtules appear (*d*). After this time I keep him in bed till the diſeaſe goes off, but neither allow him more, or warmer cloaths,

The method of cure.

Lying always in bed very prejudicial

(*c*) *See pag.* 373. *par.* 6, *&c.*

(*d*) *See pag.* 371. *par.* 12. *pag.* 382 *par.* 22. *pag.* 378 *par.* 28. *pag.* 399. *par.* 31.

cloaths, or ſuffer him to keep a larger fire in his room, than he was accuſtomed to, whilſt in health. In the mean time I permit him to drink freely of ſmall beer, and ſuch other cooling liquors as he likes beſt.

7. But notwithſtanding the moſt cooling regimen be uſed, the patient will often be ſeized with heats, a delirium and reſtleſneſs, for which reaſon I order an opiate to be taken every night earlier than ordinary; this diſtemper being generally attended with a kind of acceſs, or increaſe of heat and reſtleſneſs towards evening. This is the beſt method of preventing the appearance of too many puſtules (whence the moſt danger enſues, as I have ſhewn above) and likewiſe of promoting their filling after the eruption, as well as their due ſuppuration afterwards (*e*).

Why an opiate is to be given every night.

8. It is nevertheleſs to be regretted, inaſmuch as the youthful part of mankind chiefly periſh by this diſeaſe, that the patient, who before was in no great danger, is often ſeized on the *eleventh* day, or ſome one of thoſe days which I have reckon'd the moſt dangerous in the different ſorts of the confluent ſmall-pox, with a high fever, very difficult reſpiration, and great reſtleſneſs, which, theſe and all other helps hitherto diſcovered by medicine not availing, ſuddenly put an end to his life, to the aſtoniſhment of his friends, who, till this fatal period, had hopes of his recovery. In this caſe the phyſician, having done all he could to prevent it, will do his beſt to conquer this ſudden violent turn of the diſeaſe; in order to which let it be well conſidered, that this adventitious fever which happens on the *eleventh* day in the confluent ſmall pox, is a quite different diſtemper from the ſmall-pox and that fever which either precedes the eruption, or ariſes ſometimes from the inflammation of the puſtules, or *phlegmons* at the beginning. For, properly ſpeaking, it is only a putrid fever proceeding from the tranſmiſſion of putrid particles of the puſtules, now in a ſtate of ſuppuration, into the blood, which, being prejudicial to nature, at the ſame time infect the patient, and occaſion a very bad fever (*f*).

What is to be done when the fever comes on, on the *eleventh* day.

It is a putrid fever.

(*e*) *See pag.* 392 *par.* 35, *& ſeq.*

(*f*) The cauſes of this fever are clearly and ſcientifically delivered by Dr *Hillary*, in the 8th chapter of his eſſay on the ſmall pox, to which, therefore, we refer the reader for abundant information and ſatisfaction.

Copious bleeding excellent here.

9. In this caſe, therefore, any prudent perſon will eſteem thoſe the only proper remedies, which will moſt effectually check this ſecond fever, which I call putrid: And nothing does this better than plentifully bleeding, which clears the blood of the morbific particles that nouriſh the diſeaſe. Nor is this practice, in my opinion, in the leaſt contra-indicated by the diſtemper in the preſent ſtate of the eruptions, ſince, if the patient ſhould die at this period, and be interr'd, yet the eruptions being hard and dry, could not ſtrike in, nor grow at all leſs. And, in effect, we have nothing to do now with the ſmall-pox, but with the putrid fever, which is a very different diſeaſe.

The ſucceſsfulneſs of this practice.

10. For theſe reaſons I have had recourſe to the following method with ſucceſs, which I diſcovered ſince I publiſhed my laſt obſervations on the ſmall-pox; neither do I know, or can think of any other that will ſo certainly relieve. When, therefore, the patient is threaten'd with immediate death from the uncommon violence of the ſymptoms without ſpeedy help, whether it be on the *eleventh* day, or afterwards, I order ten or twelve ounces of blood to be immediately taken away from that arm, which hath the feweſt eruptions, and in which, therefore, the vein may be the moſt commodiouſly opened; for tho' opiates, and ſitting up a-days, may be ſufficient in the beginning of the diſeaſe, without bleeding, to conquer the fit which comes moſtly towards evening, yet on theſe days of the ſecondary fever plentiful bleeding alone can be ſafely depended on, this being the ſole means of quieting the preſent tumult. An opiate is, therefore, to be given in a large doſe, in the evening, as before, to which we have recourſe now, as to an effectual refuge, and it is to be repeated from this time morning and night, and ſometimes oftener, as there is occaſion. For it muſt be carefully noted, that the ſymptoms in ſome perſons are ſo very violent, that an opiate given even in a very large quantity cannot overcome, nor even check them in leſs than twelve hours; in which caſe it is indiſpenſably neceſſary to repeat the opiate in the ſame doſe every ſix or eight hours.

An opiate to be given in a large doſe.

11. But as it frequently happens in the declenſion of the diſtemper, partly from the nature thereof, and partly from the great virtue of the opiate, which the circum-

cumſtances manifeſtly required, that the patient becomes ſo very coſtive, as to be in danger of ſuffocation, and that the fever likewiſe riſes ſo high as to leave little hopes of recovery, we muſt ſuit the remedy to the preſent exigency. Accordingly, in this caſe, leſs danger will enſue from taking a gentle purge, than from the fever, much increaſed by the retention of the *fæces*. I have ſucceſsfully ordered here an ounce and half of *lenitive electuary* to be diſſolved in four ounces of ſome ſmall diſtill'd water, for inſtance, *the diſtill'd water of ſuccory, or milk-water*, and taken immediately; and tho' this draught may not operate ſpeedily, on account of the uſual coſtiveneſs in this diſeaſe, and alſo of the long continued uſe of opiates, yet being adminiſter'd in the morning, it ordinarily gives a few motions before night; but if it ſhould not, the opiate muſt be exhibited in the evening, and indeed earlier, notwithſtanding the purge, if great reſtleſneſs, or ſickneſs threaten danger, leſt the patient for want of this aſſiſtance ſhould periſh, whilſt we are waiting for the operation of the medicine. Nor will ſo mild a purge do the leaſt miſchief, tho' it ſhould not work at all: So that if it does not anſwer the expected end the firſt day, repeat it the next, and the latter doſe ſeconding the former, it will ſeldom fail the phyſician. But if it ſhould ſeem to have procured a ſufficient diſcharge for the preſent, and the patient grow better thereupon the ſecond draught may be deferr'd to another time (*g*).

Coſtiveneſs at this time to be remedied by a gentle purge.

May be given with the utmoſt ſafety.

(*g*) Dr *Huxham* aſſures us, that nothing hath ſucceeded better with him for removing this fever, than repeated purgatives, with the addition of *calomel* occaſionally, and interpoſing opiates between whiles. I have not only experienced this method, ſays he, in my own children, but in ſeveral other patients, with conſtant ſucceſs, and in reality ſcarce any other remedy avails. *See his treatiſe de aere & morb. epid. p.* 37. *The philoſ. tranſact.* No 390. *and Dr* Friend's *epiſt. de purgant. &c.*

The intentions of cure, according to Dr *Hillary*, are; (1) to prevent the production and increaſe of theſe acrid cacochymical humors, as much as poſſible. (2.) To hinder the return of the purulent variolous matter from the puſtules into the blood. (3.) To correct and change the morbid condition of the fluids and reduce them as near to their natural ſtate as we can. (4.) To evacuate the redundant quantity of theſe morbid humours; and (5.) to remove the inflammation, whether general or topical; and to ſtop the great tendency of the animal juices to putrefaction. To anſwer theſe ends, he gives ſmooth, blunting, cooling liquids plentifully, recommends opening the puſtules, uſes a cool-

Bleeding and purging may be repeated alternately as there is occaſion.

12. In this manner bleeding and purging may be repeated by intervals, as the fever and reſtleſneſs ſeem to require, till the patient is out of danger. But, with reſpect to purging, that the mentioning it may not prove much more detrimental than beneficial, let it be carefully remembered, that a purge is not to be exhibited till the declenſion of the diſeaſe, namely on the *thirteenth*, or ſome ſubſequent day, and not then, unleſs ſome blood hath been taken away upon the firſt appearance of the ſecond fever (*b*).

Spitting of blood, and *bloody urine* how to be ſtopped.

13. But in order to complete the method of practice in this diſeaſe as far as I am able, I will willingly be at the trouble of communicating a few particulars concerning *ſpitting of blood*, and *bloody urine*, which happen in the ſmall-pox. Both theſe hemorrhages, as I obſerved before, come on at the beginning of the diſeaſe, either before the puſtules appear, or whilſt they only ſhew themſelves in ſome few places, and in the reſt lie thick under the ſkin, and are of that ſort, which would prove moſt confluent, if one of theſe ſymptoms did not cauſe the diſtemper to terminate fatally; whilſt *purple-ſpots* appear in the mean time in ſome parts of the body, and threaten death. But tho' the purple-ſpots may be removed by duly cooling the blood, yet both *bloody-urine*, and a violent *flux of blood from the lungs*, ordinarily foreſhew certain death: Nevertheleſs this dreadful

a cooling glyſter, in the firſt place, and then exhibits a cooling purge, and obſerves that a few ſpoonfuls of a grateful cordial may be given during the operation, to very good purpoſe, with ſoft cooling aceſcents: He likewiſe has recourſe to bleeding, when neceſſary, and accurately determines the caſes wherein it is to be uſed. And if the fever remits or intermits, inſtead of the bark, which he diſapproves, thinks that a ſuitable purge or two, and a liberal uſe of *Elixir vitriol. Mynſichti*, with gentle cardiac bitters, may anſwer the end much better, with a good nutritious diet. *See his eſſay on the ſmall-pox*, p. 105. *& ſeq.*

(*b*) Experience ſhews, that purging may be ſafely and advantageouſly uſed on the *ninth* or *eleventh* day, if the eruptions be then upon the turn, as it is vulgarly term'd, and evacuations be indicated: And bleeding need not be uſed firſt, unleſs ſome particular ſymptom requires it.

In every ſort of this diſeaſe, ſays Dr *Mead*, it is proper to open the body on the decline, that is, on the ninth or tenth day from the eruption; becauſe a putrid fever generally comes on about this time, while the puſtules are drying; or upon the ſubſidence of the ſwelling of the inflamed ſkin, where there is no ſuppuration: which fever cannot be taken off with equal ſafety by any other means. But gentle cathartics alone are to be employ'd in this caſe.

dreadful difficulty may likewiſe be overcome, and life preſerved. For as both theſe ſymptoms proceed from the vehement inflammation, and of courſe the exceeding thinneſs, or diſſolved ſtate of the blood, ſuch medicines as cool and likewiſe thicken the blood, by their binding and incraſſating quality, admirably check theſe bleedings. For this reaſon, after bleeding once plentifully, give an opiate.

Take of the diſtill'd water of red poppies, two ounces; liquid laudanum, fourteen drops; diſtill'd vinegar, three drams; diacodium, half an ounce; mix them together for a draught. Then let the following, or the like remedies, be uſed till the bleeding ſtops. A compoſing draught.

Take of the troches of Lemnian *earth*, Armenian *bole, each a dram; ſeal'd earth, blood-ſtone, dragon's-blood, and prepared red coral, each half a dram; maſtich, gum arabic, each a ſcruple; make them into a fine powder, of which let half a dram be taken every three hours, in a ſpoonful of ſyrup of comfrey, drinking after it four or five ſpoonfuls of the following julap (i).* An aſtringent powder.

(i) The quantity of gum arabic here ordered is ſo very ſmall and trifling, that it cannot be ſuppoſed to contribute in the leaſt degree towards relieving either of theſe dreadful ſymptoms. Whenever, therefore, any ſtreſs is laid upon this medicine, ſeveral ounces of it ought to be taken in a day, along with large quantities of lemon juice, or of ſome mineral acid, for in this caſe there is no time to be loſt.

As I could not any where more commodiouſly inſert the following brief remarks on inoculation, not wholly my own, but partly collected from ſome of the beſt writers on the ſubject, and ranged under proper heads, the reader, I imagine, will not be diſpleaſed to meet with them in this place.

Inoculation defin'd.——By inoculation is meant the making little inciſions, only ſkin-deep, in the arms or legs, and applying ſmall pledgets of lint to them, moiſten'd with variolous matter, and ſecuring them by a bandage.

And this is an operation ſo eaſy, that almoſt every one can do it; whilſt only the ſkilful and ſagacious phyſician is equal to the reſt of the undertaking. For to render it ſucceſsful, there is further requir'd a power of diſcovering a fit body, or diſpoſing one judiciouſly to receive the moſt favourable kind of the ſmall-pox by infuſion; alſo a ſkill in preventing, or remedying all the ill accidents that may poſſibly happen in the courſe of the diſeaſe itſelf.

Advantages of it.——Experience having ſhewn that crude, full and vigorous bodies and ſuch as have been accuſtom'd to

A ſtyptic julap. *Take of the diſtilled waters of plantain, and oak buds, each three ounces; cinnamon water without ſpirit, two*

a free or inflammatory way of living, are generally worſe handled by the ſmall-pox, inoculation hath the advantage of ſingling out, or chuſing the proper ſubjects for a peculiar manner of infection, to operate mildly upon, as well as to a power, by a conduct previous to that infection, to render them in a great meaſure ſuch.

It generally produces a mild diſtinct kind; the contrary extremely ſeldom: and of courſe very rarely a ſecondary fever, which is ſo fatal to multitudes who have the ſmall-pox in the natural way,

Dr *Jurin* has clearly and undeniably proved, that it does not carry off more than one in fifty; whereas, when it is taken in the common way it uſually deſtroys one in ſix, according to the faireſt and exacteſt computation. And, ſome aſſert, that for one that dies of it by inoculation, ten die of it by receiving the infection in the ordinary way.

The practice is now ſo well eſtabliſh'd, and become ſo general, many phyſicians and ſurgeons inoculating their children, that the ſafety, expediency, and advantage of it, cannot with any colour of reaſon be called in queſtion. In *London* the *Middleſex County Hoſpital* was founded for ſuch poor perſons as were ſeized with this diſtemper, and for ſuch alſo as were *freely diſpoſed to be inoculated.* Accordingly, great numbers of perſons of both ſexes and all ages have been inoculated there with the beſt ſucceſs. And in the *Foundling Hoſpital* abundance of children have been inoculated no leſs ſucceſsfully.

Theſe, and innumerable other inſtances, that might be produced, of the ſafety and benefit of inoculation, muſt ſurely much more avail to countenance the practiſe of it, and render it ſtill more univerſal, than all that may be urg'd againſt it can avail to the contrary; though the arguments alledged be ever ſo plauſible and ſpecious. With men of reaſon, temper, and candour, facts will certainly be allowed their due weight and force, and pour that conviction on the unprejudiced mind, which they are ſo irreſiſtibly able to produce. In truth, they are of ſuch a nature, that they will not bend to the paſſions and prejudices of mankind, but are ever too hard for all arguments, and triumph over all oppoſition from every imaginable quarter.

The beſt ſeaſons for it.——Winter and ſpring are by moſt allowed to be the propereſt ſeaſons for communicating the infection, and the *ſmall pox* is generally found to be the mildeſt, and attended with the feweſt bad ſymptoms at theſe times,

The propereſt ſubjects for it.——Thoſe from five years of age up to forty, are the fitteſt; for people of declining years are bad ſubjects for this, or any violent diſtemper—Some judicious ſurgeons are of opinion, that ſucking children are as proper ſubjects for inoculation as any; and aſſure us, that they have inoculated multitudes of ſuch with the beſt ſucceſs —Perſons of a ſallow icteric complexion, and that are often indiſpos'd, are not fit ſubjects for inoculation; as there is reaſon to apprehend that ſuch have unſound viſcera, which

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two ounces; ſyrup of dried roſes, an ounce; ſpirit of vitriol, enough to give it a moderate tartneſs; mix the whole for a julap.

muſt naturally ſubject a patient to internal puſtules, which, if not conſtantly fatal, muſt be commonly ſo. Thoſe of ſallow dark complexions, of what I conceive an atrabilious temperament, with rigid fibres, and a very coarſe tone of voice are improper ſubjects; for from repeated inſtances it appears, that the laſt mentioned circumſtance is one mark of a conſtitution diſpos'd, to the ſeverer degrees of this malady.—In general, the ſubjects for this operation ſhould be choſen of a good habit of body, and free from any apparent diſeaſe

The method of preparation for it.——Different bodies neceſſarily require different degrees and modes of evacuation: ſome may be prepared moſt effectually by alterative medicines, and ſuch gentle evacuants as are eminently ſo. Many will need no evacuation or preparation at all eſpecially ſucking children; and it is even poſſible, that a few who are determined to be inoculated, may, inſtead of phyſic actually want a better plight of body than they enjoy, to become proper ſubjects of it.—Thus, in a puny habit, after a gentle vomit or purge, a light infuſion of the bark, with the addition of a ſmall quantity of red wine taken for ſome time is highly proper, and proves very beneficial, and ſuch may eat once a day ſparingly of the lighteſt kinds of animal food.—In a plethoric habit, bleeding, vomiting, purging, and a low diet are adviſeable.—In groſs or robuſt habits, bleeding and purging, a courſe of æthiops mineral, or cinnabar, with a milk diet for 5 or 6 weeks, is the beſt preparation. Moderate exerciſe and early hours both for riſing and going to bed, and a proper regulation of the non naturals, ſhould be recommended to all ſubjects without diſtinction. Warm bathing, in dry rigid habits, though not recommended by any author on the ſubject, that I have read, muſt certainly be one good preparative; for this will cool, dilute, and relax, the natural conſequence of which ſtate of body is a gentle, kindly, ſmall pox.

Very young ſubjects rarely require bleeding; grown perſons often do, eſpecially the ſanguine, and it may be needful to repeat it if the ſymptoms of invaſion run high.

If from the ſallow complexion and habit of the patient, there is reaſon to ſuſpect a cacochymy of the fluids, and the teguments be harſh and dry, give ſmall doſes of calomel three or four times within the term of preparation (that is a month or ſix weeks before inoculating) and purge it off with lenients.—To the ſanguine and florid, whoſe blood ſeems ſufficiently ſweet or fluid, give only antiphlogiſtic purges:—but forbid both the uſe of any other but white meats, during the whole time of preparation, and of them likewiſe from the time of inoculating.—And, in reality, when there is no reaſon to apprehend that a ſtrict vegetable and fluid diet would ſink the natural ſtrength and ſpirits too much it ſhould be preferr'd and uſed all the time of preparation.

Children, as was ſaid above, ſeldom need bleeding, but ſhould generally take ſome good worm-purges beforehand, leſt the

In the mean time the opiate above preſcribed muſt be given every evening: Emulſions alſo made of the *four greater cold ſeeds*, and *white poppy ſeeds*, are very beneficial (*k*). But after the bleeding is ſtopp'd, the diſtem-

the diſtemper ſhould be encreaſed, or perplex'd by the acceſſion of a worm fever.—And they may likewiſe take a few papers of *Æthiops mineral* and cream of tartar; and ſhould be kept from fleſh the whole time of preparation.

Manner of inoculating.——Raiſe the ſkin of both arms in the diviſion of the muſcles, where iſſues are uſually made, as thin as poſſible, by diſengaging it from the deeper integuments, and running the point of a lancet through it: make a ſhallow orifice, not above the length of one fourth of an inch; but if it be a little longer, it matters not much: then apply two pledgets of lint, as big as ſmall peas, that have imbibed the variolous matter, to the inciſions, and ſecure them with a plaiſter and a ſuitable bandage. In twenty four hours the lint may be taken off, and the orifices dreſſed with the common plaiſter, and a freſh dreſſing applied once in a day or two, or oftener, according as they diſcharge; for if they run conſiderably it will be proper to dreſs them twice a day.

And they may be kept running after the patient is recovered, for a drain, as iſſues, if need be, as long as he pleaſes, with the help of a pea, a ſticking plaiſter and bandage.

I am informed that ſome eminent practicioners who have inoculated great numbers, rather chuſe to make the inciſions in the legs, by which means abſceſſes of the *axillæ* are generally prevented, which often happen when the operation is performed on the arms, and prove very painful and troubleſome to the patient.

The fitteſt time for procuring the *pus*, or variolous matter, is in its ſtate of maturation. It ſignifies not from what kind of ſmall-pox 'tis taken, but 'tis adviſeable to take it from a young, and otherwiſe ſound and healthy ſubject.

Treatment of the inoculated.——From the time the operation is performed, the patient ſhould keep moderately warm, and live temperately.

As to the reſt, as inoculation hardly ever fails giving a mild diſtinct ſort of ſmall pox, the temperate regimen only is generally neceſſary; but if any troubleſome ſymptoms ſhould a riſe in the courſe of the diſtemper, they require the ſame treatment as if the ſmall pox had been taken in the natural way.

(*k*) Dr *Hillary*, in theſe hemorrhages, adviſes bleeding to ſuch a quantity, as the age and ſtrength of the patient will permit and the violence of the ſymptoms requires, and that it be repeated, if the pulſe riſe, as it often does, after the firſt bleeding. And we alſo know, *proceeds he*, that this violent heat, tenuity, and diſſolution of the blood may be ſtill more abated, by a prudent and plentiful uſe of the *mineral acids*, as *ol. & ſp. vitr. ol. ſulph. p. camp. tart. vitriol, &c.* with incraſſating reſtringents.——It will likewiſe be neceſſary to procure, if we can, a revulſion from thoſe parts thro' which the blood is evacuated; if it paſſes off by urine or ſtool, beſides the relief we may expect from bleeding, warm refreſhing fomentations applied to

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diſtemper is to be treated in all other reſpects throughout the courſe of the cure, according to the method above delivered in our diſcourſe on the ſmall-pox (*l*).

14. Before I conclude, let me add, that when I order *liquid laudanum*, I mean my own *laudanum*, the preparation of which I have already (*m*) communicated. And the *ſyrup of poppies*, or *diacodium*, I would have made in the following manner.

Take of the heads of the white poppy well-dried, fourteen ounces; let them infuſe for twenty-four hours in a gallon of ſpring water; then boil them well, and preſs out the remainder ſtrongly; to which add twenty-four ounces of ſugar, and boil them together into a ſyrup (*n*). Syrup of poppies.

I eſteem theſe two preparations the beſt of their kind; eſpecially the *diacodium*, an ounce of which will do more ſervice than two of that which is made with green poppy heads (without preſſing the liquor out ſo ſtrongly) and a large quantity ſometimes of the black heads of the wild poppy, which have little virtue. Accordingly, whenever I am not ſatisfied about the ſtrength of any of theſe opiates, I uſually order a grain and a half, or two grains of *ſolid* LONDON *laudanum*, diſſolved in ſome proper diſtill'd water, in the room of them, by which means I avoid making any miſtake, and hurting my patient.

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the extremities, will cheriſh the heat, which in this caſe is moſtly two languid, and by relaxing the veſſels diminiſh the reſiſtance, and ſollicit a large quantity of fluids to theſe parts. *See his eſſay on the ſmall-pox*, p. 133, 134, & 136.

(*l*) *See ſect. iii. chap. ii. p.* 101,

(*m*) *See* p. 161. *par.* 14.

(*n*) *See note* (*c*) p. 294. *at the end of this book.*

A DISSERTATION

Concerning Bloody-Urine from a Stone in the Kidneys.

The author's reason for publishing this piece.

THO' some may think me a little indiscreet in publishing an observation which I have experienced in myself alone, yet 'tis hop'd no equitable person will be displeased with me, who have suffered so long and so much from *bloody-urine*, from a stone in the kidneys, for being moved to compassionate those who labour under the same disease, and to communicate those remedies which have given me relief, tho' they may perhaps seem common, and not worthy of notice.

2. In the year 1660, I had the longest and severest fit of the gout I ever had in my life, so that I was constrained for two months, in the summer season, to lie always in, or upon a soft bed, and towards the close of the fit I began to feel a dull heavy pain, especially in the left kidney, and sometimes, though very seldom, in the right. After the gout went off, the pain in the kidneys remained. and attack'd me at intervals, which, though it was not very sharp, made me apprehend the stone; for I had not yet had a single fit of the stone, which is attended with severe pain along the ureters towards the bladder, and violent vomiting. But tho' these signs of the stone in the kidney appear'd not hitherto, yet I had reason to believe I had a large stone in one of them, which being too big to pass into the ureters, occasioned the above-mentioned symptoms. And several years afterwards I found I was not mistaken; for having walk'd considerably, and for a long time in the winter season, in 1676, soon after the breaking of a severe frost, I made *bloody-urine* directly, and consequently did so whenever I walk'd much, or was carried in a coach over the stones, tho' the horses went slowly; but this symptom did not seize me when I travell'd in a coach in unpav'd roads, how long a journey soever I made.

Fears he has a large stone in one kidney

3. The

3. The urine I voided on these occasions, though it looked very bad at the time of making, so as to resemble pure blood, yet soon after it became clear at the top, like natural urine, the blood falling to the bottom by itself in clots. To relieve this disorder, I had a large quantity of blood taken from my arm, and after taking some purges, had recourse to several sorts of cooling incrassating remedies, along with a proper regimen, and carefully forbore all acid, pungent, and attenuating liquors. But receiving no benefit from these, and many other remedies, which it would take up too much time to enumerate, and fearing to drive the stone forwards by steel-waters, as suspecting it was too large to be expell'd thereby, I at length quite despaired of relieving myself by this method, especially having found that some of my acquaintance had hastened their death by fruitlessly endeavouring to cure this complaint by such medicines; for which reason I resolved to desist from all further trials, unless by way of prevention; by avoiding all motion of the body as much as I could.

Voids bloody urine.

Uses several remedies ineffectually to relieve himself.

4. But happening afterwards to recollect the great commendations which some persons have bestowed on the seed of the ash tree, for its stone dissolving, or stone-breaking virtue, I imagined, that if the seed had so much virtue, the *manna* thereof might probably have more. For the *manna* which comes to us, according to Mr *Ray*, (*a*) and other earlier writers, is neither an aerial honey, nor any kind of heavenly dew, but rather a liquor ouzing from the leaves, branches, or trunk of the *Calabrian* ash-tree, of the truth of which Mr *Ray* was further satisfied, whilst he was in his travels in *Italy*, by a physician, who frequently gather'd *manna* from the branches and leaves of these trees, first closely covered with linnen clothes, Accordingly, to make the trial, I dissolved two ounces and a half of *manna* in a quart of *whey*, and drank it, and took a little lemon-juice between whiles, as well to make it operate more speedily, it being ordinarily a slow purgative, as to render it more agreeable to the stomach. It is hard to express the ease I perceived in the region of the kidneys from this medicine; for tho' the pain was not continual before, yet I felt a troublesome weight. En-

Induc'd to try *manna*.

His manner of taking it.

Greatly relieved by it.

(*a*) See his catalogue of *English* Plants.

Encouraged by this good ſucceſs, I took this purgative every week on a ſet day, for ſome months, and found a manifeſt amendment after every purge, till at length I could bear the ſhaking of a coach when the horſes went apace, and indeed continued free from this ſymptom till laſt ſpring, at the beginning of which it returned, occaſioned by my having had the gout ſeverely all the preceding winter, and my inability to motion, which made me indulge reſt, and uſe leſs exerciſe than uſual. And now I doubted whether I ſhould have recourſe to purging again, as finding that the mildeſt purge certainly occaſioned a fit of the gout, becauſe the whole ſubſtance of my body, in theſe latter years, had, in a manner, degenerated into nouriſhment for this diſtemper. But at length it came into my mind, that I might ſafely reſume my former method of taking *manna* once a week, provided I took an opiate in the evening, after the operation, to quiet the tumult raiſed by the purgative. Accordingly, in the morning I drank two ounces and an half of *manna* diſſolved in a quart of *whey*, and at night took ſixteen drops of *liquid laudanum* in ſmall beer; and repeated the *manna* and *laudanum* in this manner twice a week, for three weeks running. But afterwards I took the *manna* only once a week, becauſe it had diſcharged ſuch plenty of foul humours, as to leave little fear of the gout. And my reaſon telling me, that if *manna* was poſſeſs'd of any ſtone-diſſolving, or ſtone-breaking virtue, its efficacy on which I depend, muſt needs be leſſened, in ſome meaſure, by ſo powerful an aſtringent as *laudanum* is, I thought it beſt to omit taking the opiate, as I only purged once a week.

Seiz'd with the diſorder again.

Hath recourſe to *manna* anew, with an opiate at night.

Quits the opiate.

5. I have continued this method for ſome months, always purging on the ſame day of the week, and would not, upon any account, be perſuaded to quit it. But tho' the pain of my back abated, as formerly, upon taking the firſt purge, yet ſoon after repeated purging brought on ſome ſymptoms of the gout, which ſometimes affected the limbs, and ſometimes the bowels: but *laudanum* effectually check'd theſe motions of the diſtemper. This method, however, having hitherto been ſucceſsful, I judg'd it proper to continue it, both to prevent the return of the bloody urine, and to carry off a part of the matter that forms the ſtone. And,

Repeated purging brought on ſome ſymptoms of the gout.

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in the end, it anſwer'd my expectation, having never had this ſymptom ſince my firſt publication of this treatiſe, and therefore I left off the *manna* entirely. But cured his diſorder.

6. With reſpect to purging, therefore, in the caſe of bloody urine, provided only *manna* be uſed according to the method above delivered, I muſt retract an aſſertion I formerly publiſhed in my treatiſe on the gout; namely, *That it is abſolutely improper to purge gouty perſons either at the beginning, declenſion, or in the intervals of the fits* (*b*). For I did not then recollect that the fit which I feared might be occaſioned by the purgative, might be prevented by giving an opiate at night. Nevertheleſs, if the gout only be attended to, all manner of evacuations are very pernicious therein, and therefore not to be uſed, unleſs the above-mentioned ſymptom requires them (*c*). The author retracts a former opinion of his concerning purging.

7. To

(*b*)——————*Sinon* is my name:
Though plung'd by fortune's power in miſery,
'Tis not in fortune's pow'r to make me lye.
Dryden's Virgil, Æneis, Book ii. p. 490.

(*c*) *See* p. 474, *par.* 22. *& ſeq.*

I have known, ſays Dr *Cheyne*, ſome eminent *phyſicians*; that have had ſo little regard to *Sydenham*'s opinion in this matter, that in the fit of the *gout* itſelf, at whatever time it happened, they never ſcrupled to drive it off both from themſelves and others, by ſtrong quick, and active *purges*, which they repeated every morning whilſt the *fit* continued and at night quieted the tumults they excited, and expelled the *gouty* humours, introduced into the habit by them, with *cordial* and warm medicines, mixed with *opiates*. This method they continued till the pain was gone, and the *tumour* ſubſided. And to prevent its return, carry off all the remainining *goutiſh* humours, and to ſtrengthen the habit, they perſued gentle ſtomach *purges*, *aromatic diluters*, and warm *alteratives*, till a ſtrong conſtitution was obtained: And moſt certain it is, that this method will cure any fit of the *gout*, how obſtinate ſoever, and that in a few days. The reaſons they gave for this procedure, were that by ſuch a method, inflammatory *rheumatiſms* (of the nature of which the *gout* was) *eryſipelas*'s, *ſcirrhous*, and even *hot tumors*, were ſafely, quickly and certainly (without relapſes or danger) carried off; and that the danger ariſing in common practice from purging off a *fit* of the *gout*, was, that care was not taken to prevent its returning, or its falling on ſome other noble parts, by continuing theſe gentler warm *purges*, *diluters*, *alteratives*, and *ſtrengtheners*, to carry off intirely the *gouty* remains to ſweeten the ſharp humors, and to ſtrengthen the *relaxed* ſolids. But this I mention only to illuſtrate and confirm my advice, of gentle *ſtomach purges*, in the intervals of the *gout*. For I am of opinion, that the moſt dangerous and active part of the *gouty* humour, is a great deal too ſubtile (tho' an humour certainly it muſt be) to be carried off by any groſs evacuation whatſoever. And many fatal experiences

His way of living.

7. To theſe obſervations I will add a few particulars, relating to the regimen and diet, which ſeem proper in both theſe diſtempers; for I would not omit mentioning any thing that may be ſerviceable to ſuch as labour under the ſame diſeaſes that I do. In the morning, as ſoon as I am up, I drink a diſh or two of tea, then I go out in my coach till noon, and at my return home dine moderately upon any kind of meat I like, that is eaſy of digeſtion: for moderation is principally neceſſary. I drink a little more than a quarter of a pint of canary immediately after dinner every day, to promote digeſtion, and drive the gout from my bowels. In the afternoon I go out again in my coach, and, when buſineſs permits, take a turn into the country for two or three miles for good air. A draught of ſmall beer ſerves me inſtead of a ſupper; and I drink another draught after I am in bed, and about to compoſe myſelf to ſleep, in order to dilute and cool the hot and acrid humours lodg'd in the kidneys, which breed the ſtone. I always prefer ſmall beer brewed with hops, to that which has none, becauſe, tho' unhop'd ſmall beer is ſmoother and ſofter, and ſo better ſuited to bring away the ſtone from the kidneys, yet that which is brewed with hops, on account of the ſlight ſtypticity it receives from the hop, is leſs apt to breed gravel and calculous matter, than that which has none, as being more viſcid and ſlimy. On my purging day I dine upon a chicken, and, notwithſtanding, drink my canary as uſual. I go to bed early, eſpecially in the winter ſeaſon; this being one of the beſt helps for promoting digeſtion, and preſerving the proper order of nature: whereas, on the contrary, ſitting up late weakens and vitiates all the digeſtive faculties in aged perſons afflicted with any chronic diſeaſe, and injures their vital principle to a degree, not to be eaſily remedied. And to prevent bloody-urine from the ſtone, whenever I am obliged to go very far in my coach upon the ſtones (for the longeſt journey in unpav'd roads does me not the leaſt hurt) I always drink a large draught of ſmall beer before I ſet out, and another in the

Condemns ſitting up late.

riences have confirmed the danger of tampering after ſuch a manner (whatever authority it may have to defend it, or, ſpecious reaſons to inforce it) to ſuffer any cautious perſons to venture upon it. *See his eſſay on the gout*, p. 34, *& ſeq.*

the way, if I am abroad a conſiderable time; by which means I ſecure myſelf pretty well from bloody-urine.

Attack'd ſometimes with the gout inwardly.

8. But with reſpect to the gout, I will add one obſervation, which is this: of late years the gouty matter ſometimes ſtrikes in, occaſioned by ſome error in the non-naturals, the ſigns of which are great ſickneſs, with vomiting, and a ſlight pain of the belly, whilſt the limbs at the ſame time are ſuddenly freed from pain, and better diſpoſed to motion than ordinary. In this caſe I drink a gallon of poſſet drink, or ſmall beer, and, after having diſcharged it upwards, take a ſmall draught of *canary*, with eighteen drops of *liquid laudanum* in it, and compoſe myſelf to ſleep: and by this method I have ſeveral times ſaved myſelf from imminent death (*d*).

His method of relieving himſelf.

Apologizes for talking ſo much of himſelf.

9. Though it may perhaps ſeem abſurd, eſpecially in a perſon whoſe life or death is of ſo little moment, to mention himſelf ſo frequently, yet my intention in communicating theſe particulars is to ſerve others, whoſe lives and health are probably of greater value.

10. Laſtly, we are to take notice of the great danger which ſome perſons who have the gout and ſtone run, by unadviſedly taking *manna* diſſolved in the *purging*

(*d*) Dr *Cheyne* tells us, that ſlight touches of the *gout* in the ſtomach, which ſeems to have been our author's caſe, will yield to any little ſtomach purge; but adds, that it is more obſtinate towards the decline of life; when it ſettles in a conſtant pain, nauſeating and kecking in the ſtomach. Vomits are reckoned dangerous in the *gout*, leſt they ſhould derive the humour on the ſtomach: but there can be no room for ſuch a ſuſpicion here, wherefore, upon the firſt ſeizure of the ſtomach, a vomit is inſtantly to be adminiſter'd, and repeated, according to the occaſion of the caſe: after that tincture of *hiera picra*, with compound ſpirit of *lavender*, and a few drops of tincture of *ſnakeweed*, and tincture of *diambra*, with a hot *ſinapiſm*, or bliſter on the ancles: and, laſt of all, the higheſt cordials, and moſt generous wines may be freely indulged, without fear of inflammation. Among the cordials, I would recommend the *Electuarium de ovo* as containing *camphire* (the moſt conſtant and active *diaphoretic*, and the moſt uſeful one for that purpoſe) and ſome other of the richeſt cordials. After all this management, ſhould the *gout* ſtill continue in the ſtomach, and become habitual, (which it ſeldom does after ſuch a method taken in time) nothing but a long courſe of the *Bath* waters, with *ſteel*, bitters, and gentle ſtomach purges, a regular diet, and proper exerciſe, can effectually cure it. *See his eſſay on the gout*, p. 76, 77. *See alſo pag.* 503. *the note.* (*b*)

Opiates are to be uſed with great caution, and very ſparingly, for fear of weakening the inward parts, and fixing the pain, which they are apt to do, if indulged too freely.

ing mineral waters; for though being taken this way, it works quicker, and ſits eaſier on the ſtomach, yet theſe inconſiderable advantages are no equivalent for the miſchief otherwiſe occaſioned by the waters. For if the ſtone in the kidneys be too large to be forced thro' the ureters into the bladder, theſe waters generally cauſe a fit, which continues, not without endangering the life of the patient, till the ſtone gets back again into the *pelvis* [*e*]. *Steel-waters*, likewiſe, are unſafe, unleſs it be certainly known beforehand, that the ſtone is ſmall enough either to ſlip, or force its way through the ureters; which, to the beſt of my judgment, can only be learnt with certainty from hence; *viz.* if the patient hath already had a fit of the ſtone, (which conſiſts of a very ſharp pain in one of the kidneys, extending thro' the whole duct of the ureters, and accompanied with violent vomiting) he may be aſſured that the *pelvis*, inſtead of having a large ſtone in it, rather contains a number of ſmall ſtones, one of which will fall occaſionally into the ureters, and cauſe a fit, which generally laſts till it is forc'd into the bladder. In this caſe, I ſay, there is no better remedy either to prevent the increaſe of ſmall ſtones, or to expel them from the kidneys, than drinking *ſteel-waters* plentifully every ſummer (*f*).

Steel-waters recommended in theſe diſeaſes.

11. But

(*e*) The term *pelvis* here does not ſeem to be uſed with ſtrict propriety. 'Tis true there is a *pelvis* of the kidneys, which is a membranous cavity, but when that is meant, as it muſt needs be in this paſſage, it ſhould be clearly expreſſed: and yet even then I think 'tis hardly probable a ſtone ſhould be moved thence into the ureters and returned.

(*f*) Mrs *Stephens*'s medicines have been found ſo very beneficial in abundance of inſtances in this painful diſtemper, that they well deſerve to be rank'd amongſt the beſt palliating remedies yet diſcovered for it; and of courſe to be tried by thoſe who are unhappily afflicted with it; though they are not entirely to be depended on as a *ſolvent* for the *ſtone*. The baſis of them is *ſoap*, the virtue of which, as Dr *Hales* obſerves, is chiefly owing to the *ſoap-lees*; which, as they may be more eaſily taken, and are much leſs nauſious than *ſoap* in ſubſtance, may be commodiouſly and advantageouſly ſubſtituted inſtead of it. Dr *Jurin* continued the uſe of them for a conſiderable time with great ſucceſs; as appears from his own caſe, communicated by himſelf to the public, and annex'd to "Rutty's *ac-*
" *count of ſome new experiments and obſervations on* Joanna Ste-
" phens's *medicine for the ſtone. Printed for* R Manby *in*
" 1742." And I have the pleaſure to be acquainted with a worthy

11. But as perſons may often be ſeiz'd with a fit of the ſtone, when theſe waters are either not procurable, or at an improper ſeaſon for drinking them, they are to be treated according to the following ſhort and plain

A fit of the ſtone how to be treated.

worthy and eminent phyſician, who has taken the full quantity of *ſoap* directed by Mrs *Stephens*, for ſeveral years paſt daily; which has made him greatly eaſier than he was before he began with it, and rather mended than impaired his general health.

It muſt be obſerved, however, that theſe medicines are not proper in a fit of the ſtone, which is beſt relieved by bleeding, gentle purging, emollient and turpentine glyſters, warm bathing and emollient lubricating liquors, with nitre diſſolv'd in them, drank freely; and opiates, in caſe of great weakneſs, and violent pain, and an unſucceſsful trial of other things.

In ſmall ſtones and gravel, *ſoap* and *rhubarb* are excellent remedies, one part of the latter to four of the former for a doſe now and then adding a little ſaffron.—— e. g.

Take of hard ſoap, two ſcruples; rhubarb, ſix grains, or half a ſcruple, ſaffron, five grains; ſyrup of marſh-mallows enough to make the whole into a bolus, to be taken twice a day.

The *diuretic ſalt* is an admirable medicine in the gravel; the method of preparing which may be ſeen in the late College diſpenſatory. As *Sydenham* is here very ſhort and general, though what he ſays is juſt and maſterly on the whole, I thought the following obſervations on the ſtone and nephritic diſorders, which an ingenious phyſician of my acquaintance lately collected from the beſt practical authors and communicated to me, with leave to tranſlate (for he wrote them in latin) and publiſh them, would be very acceptable to the reader, as they ſet before him, in one connected view, the true intentions which ought to be purſued in theſe caſes, and contain, in a ſhort compaſs, the ſubſtance of the ſureſt practical rules that lie diſpers'd in many volumes.

I, In diſorders occaſioned by the ſtone or gravel lodg'd in the kidneys or ureters, if the veſſels be too much diſtended from a fulneſs of blood, let bleeding be firſt performed, to guard againſt an inflammation, and that, by leſſening the *vis vitæ* a little, the paſſages may be the ſooner relax'd and dilated by the remedies that are afterwards to be adminiſter'd.

II. Soft oily medicines ſhould be given firſt in theſe caſes, and then diluters in a ſufficient large quantity, as well by the mouth, as by glyſters frequently repeated, with which fomentations, *ſemicupia*, &c. may be joined as aſſiſtants; and the body muſt be kept very open at the ſame time, with honey, manna and the like.

Acrimonious purgatives being apt to inflame and ruffle, are hurtful here; and, therefore, ſuch as contain aloes are improper; for, beſides increaſing the original complaint, they may occaſion the colic, and the painful piles in ſanguine habits.

III. The vomiting which happens in the fit ſhould not be check'd, but rather kept within moderate bounds, as nature cauſes this motion to prevent the coheſion of the gravel, which is driven forward by the action of the abdominal muſcles, and

method. The patient being ſanguine and not aged, take ten ounces of blood away from the arm of the pain'd ſide, then let a gallon of *poſſet-drink*, in which two ounces

ſo gently expelled: therefore, to aſſiſt by drinking plentifully of ſome aqueous liquor warm, with or without honey, as is moſt agreeable to the patient, is the beſt way of remedying it. Glyſters likewiſe generally relieve it, for the body being opened, and a free paſſage thereby made for the wind to eſcape, the violent retchings and anxiety immediately ceaſe.

IV. 'Tis worth conſidering, that the *colon*, which forms a kind of arch over both kidneys, is ſometimes join'd to one of them, eſpecially the left; and conſequently, if an emollient decoction be thrown up into it warm, it may, by its heat and moiſt vapour, relax and ſoften the kidneys like a fomentation. Hence we ſee the reaſon why glyſters, frequently injected, do ſo much ſervice in moſt diſtempers of the kidneys: —— and why wind in the firſt paſſages, and much hard and dry excrement, uſually occaſion ſuch grievous diſorders as to bring on a freſh fit: ——and why the left kidney is more ſubject to this diſeaſe than the right; becauſe it lies nearer to the *colon*.

V. When the vomiting (3) abates a litle, or the ſtomach and bowels, at leaſt, are freed from their foul contents, and the body is open enough, then, and not before, 'tis proper to give opiates which by eaſing the pain, and relaxing the ſpaſmodic tenſion and twiſting of the fibres, moſt effectually open the paſſages.

VI. When the oily medicines, the diluents, (2, 3) and anodynes (5) have conſiderably abated the ſpaſms, the pulſe is grown calmer and ſofter, and the whole body of a moiſt and equable heat and the wind readily goes downwards, the expulſion of the ſtone, or gravel, may be attempted by giving the gentleſt expellents now and then in the intermediate ſpaces.

VII. But where the ſtone ſticks in the kidneys, expellents (6) are unſafe, unleſs it ſhould ſeem very probable, from the immediately preceding fit, that the ſtone is not too big to paſs the ureters. Diluents, taken too plentifully in this caſe, do miſchief, unleſs they are ſoon thrown up again, as they can not eaſily paſs through the veſſels.

VIII. If a large ſtone be lodg'd in the bladder, violent diuretics will be very apt to waſh off the viſcid mucus which lines the ſtone of a good thickneſs, and ſoftly covers all its rough and ſharp points as it were with a ſheath; and by violently moving, the ſtone itſelf may be diſlodged from the cavity where it lay at reſt, and ſo occaſion a grievous painful fit. But the gravel in the bladder requires the uſe of ſtronger diuretics than the gravel in the kidneys. Some emollient infuſion, as of linſeed, drank very freely, keeping the body cool ſo as to fill the bladder, may prove very ſerviceable to waſh away ſtones or gravel by an increaſing quantity of urine.

IX. It is to be generally obſerved, that the more painful the fit, the gentler the diuretics muſt be that are uſed, and the leſs copiouſly they muſt be exhibited.

X. In aged and weak ſubjects, ſtrengtheners and cardiacs ſhould

ounces of the *roots of marſh-mallows* have been boil'd, be drank with the utmoſt expedition, and the following glyſter injected.

ſhould be mix'd with the diuretics; and ſuch may be allow'd the uſe of generous liquors.'

XI. When the pain and ſpaſms are very violent, and yet there is reaſon to hope that the ſtone will paſs the urinary ducts, gentle diuretics mix'd with mild anodynes do moſt ſervice; for the latter relax the parts and eaſe the pain, and the former than more ſafely propel the ſtone.

XII. In a true or inflammatory *nephritis*, to whatever cauſe it is owing, ſuch medicines as quicken the motion of the parts, and ſtimulate, tho' in the ſmalleſt degree, muſt be prohibited. On the contrary, bleeding, manna, and oily things, the gentleſt laxatives, diluents in a middling quantity, coolers, emollient glyſters without any ſaline and purging, and therefore, ſtimulating ingredients, but with the addition of nitre only, frequently repeated, are the beſt remedies in this caſe. The diſtemper is diſcoverable by a violent pungent tenſive pain of the region of either or both kidneys; an acute continued fever, the making little urine, and that either high-colour'd, or thin and watery, the *lentor* of the blood taken away by bleeding, &c.

XIII Hence the method of preſerving thoſe perſons from the ſtone and nephritic diſtempers who are ſubject to them, is beſt deduc'd.—And this conſiſts in bleeding twice or thrice a year, to leſſen the quantity of blood; —diligently guarding againſt the ſuppreſſion of the uſual natural evacuations of the menſes or piles; —in keeping the body conſtantly open; [For which purpoſe *Boerhaave* recommends borage, chervil, lettuce, parſley, ſcorzonera, turnips, &c. to be boiled in freſh broth, and the drinking of whey, butter milk, and milk; and obſerves, that the uſe of theſe aliments for ſuch a ſpace of time, till the body becomes ſomewhat looſe, and continues ſo, is highly beneficial, though ſome little weakneſs ſhould enſue upon it, as this debility often happily cures even an inveterate diſtemper.]——in avoiding all crude and flatulent aliments, and what makes copious hard fæces, every thing acrid and ſharp, and all great commotions of body and mind;—— in living temperately and abſtemiouſly;—in diluting the food with ſmall watery liquors, or mild clear malt liquor, drinking a little while, and taking about a pint of warm water faſting, or before dinner; which laſt remedy is mightily extoll'd by *Hoffman*:———in not lying in too warm and ſoft a bed, and eſpecially not upon the back, a poſture whereby the kidneys, which are ſituated in that part, are ſtreighten'd and compreſs'd by the weight of the incumbent viſcera, and which likewiſe heats, and of courſe injures them ſtill more;——— in not leading a ſedentary inactive life, but uſing moderate exerciſe every day in the open air, if the weather will permit, and gentle frictions of the whole body, eſpecially in a morning, in bathing, &c.

———The beſt method of treating *nephritic pains*, according to Dr *Mead*, is to begin by blood-letting. And it will

Take of the roots of marſh-mallows and the white lilly, each an ounce; the leaves of mallows, pellitory of the wall, bear's breech, and camomile flowers, each an handful; the ſeeds of flax and fenugreek, each half an ounce; boil them together in a ſufficient quantity of water to a pint and half; in the ſtrain'd liquor diſſolve brown ſugar and ſyrup of marſh-mallows, each two ounces: mix the whole for a glyſter.

When will be of ſervice to the patient, to obſerve when the fits are wont to return, and to empty the veſſels at that time which threatens the greateſt danger. For it is well known, that this diſeaſe is partly occaſioned by the compreſſion of the ſmall ducts of the kidneys from the fullneſs of the capillary arteries; which fullneſs is increas'd by the new and full moon. Whence I have more than once wonder'd, that the chief bent of the writers on this diſeaſe is, to drive down the gravel into the ureters and bladder: whereas the diſſection of dead bodies has taught me, as I have mention'd before, that the firſt rudiments of a *calculus* are a very limpid *ſerum* in the *caruncles* of the kindey; and that this may harden to the conſiſtence of a ſtone, will not ſeem ſtrange to thoſe who are acquainted with the attractive force of ſalts in ſolution, and with the effects of obſtructions in the capillary veſſels. And hence it is that *calomel* given now and then is of greater ſervice in the beginning of this diſeaſe, than any diuretics: becauſe this medicine removes the obſtructions of the minute veſſels, and thus prevents the coheſion of ſaline particles, which is frequently the conſequence of ſuch obſtruction. Moreover, daily experience ſhews, that too free an uſe of diuretics is prejudicial in diſeaſes of the kidneys.—*Treatiſe concerning the influence of the ſun and moon upon human bodies, tranſlated by Stack*, p. 98.———

XIV. Thoſe who in order to preſerve themſelves from theſe maladies frequently uſe acrid and heating things, and ſtrong forcing diuretics, take the worſt of methods; for by this means the kidneys are hurt, and overcharged with too great a flow of humours, and an inflammation often occaſion'd. But when gravelly matter has been for ſome time obſerved to be diſcharged with the urine, and to ſubſide preſently after it is made, light ſteel waters, either of the purging or diuretic kind, very ſafely and effectually expel it, and ſtrengthen the kidneys; and likewiſe admirably prevent any calculous concretions that might afterwards be form'd, if drank plentifully for ſome weeks every ſummer.

That ſuch perſons as are unhappily afflicted with the *gravel*, *ſtone*, or *gout*, may want no helps that *aliments* can furniſh, both to relieve and prevent the fits, we have here ſubjoined Dr *Lobb*'s two claſſes of the *ſtronger* and *weaker*, DISSOLVENTS of the STONE, and his third claſs of NON-SOLVENTS, together with an abſtract of his RULES OF DIET, for *calculous* and *gouty* perſons, and recommended them to general uſe in all ſuch caſes.

When the patient has thrown up the poſſet-drink, and the glyſter done working, give a ſufficiently large

I. *Claſs.* The *ſtronger* DISSOLVENTS of the STONE.	II. *Claſs.* The *weaker* DISSOLVENTS of the STONE.	III. *Claſs.* The NON-SOLVENTS.
Bread	*Aſparagus*	*Barley*
Cellery	*Cabbage*, common	*Beer*
Codlins	*Carrots*	*Cabbage*, red
Cucumbers	*Chocolate*	*Currants*, red
Currants, foreign	*Coco*	*Cyder*, *Southam*
Cyder, *Herefordſhire*, and *Monmouthſhire*.	*Coffee*	*Golden rennits*, their juice
Figs	*Cyder*, *Glouceſterſhire*	*Horſe radiſh*
Grapes, white	*Elderberry juice*	*Malt*
Hops	*Golden pippins*	*Millet ſeeds*
Leeks	*Golden rennits*, their decoction	*Oatmeal*, its infuſion
Lettuce, cabbage	*Honey*	*Onion tea*
Lemons	*Mallow leaves*	*Parſley root tea*
Milk	*Malt and hops*	*Salt and water*
Mulberries	*Mulberry brandy*	*Salt of wormwood and water*
Mulberry wine	*Neutral mixture*	*Spinach*
Non-Pareils	*Non-Pareil tea*	*Tea* green its infuſion
Onions	*Oatmeal*	*Verjuice and water*
Oranges	*Parſley*	*Water*, new river
Pears	*Parſnips*	*Water gruel*
Punch	*Pearl barley*	*Wheat*, its decoction
Radiſhes, garden	*Potatoes*	*Wine*, currant
Raiſins	*Rice*	——elderberry
Sorrel	*Strawberries*	——leek
Tea, green	*Tea* bohea	——mountain
Turnips	*Wine*, red port	
Vinegar	——*Canary*	
Wine, white port	——*Madeira*	
	——rheniſh	
	——raiſin	

RULES OF DIET *for* calculous *and* gouty *perſons*.

Let them BREAKFAST on warm milk crumb'd with bread and ſugar'd :—or on bread and butter with green tea made by decoction :—or on the ſame with limonade, or orangeade, or a ſoft cyder mix'd with water to the ſtrength of ſmall-beer, and ſweetened :—or on toaſt and butter with coffee and milk ſweetened :—or on chocolate and milk, or coco and milk:—or on bread gruel ſweetened, with two or three ſpoonfuls of white port, or of a ſoft cyder added to it :—or on mallow, oatmeal, barley, or rice gruel, made agreeable to the palate.

They may DINE on bread pudding plain, or with currants; rice pudding plain, or with currants, on puddings made with oatmeal, or pearl barley, either plain, or with currants ; apple pud-

doſe of *liquid laudanum*, for inſtance, twenty five drops, or fifteen or ſixteen grains of MATTHEW's pill. But bleed-

puddings, or apple dumplings, currant fritters, or apple frit. ters.—A little animal food, with a large proportion of greens, ſuch as young garden radiſhes boiled, aſparagus, lettuce and cabbage, ſavoys, colley flowers, and brocoli, on account of their affinity with cabbages; likewiſe turnips, potatoes, onions, and parſnips: all theſe boiled.——The following muſt be eaten raw, *viz.* young radiſh tops, muſtard, garden creſſes, lettuce, ſorrel and parſley, dreſs'd with vinegar, verjuice, or lemon juice, or orange juice, and ſalt, in the ſpring:—or *Sileſia*, or cabbage lettuce, or goſs lettuce, with vinegar, or verjuice, muſtard, and ſalt, in the ſummer:—or in the winter, cellery with vinegar, or verjuice, and a little ſalt; and it may with great advantage be plentifully put into ſoops.—Cucumbers, with vinegar pepper, and ſalt, make a ſuitable ſallet, and indeed, an *excellent medicine* in the ſummer ſeaſon both againſt the *ſtone* and *gout*.——And in winter, pickled cucumbers both large and ſmall may in ſome meaſure anſwer the ſame end.—After the animal food, tarts made with any of the ſummer fruits, or ſcalded apples eaten with roſe water, or river water, or with milk and ſugar; or bak'd apples or pears may be properly eaten.

When that is made a part of the dinner, the eating ſome fruit after it to prevent too great an increaſe of alcaline ſalts in the blood is very adviſeable; as *ſtrawberries*, *mulberries*, raſberries *codlins*, cherries *grapes*, *apples*, and *pears*:——thoſe in *Italic* are found by experiments to have a quality ſtrongly diſſolvent of the ſtone, whence it is concluded they are as good in the gout.

Small drinkables at dinner may be limonade, made with the juice of one lemon, a point of water, and ſome ſugar;——or with orange juice in the ſame manner;——or codlin, pippin, ſtrawberry, or mulberry water, made by boiling two ounces of any of them in water enough to a pint, and then ſtraining it off and ſweetening it to the taſte:——or fig, raiſin, or currant water made in the ſame manner; only the firſt may be acidulated with lemon, or orange juice;——or honey water, made by diſſolving, or boiling an ounce a few minutes in a pint of water:——or onion water, made by boiling four ounces, peeled and ſliced, in a pint and half of water to a pint:—or white port mixed with water to the ſtrength of ſmall beer, aud ſweetened, or ſoft cyder ſo mix'd, or milk and water, or barley water and milk.

Strong or ſpirituous drinks proper for perſons afflicted with the *ſtone* or *gravel* are *foreign wines*——white and red port, canary, Madeira, and rheniſh.——*Home made ſpirituous liquors* are, raiſin, or mulberry wine, ſoft cyder, perry, mulberry brandy diluted with water; ſtrawberry brandy ſo diluted; punch ſweetened with honey, or ſugar, and mead.—Ale, ſtrong and ſmall beer, are liquors not very prejudicial, but no way contribute to the cure of thoſe diſeaſes.

For DINNER, he recommends milk and bread, only warm'd, apple tarts;—bread with ſtrawberries and red port ſweetened;

—cu-

bleeding is not to be uſed in aged perſons, worn out by ſome inveterate chronic diſeaſe, and antient women, ſubject to the vapours, eſpecially if they void black gravelly urine at the beginning of the fit: nevertheleſs, in other reſpects, this method muſt be cloſely followed.

12. But to return to the ſtone, ſuppoſing it a large one, which is our preſent ſubject: if the patient hath never had a fit, on account of the ſtone's being too big to paſs the *pelvis*; *ſteel waters* will not only do no ſervice, but cannot be uſed without immediate danger, for the reaſons above-mentioned. Nor do *mineral waters* ſucceed better in gouty perſons, if they be advanced in years, as ſuch moſtly are, and withal of a weak and phlegmatic conſtitution; the ſtrength of nature being ſometimes impaired to that degree in ſuch ſubjects, as to give great reaſon to apprehend the total loſs thereof

Steel-waters pernicious in caſe of a large ſtone, and in the gout.

—cucumbers with vinegar and a little ſalt, and eaten with bread;—apples boiled and ſweetened, and ſpread on a ſlice of bread;—baked or ſtew'd apples and pears eat with bread;—roaſted apples and milk and ſweetened;—aſparagus boil'd, with butter and bread;—bread and butter, with or without a ſallet of goſs lettuce, vinegar, muſtard, and ſalt;—biſket, or dry bread, and ſo much of one or other of the ſmall drinkables directed for dinner, and two, three or four glaſſes of wine, or cyder.—bread gruel made with onion or leek water, with a little ſalt, butter, and bread;—oatmeal gruel made in the ſame manner;——currant gruel, ſweetened with ſugar, and bread broke into it;—coco ſweeten'd with a ſlice of toaſted bread in it;——a piece of bread toaſted and ſpread with honey, and warm milk drank after it;—and any of the ſmall drinkables preſcribed at dinner may be uſed at ſupper.

Beſides the obſervance of the foregoing *rules*, he adviſes perſons much afflicted with the *ſtone* to drink four or ſix ounces twice a day, of *onion water*, *leek water*, *lemonade*, *orange water*, or any other of the *firſt claſs of* DISSOLVENTS that may better ſuit the ſeaſon of the year, the temperature of the air, and their conſtitutions.

Perſons much troubled with the *gout* he judges ſhould be very careful to avoid whatever may check or diminiſh the diſcharge by inſenſible perſpiration; becauſe the impediments of this evacuation may occaſion a retention of the particles of the *gouty* humour in the body and a fit of the gout in conſequence of it.

As *acids* have been generally eſteem'd hurtful in the *ſtone* and *gout*, it may not be amiſs to obſerve that the doctor recommends them on the foundation of ſome experiments, which prove that ſeveral *acids* in common uſe have a quality DISSOLVENT of the human *Calculus* out of the body; whence he ſcruples not to preſcribe them in the *gout* likewiſe, *See his treatiſe on* DISSOLVENTS *of the* STONE, *&c.* p. 46, 142, *and* 362, *& ſeq.*

from such a quantity of water. But whether the ill consequences, happening to persons of this constitution, proceed from this, or some other cause, I am thoroughly persuaded that abundance of persons, who have been extremely debilitated, and in a manner worn out by this distemper, have been destroy'd by these waters.

13. And this is in a manner all I have discovered concerning the cure of diseases to the present day, *September* the 29th, 1686.

Pro-

Proceſſus Integri:

OR,

Complete Methods

OF

CURING moſt DISEASES.

To which are added,

An accurate Deſcription of their reſpective SYMPTOMS,

Several judicious OBSERVATIONS,

AND

A ſhort TREATISE of a CONSUMPTION.

ADVERTISEMENT.

IT may not be improper here to caution our readers, not to depend wholly on what is said and directed to be done in most of the diseases described in the subsequent short treatise; but to consult those places in the foregoing works of our author, where they are treated of at large, and practical notes of our own, and others, occasionally added, to supply deficiencies, correct mistakes, or further to explain, illustrate and confirm his sentiments and observations.

The EDITOR's PREFACE.

THE reader is here presented with a specimen of practice, drawn up with great thought and care, and written with his own hand, for the use of his son, a physician, and given to me by the excellent SYDENHAM: *a man who hath had few competitors in any former age, and will be equall'd by few in any succeeding one; who was no less eminent for his wonderful sagacity and penetration, than his probity and remarkable benevolence to mankind, so that he died greatly regretted by all that knew him, whose rules, tho' they are deeply imprinted in my mind, yet, for fear they should by some means or other slip my treacherous memory, both to my own prejudice, and that of the diseas'd, I sent the manuscript to the press, and caus'd about twenty copies to be printed to oblige my friends. How this piece came to be published, so uselessly enlarged, among the* miscellanea curiosa, *printed last year at* Nurenburg, *I know not: but it is now put into such a dress as to render it every way useful; not stuffed with fanciful speculations, and absurd notions, nor adorned with a favourite hypothesis, supported by many specious reasonings, but describing diseases candidly and accurately, and yet more accurately exhibiting the methods of cure; the sole scope of the work being to shew what nature is able to perform and bear. And to say the truth, if a person knows the structure of the parts, diseases will discover themselves by their symptoms, which may be learnt from diligent observation, and he will thence be taught to apply the true and genuine method of cure, by diet and medicine, and become a successful practitioner.*

It is of little significance, whether an alcali or an acid offends, or the disease be seated in the animal spirits, or the blood, or in some hidden bowel, in order to discourse pretty learnedly and fully of the periodic return of intermittents; whilst the fever mean time plainly discovers itself even to the attendants on the sick, by the restlessness, thirst, heat, quick pulse, retchings, and other symptoms. Hence I have often wonder'd, why physicians of great judgment and practice do so sollicitously and scrupulously endeavour in their writings to investigate the immediate and proximate causes of disorders, and bring them out of that obscurity in which nature has involved them, tho' they fail in

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the attempt; and cannot but know at the same time how totally ignorant they are of the causes of some obvious appearance; as, for instance, whence proceeds the greenness of grass, or the whiteness of snow. It were better to personate the physician than the philosopher, (for who would have Cartesius *for his physician?) duly and clearly to enumerate the most minute particulars, and candidly and faithfully to propose the most effectual remedies, for the cure of every particular disease. By this means the art of medicine, being no longer confin'd to the narrow limits, to which it is now restrained, will be generally known, happily promote the health of mankind, and cause its professors to be had in the highest esteem.*

Our judicious author, not long before his death, intended to have given us a treatise of a consumption. He spared no pains in searching after nature's method of curing diseases, that he might assist her, and alleviate the miseries of mankind. Hence being taught by undeniable experience, and a series of most faithful observations, he improved practice, and reduc'd the rules thereof to greater certainty. But, to the misfortune of the consumptive, whilst he persued these studies without intermission, the debilitated spirits forsook their ordinary posts, and the gout, which he had been afflicted with several years, and which had weakened his limbs, struck in upon the bowels, and occasioned a violent vomiting and looseness, which endangered his life. But the prince of physicians yielded not to a single disease, for this was succeeded by the stone in the kidneys, which having corroded the mouths of the vessels, he voided more bloody-urine than old age could bear; so that suffering the disorder to take its course, being neither desirous of life nor death, it carried him off. But not totally to deprive the consumptive of help, we have published such fragments, as every where discover their author, and may be serviceable at least in the first stage of a consumption (for it is not right to conceal any thing that may relieve our fellow creatures) that from this sketch it may appear, how accurate and complete a treatise of consumptions we might have expected from him, had providence permitted him to live to finish it.

That our very deserving author was eminently skilful in curing fevers, the small-pox, and measles, and all other acute and chronic diseases, the following sheets will shew. The propereſt regimen and diet are directed, only a few

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neceſſary remedies are preſcribed, ſuch as are neither invented to enrich the apothecary, nor compounded out of vain oſtentation. He allow'd his thirſty patients to quench their thirſt, as he did his own, by drinking ſmall beer freely at pleaſure, which wonderfully refreſh'd and cool'd them; and did not cruelly ſtop his ears to their entreaties, and ſubſtitute nauſeous apozems and julaps inſtead of it. He was very careful to prevent their being more heated, who were already too hot, either by making a large fire in the room, heaping too many clothes on them, or giving them remedies to carry off the crude and yet unconcocted matter by the pores, which being by this means put into motion, flies to the brain, and occaſions a phrenſy, or coma, or from the extravaſation of the blood, covers the breaſt with purple ſpots, or what are termed miliary eruptions. Can the hiſtory of the ſmall-pox be written in a more accurate and maſterly manner than he has done it? He ſpecifies the day of eruption in both ſorts, and exactly deſcribes the nature of the puſtules: expreſsly tells us when the ſalivation begins, and how long it laſts; in what manner the ſwelling of the face and hands appears, and particularizes what is to be expected every day. He was the firſt who adviſed the uſe of opiates in this diſtemper, (with what advantage let the phyſicians judge) and who juſtly condemn'd the practice of giving cordials before the eruption, which often occaſioned a confluent kind of ſmall-pox. But theſe particulars will be better learnt from his own writings; wherefore I take my leave of the reader, intreating him to overlook whatever errors he may meet with in this performance.

S. M.

The *Preſcriptions* moſt frequently uſed by the AUTHOR.

The common purging potion.

TAKE of tamarinds, half an ounce; ſena, two drams; rhubarb, a dram and half; boil them together in a ſufficient quantity of ſpring-water to three ounces; in the ſtrain'd liquor diſſolve manna and ſolutive ſyrup of roſes, of each one ounce: mix the whole for a potion.

The common vomit.

Take of the diſtill'd water of holy thiſtle, two ounces; of antimonial wine, an ounce; ſyrup of cloves, half an ounce; mix them together for a vomit, to be taken at four in the afternoon, drinking a large draught of poſſet-drink after every puke.

The pearl julep.

Take of the diſtill'd waters of black cherries and milk, each three ounces; ſmall cinnamon water, an ounce; prepar'd pearl, a dram and half; fine ſugar, enough to ſweeten it; and roſe water, half an ounce; mix all together for a julep, of which let the patient take four or five ſpoonfuls when he is faint.

The cordial julep.

Take of the diſtill'd waters of black cherries and milk, each three ounces; plague water, ſyrup of cloves, and the juice of citron, each half an ounce; mix them for a julep, a few ſpoonfuls of which are to be taken often.

The dietetic decoction.

Take of the roots of ſarſaparilla, ſix ounces; ſaſſafras and china, each two ounces; liquorice-root, an ounce; boil them together in two gallons of ſpring-water for half an hour; then let them ſtand cloſe cover'd upon hot aſhes, twelve hours, afterwards boil them again till one third of the liquor is evaporated; and upon removing it from the fire, infuſe therein half an ounce of

of anniſeeds, for two hours; then ſtrain it off; laſtly, pour off the decoction, after it is clarify'd by ſtanding, into bottles, in which let it be kept well cork'd for uſe.——It is to be drank for thirty days for common drink.

The opening and antiſcorbutic apozem.

Take of the roots of graſs, ſuccory, fennel, and aſparagus, of each an ounce; currants and raiſins ſtoned, each two ounces; the leaves of liverwort, hart's-tongue, and maiden hair, each one handful; the leaves of brook-lime, added towards the end, two handfuls; boil them together in a ſufficient quantity of ſpring-water to a quart, and towards the end of the operation add half a pint of Rheniſh *wine; ſtrain off the decoction, in which, whilſt hot, infuſe in a cloſe veſſel for two hours an handful of the leaves of garden ſcurvy-graſs, then having ſtrain'd off the liquor again, add to it ſyrup of the five opening roots, and of the juice of oranges, each two ounces; ſmall cinnamon water, an ounce; mix the whole together for an apozem, to be taken in the quantity of half a pint at a time, in the morning, and at five in the afternoon, for a fortnight.*

The thickening linctus for a cough.

Take of oil of ſweet almonds, an ounce; ſyrup of rea poppies, of purſlain, and of jujebs, and the healing lohoch, each half an ounce; white ſugar a ſufficient quantity; and make thereof a lohoch or linctus, according to art; to be taken frequently off a liquorice ſtick.

A more thickening linctus.

Take of the conſerve of red roſes, ſyrup of violets, and of white poppies, each an ounce; white poppy-ſeeds, three drams; paſs them thro' a hair ſieve; then add oil of nutmegs, by expreſſion, ſix drops: mix and make a lohoch.

For a thin tickling cough.

Take of the conſerve of red roſes, two ounces; ſyrup of white poppies, and of jujebs, each an ounce; olibanum,

num, maſtich and amber, in fine powder, each a dram; oil of nutmegs by expreſſion: mix them together for a lohoch; a ſmall quantity of which is to be taken often, and ſwallow'd ſlowly.—And let a ſpoonful of it be taken twice a day with eight, ten, or twelve drops, of balſam of ſulphur, with oil of aniſeed.

Purging ale.

Take of polypody of the oak, a pound; monk's rhubarb, the leaves of ſena, and ſtoned raiſins, each half a pound; rhubarb ſlic'd, and horſe-radiſh root, each three ounces; the leaves of garden ſcurvy-graſs and ſage, each four handfuls; four oranges ſlic'd, infuſe them together in five or ſix gallons of ale, whilſt it works; and when it is fit to drink, let it be uſed for common drink for a fortnight, or three weeks, drinking a draught of it every morning eſpecially.

The hyſteric plaiſter.

Take of galbanum (diſſolv'd in tincture of caſtor, and ſtrain'd off) three drams; tacamahac, two drams; make a plaiſter thereof, to be ſpread on leather, and applied to the navel.

The purging medicine for very young children.

Take a ſmall ſpoonful of the ſyrup of ſuccory, with rhubarb, and give it the child.

The bitter purgative decoction.

Take of the bitter decoction, made with a double quantity of ſena, four ounces; ſyrup of buckthorn, an ounce; the electuary of the juice of roſes, two drams: mix them together for a draught.

PRO-

Proceſſus Integri:

OR,

Complete METHODS of curing moſt DISEASES.

Of that diſorder which is called the hyſteric paſſion in women, and the hypochondriac diſeaſe in men.

1. WHEN the mind is diſquieted by ſome great misfortune, the animal ſpirits run into irregular motions, a copious tranſparent urine is voided between whiles, the patients utterly deſpair of their recovery, and preſage the worſt evils to themſelves. Whatever part of the body the diſtemper attacks, and it affects ſeveral, it ſoon produces the ſymptoms peculiar thereto. Thus. when it ſeizes the head immediately after a difficult delivery, it occaſions an apoplexy, which terminates in a palſy of one ſide. Sometimes it cauſes convulſions, much like an epilepſy, and appearing in this manner it is commonly term'd the ſtrangulation of the womb, which is accompanied with a riſing of the *viſcera* and *præcordia* into the throat. Sometimes the patient is ſeiz'd with the *clavus hyſtericus*, which is a ſharp pain in a part of the head, no larger than a thumb's breadth, and is attended with a vomiting of green matter, not unlike *porraceous* bile.

2. The fit likewiſe counterfeits a palpitation of the heart, a cough, the colic, the iliac paſſion, the ſtone, and a ſuppreſſion of urine, and ſometimes cauſes exceſſive vomitings and a looſeneſs. Outwardly, in the fleſhy parts it ſometimes occaſions pains, and ſometimes a ſwelling, which in the legs reſembles a dropſy. It alſo attacks the teeth, and the external parts frequently feel as cold as a corpſe, the patients laugh or cry without the leaſt provocation, and ſometimes ſpit ſo plentifully, that one would ſuſpect they had been anointed with ſome mercurial ointment. Whatever part hyſteric pains affect, they always leave it ſo tender upon their going off, that it cannot bear to be touch'd, as if the fleſh had been beaten with ſtripes.

3. Let eight ounces of blood be taken away, and a galbanum plaiſter applied to the navel; and next morning let the patient begin to take the following medicines.

Take of the greater Pil. cochiæ, *two drams; caſtor powder'd, two grains; balſam of* Peru, *three drops; make the whole into twelve pills, of which let four be taken every morning, or every ſecond morning, (according to the ſtrength of the patient) at four or five o' clock, ſleeping after them.*

Take of the diſtilled water of rue, four ounces compound briony water, two ounces; caſtor (tied up in a piece of linnen, and ſuſpended in the vial) half a dram; fine ſugar, enough to ſweeten the whole; mix them for a julep, of which let four or five ſpoonfuls be taken whenever the patient is faint.

4. After finiſhing theſe pills, let the following medicines be uſed.

Take of the filings of iron, eight grains; extract of wormwood enough to make it into three pills, to be taken early in the morning, and at five in the afternoon, for the ſpace of thirty days, drinking after each doſe a draught of wormwood wine.

5. If the form of a bolus be more agreeable.

Take of the conſerve of Roman *wormwood, and of orange-peel, each an ounce; candied angelica and nutmeg, and* Venice *treacle, each half an ounce; compound powder of wake-robin, three drams; candied ginger, two drams; ſyrup of citron juice, or, in defect of it, ſyrup of orange peel, enough to make the whole into an electuary.*

Take of this electuary, two drams; the filings of iron, eight grains; ſyrup of orange-peel, enough to make them into a bolus, to be taken morning and night, with a draught of wormwood wine, or ſix ſpoonfuls of the following infuſion after it.

Take of the roots of angelica, elecampane and maſter-wort, each an ounce; the leaves of common wormwood, the leſſer centory, horehound, and germander, each an handful; the peel of two oranges, ſliced thin; put thereon as much canary as will float the breadth of two fingers above it; let the tincture be ſtrained off as it is wanted.

6. In weakly conſtitutions ſteel may be exhibited in powder, according to the following form.

Take of iron-filings, finely powder'd, an ounce; compound powder of wake-robin, ſix drams: the ſeeds of coriander, aniſe, and ſweet fennel, each half an ounce; cinnamon, and red coral, pre-

pared

pared, each three drams; nutmeg, two drams; make them into a fine powder, to which add fine ſugar, an equal weight with all the foregoing.

Half a dram of this powder is to be taken twice a day, for the ſpace of four days, and afterwards a dram twice a day, for the ſpace of forty days, drinking after each doſe, ſix ſpoonfuls of the following julep, or as much wormwood wine.

Take of milk-water, twelve ounces; compound gentian water, four ounces; the greater compound worm-wood water, two ounces; fine ſugar, enough to ſweeten it: mix them for a julep.

Or,

Take of Rheniſh *wine, in which wormwood has been infuſed, half a pint; compound gentian water, two ounces; ſyrup of clove-july flowers, an ounce; mix them for a julep.*

Take of fine myrrh, galbanum and fetid aſa, each a dram; caſtor, half a dram: balſam of Peru, *enough to make them into a maſs, each dram whereof is to be made into twelve pills, of of which three are to be taken every night drinking after them three or four ſpoonfuls of compound briony water, during the continuance of this proceſs.*

7. If theſe pills ſhould open the body uſe the following.

Take of caſtor, a dram: volatile ſalt of amber, half a dram; extract of rue, enough to make them into twenty four pills, three of which are to be taken every night, with three or four ſpoonfuls of the hyſteric julep above directed.

Sixteen or eighteen drops of ſpirits of hartſhorn, given often in any proper vehicle, do great ſervice.

8. If the diſeaſe yields not to theſe medicines, let the following pills be uſed.

Take of the troches of myrrh, reduced to powder, a ſcruple; balſam of ſulphur with oil of turpentine, four drops; diſſolv'd gum ammoniac, enough to make them into four pills, to be taken morning and night, drinking after them four or five ſpoonfuls of the hyſteric julep, with twelve drops of ſpirit of hartſhorn therein.

The antiſcorbutic electuary, and the diſtill'd water deſcrib'd above in treating of the rheumatiſm *, are beneficial in theſe diſ-

* *Vid. pag.* 252.

orders; and ſo is the ſtrengthening electuary, with the addition of an ounce of the conſerve of garden ſcurvy-graſs, and ſix drams of the compound powder of wake-robin, drinking ſome of the above mention'd water after it †

9. But if this procedure fails, recourſe muſt be had to the ſteel-waters, and theſe proving ineffectual, let the ſulphurous kind be tried, ſuch as thoſe of *Bath*.

10. Theſe rules are to be obſerved in drinking the ſteel-waters. (1.) If any bad ſymptom happens which may be aſcrib'd to them, let them be left off till it vaniſhes. (2.) They muſt be continued ſix weeks at leaſt, or rather two months. (3.) A little candid ginger, or ſome caraway comfits, ſhould be taken between whiles to warm the ſtomach. (4.) Three of the hyſteric pills, with four or five ſpoonfuls of the hyſteric julep, may alſo be taken every evening during the firſt ten nights.

11. As to the *Bath* waters, let them be drank two days running, and uſed by the way of bath the third; continuing this method ſix weeks, or two months.

12. If the ſteel over heats the body during the courſe, let two quarts of the purging mineral waters be drank every fourth morning whilſt it is continued; becauſe theſe waters have the property of opening the body, without occaſioning any diſturbance, as the ſhop purgatives ordinarily do.

13. If the ſteel ruffles the conſtitution conſiderably, give a doſe of *laudanum*, in a few ſpoonfuls of ſome hyſteric water, every night for ſome time.

14. When the ſtrength appears much impaired, from the long continuance of the diſeaſe, bleeding and purging are to be omitted, and immediate recourſe had to ſteel.

15. But if the ſymptoms be moderate, it will be ſufficient to bleed firſt, and afterwards purge three or four times, and then adminiſter the hyſteric pills morning and night for ten days.

16. In caſe of intolerable pain, violent vomiting and purging, laudanum muſt be exhibited, and afterwards the ſpirits ſtrengthened. But if the ſtrength will bear it, bleeding and purging muſt be previouſly uſed, eſpecially in women of a robuſt make, and thoſe of a ſanguine conſtitution. In the weak, who have lately had a fit, it is enough to cleanſe the ſtomach with a gallon of poſſet-drink, exhibiting immediately after the operation a large doſe of *Venice* treacle, or orvietan, waſhing it down with a few drops of laudanum in a few ſpoonfuls of any ſpirituous liquor. But if the patient has vomited lately, and vomiting cannot be further encouraged with ſafety, ſuch a quantity of laudanum muſt immediately be

† *Vid. pag.* 436.

be given, as may be ſufficient to conquer this ſymptom, repeating it after every vomiting, in a ſolid form eſpecially, or in a very ſmall proportion of ſome liquid: for inſtance, a few drops may be given in a ſpoonful of ſtrong cinnamon water, the patient in the mean time indulging reſt, and keeping her head ſtill. After the ſymptom is conquer'd, let the laudanum be continued morning and night for a few days.

17. In the uſe of laudanum two things muſt be carefully obſerved. (1.) When once we begin with it after any evacuation, it muſt be given in a ſufficiently large doſe, and repeated often enough to conquer the ſymptom, only intermitting ſuch a ſpace of time between every doſe, as may be ſufficient to inform us what effect the laſt hath had before we give another. (2.) When the cure of a diſeaſe is attempted by laudanum, we muſt forbear evacuations, and not venture even upon the mildeſt glyſter.

18. The frequent and long continued uſe of *Venice* treacle is very ſerviceable in this and many other diſeaſes proceeding from a want of heat and concoction.

19. A few ſpoonfuls of an infuſion made with the roots of gentian and angelica, the leaves of wormwood, and centory, orange-peel and other ſtrengthening ingredients, in canary, taken thrice a-day, does great ſervice, provided the patient be not of a thin and bilious conſtitution.

20. The bark is an excellent remedy, eſpecially in hyſteric ſpaſms, a ſcruple of it being taken morning and night for ſome weeks.

21. In thin and bilious conſtitutions a milk diet is proper, eſpecially in the hyſteric colic, provided the inconveniencies wherewith it is attended in the beginning can be overcome, which are its coagulating in the ſtomach, and affording too little nouriſhment to keep up the ſtrength.

22. But nothing does ſo effectually ſtrengthen the blood, and raiſe the ſpirits, as riding much on horſe-back almoſt every day for a conſiderable time; and riding in a coach is no contemptible remedy.

Of the depuratory or cleanſing Fever of the Years 1661, 62, 63, 64.

1. IF the patient be young, take away ſome blood from the arm, and the ſame day, a few hours afterwards, or the following day, two hours after a light dinner, give a vomit of the antimonial wine, having three quarts or a gallon of poſſet-drink in readineſs to take a draught of, immediately after every

motion upwards and downwards: and the operation being over, give the following, or a like opiate.

Take of the diſtill'd water of black cherries, an ounce and half; plague water, half an ounce; liquid laudanum, ſixteen drops; ſyrup of clove-july-flowers, two drams; mix them for a draught.

It is not ſafe to give antimonial wine, even in the ſmalleſt doſe, to children under fourteen.

2. From this time to the tenth or eleventh day, let the following glyſter be injected every morning.

Take of the common decoction for glyſters, or milk, a pint; coarſe ſugar and ſyrup of violets, each two ounces; mix them for a glyſter.

3. And after this time ſuffer the patient to be coſtive, that the febrile matter may be ſooner come to a concoction; for which purpoſe mild cordials, adminiſtered during the laſt days, are very beneficial.

Take of the compound powder of crabs claws, fourteen grains, the electuary of the egg, half a ſcruple; ſyrup of clove-july-flowers, enough to make them into a bolus, to be taken every eighth hour, with five or ſix ſpoonfuls of the following julep.

Take of milk-water, and black cherry water, each three ounces; plague water, and ſyrup of clove-july-flowers, each an ounce; mix all together for a julep: or any other ſimilar medicines.

4. If this method be carefully followed, it will generally be found proper, from the laudable ſeparation of the urine, and the manifeſt abatement of all the ſymptoms, to give the common purging draught towards the fifteenth day.

5. It ſometimes happens, eſpecially in the aged, after the fever is gone off, and purging hath been uſed, that the patient notwithſtanding continues very weak, and ſometimes by coughing, and other times by ſpitting, expectorates a copious tough phlegm, in which caſe, let him drink a glaſs of old malmſey, with a toaſt.

6. If an iliac paſſion ſucceeds this fever, order a ſcruple of ſalt of wormwood to be taken morning and night in a ſpoonful of lemon-juice; and in the intervals let ſome ſpoonfuls of mint-water by itſelf be taken twice an hour. At the ſame time let a live puppy be apply'd to the belly, and two or three days after the vomiting

and

and purging are gone off, give a ſcruple of the greater pil. cochiæ, diſſolved in mint-water: obſerving to keep the live puppy applied to the belly till this time.

7. To prevent a relapſe let the uſe of the mint-water be perſiſted in a conſiderable time, and the belly preſerved from cold by wearing a double flannel.

Of the peſtilential Fevers of the Years 1665-66.

1. AFTER the ſick perſon hath been blooded in bed, let him be well covered with clothes, and a piece of flannel applied to his forehead, and then, if there be no vomiting, give the following, or a like ſudorific.

Take of *Venice* treacle, half a dram; the electuary of the egg, a ſcruple; compound powder of crabs claws, twelve grains; cochineal, eight grains; ſaffron, four grains; the juice of kermes, enough to make them into a bolus, to be taken every ſixth hour, with ſix ſpoonfuls of the following julep after it.

Take of the diſtill'd water of holy thiſtle, and compound ſcordium water, each four ounces; treacle water, two ounces; ſyrup of clove-july-flowers, an ounce; mix them together for a julep.

2. If there be a vomiting, do not give the ſudorific till by the weight of the clothes only the ſweat begins to flow, the face being covered with part of the ſheet in order to promote it.

3. When the ſweat is begun, it is to be continued for the ſpace of twenty four hours, by giving draughts of ſage poſſet-drink, or mace ale, between whiles; and the patient during the ſweat may be refreſh'd with reſtorative broths.

4. After the appearance of a ſwelling I have not ventur'd upon bleeding. The patient ſhould keep his bed for twenty four hours after the ſweat is gone off, and be cautious of catching cold; his linnen ſhould be ſuffered to dry on his body, and his liquids taken warm; and he ſhould alſo continue the uſe of ſage poſſet drink: but next morning give my common purging potion.

5. The years 1667 and 1668, gave riſe to a variolous fever, and the ſmall-pox; the years 1669, 70, 71, and 72, to the dyſenteric fever; and the years 1673, 74, and 75, to the comatous fever: but I do not treat of the cure of theſe ſeveral fevers, becauſe I conceive they may be conquer'd by the method ſpecified in treating of the fever of 1685, *&c.**

* *See p* 495.

Of intermittent Fevers.

1. THE fit begins with a chillneſs and ſhaking, which are ſoon follow'd by heat and then by ſweat, which terminates the fever: tho' in the beginning of this diſeaſe, eſpecially in autumn, a remiſſion rather than an intermiſſion is perceived. The cold and hot fit are both generally accompanied with a vomiting, great ſickneſs, thirſt, and a dry tongue. A ſwelling of the abdomen in children, and of the legs in grown perſons, ſhews that the fever is going off; but a pain of the tonſils, a hoarſeneſs, hollow eyes, and a hippocratic face foreſhew death.

Take of the *Peruvian* bark in fine powder, an ounce; ſyrup of clove-july-flowers, or of red roſes, enough to make it into an electuary, to be divided into twelve doſes, one of which is to be taken every fourth hour, drinking after it a glaſs of any ſort of wine; beginning immediately after the fit.

2. If the electuary runs off downwards, give ten drops of liquid laudanum in a glaſs of wine after each, or every other doſe, as there is occaſion. In order to prevent a return of the fever, eſpecially in a quartan, this proceſs is to be repeated every week for three weeks more.

3. If pills are better lik'd,

Take of the *Peruvian* bark finely powder'd, an ounce; ſyrup of clove-july-flowers, enough to make it into pills of a middling ſize, ſix whereof are to be taken every fourth hour.

If a tincture,

Take of the *Peruvian* bark groſly powder'd two ounces; *Rheniſh* wine, two pints; digeſt them together without heat, and ſtrain off the tincture, three ounces of which are to be taken every third or fourth hour.

4. If the fever be accompanied with an almoſt continual vomiting, ſo that the patient cannot get down the bark, give a ſcruple of ſalt of wormwood, in a ſpoonful of freſh lemon-juice, ſix or eight times in the ſpace of two hours; and afterwards ſixteen drops of liquid laudanum in a ſpoonful of cinnamon water without ſpirit: and as ſoon as the vomiting ſtops let the patient begin with the bark.

5. In vernal intermittents, an emetic ſeaſonably adminiſter'd, ſo long before the fit that the operation may be over before it comes,

comes, does ſometimes cure: and ſometimes a glyſter injected daily on three or four of the intermediate days does the ſame.

6. The cure of this kind of fevers may likewiſe be attempted in the following manner.

Take of *Virginian* ſnake-weed, in fine powder, fifteen grains; white wine, three ounces; mix them together for a draught.

Let the patient take it two hours before the fit comes, and being well covered with clothes, ſweat three or four hours afterwards; and let it be repeated twice in the ſame manner.

7. In caſe of great weakneſs, from the redoubling of the fits.

Take of the conſerves of borage and bugloſs, each an ounce; conſerve of roſemary, half an ounce; candied citron peel, candied nutmeg, and *Venice* treacle, each three drams; the confection of alchermes, two drams; mix them together, and make an electuary, of which the quantity of a hazle-nut is to be taken morning and night, drinking after each doſe a few ſpoonfuls of any ſimple plague water, ſweetened with ſugar, and forbidding the uſe of glyſters during this proceſs.

8. If a dropſy happens in the declenſion of the diſeaſe, the fever not being yet remov'd, the cure muſt not be attempted by purgatives, but by infuſions in wine with horſe-radiſh-root, the tops of wormwood, the leſſer centory, juniper berries, and broom aſhes, *&c.* but after the fever is gone off, by purgatives and aperients.

9. In children ſeiz'd with this diſeaſe proceed thus:

Take of the diſtill'd waters of black cherries, and *Rheniſh* wine, each two ounces; the *Peruvian* bark finely powder'd, three drams; ſyrup of clove-july-flowers, an ounce; mix them for a julep, a ſpoonful or two of which, according to the age of the child, is to be taken every fourth hour, till the fits are gone off, dropping into every other doſe, in caſe of a looſeneſs, one or two drops of liquid laudanum.

Of the ſtationary Fever from the Year 1685 *to* 1690.

1. THIS fever was attended with the following ſymptoms. (1.) Heat and cold ſucceeding each other, (2.) a pain of the head and limbs, (3.) the pulſe in the mean time differing little from a healthy ſtate, (4.) a cough ſometimes, (5.) a pain in the neck and jaws, (6.) an increaſe of the fever towards night, (7.) reſtleſneſs, (8.) thirſt, (9.) the tongue either moiſt and quite

cover'd

cover'd with a white rough ſkin, or dry and brown in the middle, and white round the edges, (10.) lying always in bed occaſions a coma and a delirium, (11.) and the effect of a hot regimen are petechiæ, purple ſpots, miliary eruptions redder than the meaſles, an irregular pulſe, ſtartings of the tendons, and at length death. (12.) Symptomatic ſweats happen in the beginning, which being promoted by art, appear clammy in the head, and derive the morbific matter to the head, or the limbs.

2. Take away ten ounces of blood from the arm, and repeat the bleeding, if a difficulty of breathing, an acute pain of the head in coughing, and other ſigns of a baſtard peripneumony appear. And in this caſe bleeding and purging muſt be repeated till the patient recovers.

3 At night apply a bliſter, and next morning preſcribe a laxative draught, which muſt be repeated every other day, to a third time, and a compoſing draught given in the evening after the operation.

Take of the diſtill'd water of cowſlips, three ounces; ſyrup of white poppies an ounce; freſh lemon-juice, two ſpoonfuls; mix them for a draught.

4. The aphthæ and hiccup which ſucceed ſpontaneouſly after the cure of the fever, ordinarily go off in the ſame manner; but if they continue long, are eaſily removed with an ounce of the *Peruvian* bark, made into an electuary, or pills, with a ſufficient quantity of the ſyrup of red poppies, a dram whereof is to be taken twice or thrice a day, drinking after each doſe a draught of whey. This medicine will certainly anſwer the end, if the virtues of it be not deſtroyed by lying conſtantly in bed.

5. On the intermediate days of purging, direct the following.

Take of the conſerves of wood-ſorrel and hips, each an ounce; the conſerve of barberries, half an ounce; cream of tartar, a dram; ſyrup of lemons enough to make them into an electuary, of which the quantity of a nutmeg is to be taken thrice a-day, with ſix ſpoonfuls of the following julep.

Take of the diſtill'd waters of purſlain, lettice and cowſlips, each three ounces; lemon juice, an ounce and half; ſyrup of violets, an ounce; mix them together for a julep.

Or,

Take of ſpring water, a pint; roſe water, lemon juice, and fine ſugar, each four ounces; boil them together over a ſlow fire, till the ſcum riſes, which muſt be carefully taken off. Three ounces of it may be taken at pleaſure.

The

The following gargariſm is likewiſe proper.

Take of verjuice, half a pint; ſyrup of raſp-berries, an ounce; mix them for a gargariſm.

6. If the ſtomach be ſo much diſorder'd by the fever, that a draught cannot be kept down, give two ſcruples of the greater pil. cochiæ, and in this caſe an opiate is alſo to be exhibited; for inſtance, a grain and half of laudanum, with the ſame quantity of maſtich, or eighteen drops of liquid laudanum, in an ounce of ſmall cinnamon water.

7. The white decoction made with an ounce of burnt hartſhorn, boil'd in three pints of ſpring water, and ſweetened with fine ſugar, may ſerve for common drink; as may ſmall-beer likewiſe at pleaſure.

8. When the patient has been purged twice, he may be allow'd to eat chicken, and after the laſt purgation, provided the fever be a little abated, four ſpoonfuls of canary may be given him in the morning, and afternoon, and at night alſo for ſome days.

9. Nothing is more ſerviceable in a delirium or coma than ſhaving the head, without applying a plaiſter, but only wearing a cap.

10. If, as it ſometimes happens in hyſteric women, the fever continues after this repeated bleeding and purging, then, provided there be no ſigns of a peripneumony and inflammation about the vital parts, let an opiate be order'd every night, and hyſteric medicines twice or thrice a day.

How Children are to be treated in the ſtationary Fever.

1. APPLY two leeches behind each ear, and a bliſter to the neck, and purge them with an infuſion of rhubarb in beer *.

2. If the fever ſeem to intermit after purging, exhibit the julep with the *Peruvian* bark, above ſet down, in treating of intermitting fevers †.

Of the ſcarlet Fever.

1. THE ſcarlet fever chiefly attacks children towards the cloſe of ſummer: they are chill and ſhake in the beginning, but not very ſick, the ſkin is cover'd with ſmall red ſpots, which are more numerous, large, and redder than the meaſles, and continue two or three days, after which the ſcarf-ſkin falling off the true ſkin appears mark'd with branny ſcales.

Take

* *p.* 513. 605. † *p.* 558.

Take of burnt hartſhorn finely powder'd, and compound powder of crab's claws, each half a dram; cochineal, two grains; fine ſugar a dram; make them into a fine powder, to be divided into twelve parts, one of which is to be taken every ſix hours, drinking after it two or three ſpoonfuls of the following julep.

Take of black cherry and milk water, each three ounces; ſyrup of citron-juice, one ounce; mix them for a julep.

2. Apply a bliſter, likewiſe, to the neck, and give an opiate of the ſyrup of white poppies every night; and the ſymptoms being gone off, exhibit a purge.

Of the Pleuriſy.

1. THIS diſeaſe prevails between the ſpring and ſummer: it bgins (1.) with a chilneſs and ſhaking, which are ſoon accompanied with (2.) heat, thirſt, reſtleſſneſs, and the other ſymptoms of a fever; (3.) in a few hours the patient feels a violent pain in one ſide, near the ribs, which ſometimes extends to the *ſcapula*, ſometimes to the *ſpina dorſi*, and ſometimes to the fore-part of the breaſt; (4.) he has likewiſe a violent cough; (5.) the matter expectorated at the beginning of the diſeaſe, is ſmall in quantity, thin, and frequently ſtreak'd with blood; but in the courſe thereof it is more copious, and concocted, and alſo mixed with blood; (6.) the fever keeps pace with the cough, the ſpitting of blood, and the pain, and abates gradually, according as expectoration becomes eaſier; (7.) the body is ſometimes coſtive, and ſometimes too open; (8.) the blood, when cold, looks like melted tallow.

2. Take away ten ounces of blood from the arm of the affected ſide.

Take of the diſtill'd water of red poppies, four ounces; ſal prunella, a dram; ſyrup of violets, an ounce; mix them for a draught, to be taken immediately after the firſt bleeding.

Take five ſweet almonds blanch'd; melon and pumpkin ſeeds, of each half an ounce; the ſeeds of white poppies, three drams; barley-water, a pint and half; roſe-water, two drams; ſugar-candy, enough to ſweeten it: make the whole into an emulſion, four ounces of which ſhould be taken every fourth hour.

Take of the pectoral decoction, a quart; ſyrup of violets, and maiden-hair, each an ounce and half; mix them for an apoſem, of which half a pint is to be taken three times a day.

Take

Take of oil of ſweet almonds, two ounces; ſyrup of violets and maiden-hair, each an ounce; ſugar-candy, enough to make them into a linctus.

Oil of ſweet almonds, by itſelf, or freſh drawn linſeed oil, may be alſo given.

Take of the oils of ſweet almonds and lillies and marſh-mallow ointment, each an ounce; mix them together into a liniment, with which anoint the affected ſide morning and night, applying a cabbage leaf thereto.

3. The bleeding is to be repeated in the ſame quantity, three days running, if the pain and difficulty of breathing require it.

Of the baſtard Peripneumony.

1. THIS diſtemper ariſes towards the beginning, and frequently at the cloſe of winter. At the beginning (1.) the patient is hot and cold by turns; (2.) is giddy upon the leaſt motion; (3.) his eyes and cheeks are red and inflamed; (4.) he has a cough, and in coughing feels a violent pain of the head; (5.) he vomits up all liquids; (6.) the urine is turbid, and very high colour'd; (7.) the blood taken away reſembles pleuritic blood; (8.) he breathes quick, and with difficulty, and has a pain in his breaſt. This diſeaſe is diſtinguiſh'd from a dry aſthma, as being accompanied with evident ſigns of a fever, which never appear in that diſtemper, tho' they are much more gentle and latent than in the true peripneumony.

2. Let ten ounces of blood be taken away from the right arm, and the next day give this purging draught.

Take of the pulp of caſſia, freſh extracted, an ounce; liquorice root, two drams; four fat figs; the leaves of ſenna, two drams and a half; troches of agaric, a dram; boil them together in a ſufficient quantity of ſpring-water, to four ounces; in the ſtrained liquor diſſolve an ounce of manna, and half an ounce of the ſolutive ſyrup of roſes; mix the whole for a draught.

3. But if the patient cannot take a draught, give him two ſcruples of the greater pil. cochiæ, at four in the morning.

4. Let the bleeding be repeated the next day in the ſame quantity, and the day after give another purgative, which is to be repeated every other day, or ſeldomer, according to the ſtrength of the patient. And further, if the ſymptoms do not go off, bleeding muſt

muſt be again repeated once, twice, or oftner, interpoſing ſome days between each bleeding, as there is occaſion; but a ſecond bleeding will moſtly ſuffice. During this courſe, the patient ſhould uſe the pectoral decoction, the linctus, and oil of ſweet almonds, preſcrib'd above, in treating of the pleuriſy, eſpecially on the intermediate days of purgation.

Of the Rheumatiſm.

1. THIS diſeaſe begins (1.) with a chilneſs and ſhaking, with the other ſigns of a fever; (2.) in a day or two, and ſometimes ſooner, a violent pain ſeizes ſometimes one limb, and ſometimes another, but eſpecially the wriſts, ſhoulders, and knees, leaving a redneſs and ſwelling in the part laſt affected; (3.) the fever goes off by degrees, whilſt the pain continues, and ſometimes increaſes. A rheumatic lumbago is accompanied with a ſevere fixt pain in the region of the loins, reſembling a fit of the ſtone in every thing but a tendency to vomit; the patient cannot lie down in bed, but either gets up, or ſits upright therein, and is perpetually moving his body backwards and forwards: the blood is ſizy, as in a pleuriſy.

2. Let ten ounces of blood be taken away from the arm of the affected ſide.

Take of the diſtill'd waters of water-lilly, purſlain, and lettice, each four ounces; ſyrup of lemons, an ounce and half; ſyrup of violets, an ounce; mix them for a julep, ſome of which may be drank at pleaſure.

3. Emulſions of the four greater cold ſeeds ſhould be preſcribed, and a cataplaſm, made of the crumbs of white bread and milk milk tinged with ſaffron, applied to the part affected.

4. The next day take away the ſame quantity of blood, and bleed again in a day or two, and repeat the operation a fourth time, or oftner, if there be occaſion, obſerving after the ſecond time to repeat the bleeding at greater intervals.

5. On the intermediate days of bleeding, inject a glyſter of milk and ſugar between times, or the following.

Take of the common decoction for glyſters, a pint; ſyrup of violets and coarſe ſugar, each two ounces; mix them for a glyſter.

6. If the patient be too weak to bear repeated bleeding, the cure, after the ſecond or third bleeding, muſt be attempted in the following manner.

7. Ex-

7. Exhibit my common purging potion every other day, till the diſeaſe goes off, and in the evening, after the operation, an opiate of ſyrup of white poppies.

8. If the diſtemper does not yield to theſe remedies, and the patient is too weak to bear any evacuations, give him the anti-ſcorbutic electuary, and diſtilled water, deſcribed in treating of the ſcurvy, which are alſo proper in a ſcorbutic rheumatiſm. *

9. In young perſons, and ſuch as live temperately, and drink wine with moderation, the rheumatiſm may be as ſucceſsfully cured by a very cooling and moderately nouriſhing diet, as by repeated bleeding, which they cannot ſo well bear.

10. For inſtance; let the patient live upon whey only for four days running, and afterwards, beſides the whey, he may eat a piece of white bread once a day, inſtead of a dinner, till he recovers; only towards the declenſion of the diſeaſe a piece of bread may likewiſe be allowed him at ſupper. When the ſymptoms are gone off, his diet may be boil'd chicken, and other food of eaſy digeſtion; but every third day he muſt live only upon whey, till he is perfectly recovered.

Of the eryſipelatous Fever.

1. IN this diſtemper (1.) all the parts of the body, but eſpecially the face, ſwell, and are painful and red; (2.) ſmall pimples appear, which ſometimes riſe up into bliſters, and ſpread over the forehead and head; (3.) the eyes are buried under the ſwelling; (4.) a chilneſs, ſhivering, and other ſigns of a fever accompany theſe ſymptoms. In the other kind of this diſorder, which is occaſioned by drinking, there is (1.) a ſlight fever; (2.) attended with pimples, not unlike thoſe cauſed by the ſtinging of nettles, which ſometimes riſe up into bliſters, and ſoon after vaniſh, and lie hid under the skin, where they produce a very troubleſome itching, and, upon ſcratching, come out again. There is alſo another kind of eruption, which generally appears in the breaſt, being a broad ſpot with yellow ſcales, which ſcarce riſes higher than the skin, and whilſt it keeps out the patient is not at all indiſpoſed, but when it ſtrikes in, a ſlight ſickneſs ſucceeds, and the urine is turbid and yellow: it yields to the ſame remedies as the ſtubborn itch, only wine and fleſh of eaſy digeſtion may be uſed.

2. Take away nine or ten ounces of blood from the arm, and next day exhibit my common purging notion.

Take

* *Vid. pag.* 252.

Take of the roots of marſhmallows and lillies, each an ounce; the leaves of mallows, elder, and mullein, the flowers of camomile and melilot, and the tops of St. John's wort, and the leſſer centory, each one handful; linſeed and fenugreek ſeed, each half an ounce; boil them together in a ſufficient quantity of water to leave three pints, and to every pint of the ſtrained liquor, when 'tis uſed, add two ounces of ſpirit of wine.

Let the part affected be fomented twice a day with flannels dipp'd in this fomentation, firſt made hot, and wrung dry; and, after fomenting, bathe it with the following mixture.

Take of ſpirit of wine, half a pint; Venice treacle, two ounces; long pepper and cloves, reduc'd to powder, each two drams: mix them together: cover the part affected with brown paper moiſtened with this mixture.

3. If the firſt bleeding does not cure the diſorder, have recourſe to the operation again, and this failing, repeat it twice more, interpoſing a day between each bleeding.

4. On the intermediate days of bleeding, order a glyſter of milk and ſyrup of violets, and a cooling emulſion and julep.

Of the ſtubborn itch, and other inveterate eruptions of the ſkin, which yield not to bleeding and purging.

1. TAKE of Venice treacle half a dram; electuary of the egg, a ſcruple; Virginian ſnake-root, in fine powder, fifteen grains; oriental bezoar, five grains; ſyrup of candied citron, enough to make them into a bolus, to be taken every night, at bed-time, for the ſpace of one and twenty days, drinking after it ſix ſpoonfuls of the following julep.

Take of the diſtill'd water of holy thiſtle, ſix ounces; plague and treacle waters, each two ounces; ſyrup of clove-july-flowers, an ounce; mix them for a julep.

2. The patient ſhould drink half a pint of warm poſſet drink every morning, and ſweat an hour after it.

3. This courſe being over, if the eruption ſtill continue, let the parts affected be anointed with the following liniment.

Take of the ointment of ſharp-pointed dock, two ounces; pomatum, an ounce; flower of ſulphur, three drams; oil of rhodium, half a ſcruple; mix them together for a liniment.

4. But

4. But theſe medicines muſt not be uſed, before the patient hath been properly blooded and purged.

Of the Quinſey.

1. THE quinſey commonly comes between ſpring and ſummer; the fever accompanying it, is ſoon ſucceeded by a pain and inflammation of the fauces, uvula, tonſillæ, and larynx; theſe parts being ſo much ſwell'd as to hinder deglutition and reſpiration.

2. Bleed plentifully in the arm, and let the inflamed parts be beſmear'd with honey of roſes, well acidulated with ſpirit of vitriol, or ſpirit of ſulphur: and ſoon after let the following gargariſm be uſed, not in the common way, but held quietly in the mouth, till it grows warm, and then ſpit out; and repeat it in this manner between times.

Take of the diſtill'd waters of plantain, red roſes and frog-ſpawn, of each four ounces; three whites of eggs, beat to a liquor; fine ſugar, three drams; mix them together for a gargariſm.

And let the cooling emulſion, preſcrib'd in the cure of the pleuriſy, be daily uſed.

3. Next morning, unleſs the fever and difficulty of ſwallowing be abated, bleeding muſt be repeated, and purging deferr'd till the ſubſequent day, otherwiſe a gentle purge may be given.

4. If the diſorder ſtill continues, which very rarely happens, let bleeding and purging be further repeated, and a large ſtrong bliſtering plaiſter applied between the ſhoulders, after the firſt bleeding.

5. On the intermediate days of purging, inject a cooling and emollient gliſter in the morning: the patient muſt uſe a ſparing diet, and ſit up a few hours every day.

6. In all theſe fevers, which I call *intercurrent*, and in thoſe likewiſe which I term *ſtationary*, it muſt be carefully obſerved, that the patient ſhould ſit up a great part of the day, and live upon barley-gruel and water-gruel, and the like kind of diet, and uſe ſmall-beer, and milk and water for his common drink.

Of the Meaſles.

1. CHildren are chiefly ſubject to this diſeaſe; which hath the following ſymptoms. (1.) The firſt day they are ſeized with a chilneſs and ſhivering, and heat and cold ſucceeding by turns; (2.) the ſecond day a perfect fever comes on, accompanied with (3.) great ſickneſs, (4.) thirſt, (5.) loſs of appetite, (6.) a white, but not a dry tongue, (7.) a ſlight cough, (8.) heavineſs of the head and eyes, with a continual drowſineſs, (9.) a conſtant diſtillation from the noſe and eyes, and an effuſion of tears, which is the moſt certain ſign of the meaſles. (10.) Theſe ſymptoms are ſucceeded by a ſneezing, a ſwelling of the eye-lids, immediately preceding the eruption, a vomiting and a looſeneſs, attended with green ſtools, eſpecially in children whilſt they are breeding teeth. The ſymptoms increaſe till the fourth day, at which time, and ſometimes on the fifth day, little red ſpots, like flea-bites, appear in the forehead and face, which growing more numerous and large, run together, and mark the face with large red ſpots, which are compoſed of ſmall red pimples, riſing a little higher than the ſkin, and may be felt by preſſing them lightly with the finger, but can ſcarce be ſeen. From the face, where only they firſt ſhew themſelves, theſe ſpots extend to the breaſt and belly, and then to the thighs and legs; but in theſe parts they are large and red, and do not riſe above the ſurface of the skin.

(2.) The ſymptoms do not abate upon the eruption in this diſeaſe, as in the ſmall-pox, the vomiting indeed does not continue afterwards, but the fever, cough, and difficulty of breathing increaſe, and the diſtillation from the eyes, the drowſineſs and loſs of appetite remain. On the ſixth day, or about that time, the forehead and face grow rough, the eruptions begin to dry, and the skin ſeparates; but in the other parts of the body the ſpots appear very large and red. About the eighth day they vaniſh in the face, and ſcarce appear in the reſt of the body. On the ninth day they diſappear entirely, and the face, limbs, and ſometimes the whole body ſeem cover'd with branny ſcales; but the cough, fever, and difficulty of breathing, grow worſe. A hot regimen in grown perſons makes the eruptions turn livid at firſt, and then black.

Take of the pectoral decoction, a pint and half; ſyrup of violets and maiden-hair, each an ounce and half; mix them together for an apozem, and let three or four ounces of it be taken three or four times a day.

Take

Take of oil of ſweet almonds, two ounces; ſyrup of violets and maiden-hair, each an ounce; white ſugar-candy, enough to make them into a linctus, to be taken often in a ſmall quantity, eſpecially when the cough is troubleſome.

Take of black cherry water, three ounces; ſyrup of white poppies, an ounce; mix them together, for a draught, to be taken every night the diſtemper throughout; leſſening or increaſing the doſe, according to the age of the patient.

3. The patient ſhould lie in bed for the firſt two days after the eruption.

4. If a fever, a difficulty of breathing, and other ſymptoms, reſembling a peripneumony, ſucceed after the meaſles are gone off, bleed plentifully in the arm, and repeat the operation a ſecond or third time, as there is occaſion, interpoſing a proper interval between each: and continue the uſe of the pectoral decoction and linctus above preſcribed, together with the oil of ſweet almonds by itſelf. About the twelfth day from the beginning of the diſtemper, give a gentle purge.

5. The looſeneſs ſucceeding the meaſles is cur'd by bleeding.

Of the Small-Pox.

1. THE ſmall-pox is of two kinds; either diſtinct, or confluent. The diſtinct kind begins with (1.) chilneſs and ſhivering, (2.) great heat, (3.) a violent pain in the head and back, (4.) vomiting, (5.) a conſiderable tendency to ſweat in grown perſons, whence it may be conjectured, that the ſmall-pox will not prove of the confluent kind; (6.) a pain under the *ſcrobiculum cordis* upon preſſing it with the hand, (7.) drowſineſs and *ſtupor* ſometimes, (8.) epileptic convulſions, eſpecially in children, which happening after dentition, one may foretel, that the ſmall-pox is juſt approaching; ſo that for inſtance, ſuppoſing a child be ſeiz'd with a convulſive fit over night, a kindly ſmall-pox will appear next morning, and very rarely of the confluent ſort.

2. On the fourth day, incluſive from the beginning of the diſtemper, ſometimes later, but ſeldom ſooner, the eruptions come out, at which time the ſymptoms abate, or go off entirely. At firſt reddiſh puſtules, as large as the head of a ſmall pin, appear ſcatter'd up and down in the face, neck, breaſt, and the whole

body, and at the ſame time a pain ſeizes the fauces, and increaſes proportionably as the eruptions fill.

3. About the eighth day, from the firſt ſeizure, the ſpaces between the puſtules, that appear'd white before, begin to grow red, ſwell, and are painful; the eye-lids are diſtended ſo as to cloſe the eyes, and reſemble an inflated bladder. Next after the face, the hands, and fingers ſwell, and the eruptions on the face, that till this day were ſmooth and red, now grow rough and whitiſh (which is the firſt ſign of ſuppuration) and diſcharge a yellow matter, in colour not unlike a honey-comb. The inflammation of the face and hands, being in the mean time come to its height, renders the ſpaces between the eruptions of a florid red colour, reſembling that of damask roſes: and the milder the ſmall-pox is, the nearer do the eruptions and their intermediate ſpaces approach this colour. The puſtules on the face grow every day rougher and yellower, as they ſuppurate, while thoſe of the hands and other parts appear ſmoother and whiter.

4. On the eleventh day, the ſwelling and inflammation of the face vaniſh, and the eruptions being come to their due maturity and ſize, equalling that of a large pea, dry and ſcale off. On the fourteenth or fifteenth day they diſappear entirely, but thoſe of the hands being more ſtubborn, and yet white and freſh, continue a day or two longer, after which they burſt; and thoſe of the face and body ſcale off, and in the face are ſucceeded by pits or pock-marks.

5. The patient is either quite coſtive, or hath few ſtools throughout the whole courſe of the diſeaſe. Moſt of thoſe whom this diſtemper kills, die on the eighth day in the diſtinct kind, and on the eleventh in the confluent: for when ſweat is promoted in the diſtinct ſort by cordials and a hot regimen, the face, which on the eighth day ought to ſwell, and be inflam'd in the ſpaces between the eruptions, on the contrary appear whitiſh and ſunk, whilſt the puſtules notwithſtanding continue red and plump, even after the death of the patient. The ſweat which flowed freely to to this day ceaſes ſuddenly, and the patient in the mean time is ſeiz'd with a delirium, reſtleſneſs, ſickneſs, and frequency of making urine in ſmall quantities, and in a few hours expires.

6. The confluent ſmall-pox is accompanied with the ſame ſymptoms, but they are more violent: the fever, for example, reſtleſneſs, ſickneſs, and vomiting, &c. rage more ſeverely, but there is leſs tendency to ſweat than in the diſtinct kind. Sometimes a looſeneſs precedes, and laſts a day or two after the eruption, which it ſcarce ever does in the diſtinct kind. The eruption, in this ſort of ſmall-pox, happens on the third day, or earlier, but ſeldom later

later, and the ſooner the puſtules come out, the more they run together. Sometimes, however, the eruption is retarded to the fourth or fifth day by ſome violent ſymptom; as, for inſtance, (1.) a ſharp pain in the loins, reſembling a fit of the ſtone, (2.) in the ſide, like a pleuriſy, (3.) in the limbs, like a rheumatiſm, or, (4.) in the ſtomach, accompanied with great ſickneſs and vomiting. The confluent ſort differs from the diſtinct in this, that the ſymptoms do not abate immediately after the eruption, but the fever and its concomitants afflict the patient for ſeveral days afterwards. Sometimes the puſtules come out like an eryſipelas, and ſometimes like the meaſles; but they may readily be known from both by the time of the eruption. In the progreſs of the diſeaſe, the puſtules do not come to any conſiderable bigneſs, but run together in the face, and cover it like a red bladder, and make it ſwell ſooner than in the diſtinct ſort; at laſt they appear like a white pellicle, cloſely adhering to the face, and riſing a little above the skin.

7. After the eighth day this pellicle grows every day rougher, and inclines to a brown colour; the skin is tenderer, and in the worſt ſort of the confluent ſmall-pox falls off in large ſcales, but not till after the twentieth day. 'Tis worth obſerving, mean time, that the nearer the puſtules, as they ſuppurate, incline to a dark brown colour, ſo much the worſe they are, and the longer in falling off: but the yellower they are, the leſs they run together, and the ſooner they vaniſh.

8. When the pellicle firſt falls off, the face appears ſmooth, but it is ſoon ſucceeded by branny ſcales, of a very corroſive nature, which leave large pits and frequently ſeems behind them. Sometimes the skin of the back and ſhoulders ſcale off. The dangerouſneſs of the diſeaſe is to be eſtimated by the number of the eruptions on the face only. Thoſe of the hands and feet are larger than thoſe of the other parts, and the nearer they approach the trunk the leſs they are.

9. In grown perſons a ſalivation, and in children a looſeneſs (tho' not ſo certainly) accompanies the confluent kind. The ſalivation ſometimes begins with the eruption, and ſometimes not till two or three days afterwards. At firſt the matter is thin, but on the eleventh day it grows more viſcous, and is rais'd with great difficulty. The patient is thirſty, and is ſeized with a hoarſneſs, great ſtupor and drowſineſs, coughs between whiles as he drinks, and the liquor flies out at the noſtrils. At this time the ſalivation generally ſtops, which, if it were not ſupplied by the ſwelling of the face, and the ſwelling of the hands, now manifeſtly beginning, and laſting longer than the former, would immedi-

ately deſtroy the patient. For tho' the ſwelling of the face, according to the nature of the diſeaſe, ought to abate a little on this day, yet it ſhould not ſink entirely till a day or two afterwards. The looſeneſs does not attack children ſo ſoon as the ſalivation does grown perſons.

10. In both the kinds of the ſmall-pox, the fever rages from the beginning of the illneſs to the time of the eruption, after which it abates till the ſuppuration begins, which being finiſhed, it goes off. Wrong management occaſions abundance of irregular ſymptoms, as a ſinking of the puſtules, a delirium, or coma, purple ſpots between the eruptions, with ſmall black ſpots on the top of them, depreſt in the middle; bloody urine, and ſpitting of blood in the beginning of the diſtemper, and a ſuppreſſion of urine.

11. The ſeparation is finiſh'd with a febrile ebulition, in the firſt three or four days, and the expulſion is form'd during the reſt of the time, by means of ſmall abſceſſes in the fleſh.

12. In the mildeſt ſort of the confluent ſmall-pox, the eleventh day, incluſive from the beginning of the illneſs, is the moſt dangerous, the fourteenth in the middle ſort, the ſeventeenth day in the worſt kind: but ſometimes the patient does not die before the twentieth day, which however very rarely happens. Moreover a very troubleſome fit of reſtleſneſs comes on every day towards evening, from the eleventh to the ſeventeenth day.

13. Take away nine or ten ounces of blood upon any of the firſt three days, and afterwards give a vomit of an ounce, or an ounce and half of antimonial wine.

14. During the firſt ſtage of the diſtemper, that is, till the eruption be over, let the blood be diluted by drinking ſmall beer often.

15. As ſoon as all the puſtules are come out, which ordinarily happens on the ſixth day from the beginning of the illneſs, give an ounce of the ſyrup of white poppies every evening till the tenth day; and that night, if the ſmall pox be of the confluent kind, increaſe the doſe to an ounce and half, and from this time forward give an ounce every morning, and an ounce and half at night, till the patient recovers.

16. If the ſyrup of poppies, does not agree with the patient, liquid laudanum may be exhibited in its ſtead; for inſtance, eighteen drops of it for an ounce of the ſyrup, and twenty-five drops for an ounce and half; obſerving, in the mean time, if the opiate fails to quiet the tumult (as it frequently does at the declenſion of the moſt confluent ſmall-pox) to give it every eighth hour, or oftner, if there be occaſion.

17. But

17. But in the diſtinct ſmall-pox the opiate need only be exhibited every night, after the eruption is over, and in a ſmaller doſe likewiſe.

18. But of whatever kind the ſmall-pox be, and at whatever time of the diſeaſe it happens, if a *delirium* comes on, 'tis indiſpenſably neceſſary to check the irregular motion of the ſpirits; and therefore, if the firſt opiate does not anſwer the end, it muſt be repeated till the diſturbance be quieted, interpoſing ſuch a ſpace of time between every doſe, that we may be aſſured whether the laſt hath been effectual for that purpoſe, before we exhibit another.

19. If a total ſuppreſſion of urine happens, the patient muſt be taken out of bed, and walk a few turns about his room.

20. If the heat renders the *ſaliva* ſo viſcous that it can't be got up, the throat muſt be frequently ſyring'd with a gargariſm of ſmall-beer or barley water with honey of roſes; or the following may be uſed for this purpoſe.

Take of elm bark ſix drams; liquorice root, half an ounce; ſton'd raiſins, twenty; red roſes, two pugils; boil them together in a ſufficient quantity of water to a pint and half; in the ſtrain'd liquor diſſolve ſimple oxymel and honey of roſes, of each two ounces; mix them for a gargariſm.

21. If there be occaſion for a bliſtering plaiſter, apply a large ſtrong one to the neck, on the evening preceeding the great criſis of the diſeaſe, and immediately afterwards exhibit the opiate. Garlic may alſo be applied to the bottom of the feet, from the eighth day to the end of the diſtemper, and renew'd every day.

22. If a child be ſeiz'd on a ſudden with convulſions after dentition, it may be conſider'd that in all probability they proceed from the effort of nature to expel the ſmall-pox, ſcarlet-fever, or the meaſles to the outward parts; and therefore let a bliſtering plaiſter be applied to the neck, and the child immediately put to bed, and a cordial alſo exhibited, mix them with a ſmall quantity of ſome opiate; for inſtance, five drops of liquid laudanum, in a ſpoonful of plague-water, to a child of three years of age.

23. If on the eleventh, or any ſucceeding day, the ſecond fever, attended with reſtleſneſs, and the other ſymptoms of this kind, riſes ſo high that it cannot be check'd by opiates, tho' repeated with the greateſt frequency, and even endangers life; in this caſe let a ſufficient large quantity of blood, for inſtance, twelve ounces, or thereabouts, be immediately taken away, and the operation may be repeated a ſecond or third time on the ſubſequent days, if the abovemention'd ſymptoms require it, but

not otherwiſe. A lenient purgative may alſo be order'd on the thirteenth day, but not ſooner, or any of the following days, provided bleeding hath been previouſly uſed; for inſtance, an ounce of lenitive electuary, diſſolv'd in four ounces of ſuccory or milk water. But neither bleeding or purging obſtruct the uſe of opiates, which notwithſtanding theſe evacuations, ought to be given in a large doſe, and repeated according to the exigency of the caſe; for we are always to have recourſe to opiates in this diſeaſe.

24. When the puſtules are quite dry, the face may be anointed with a liniment, made of equal parts of oil of ſweet almonds and pomatum, for two days, but not longer.

25. On the twenty firſt day from the beginning of the diſtemper, take away ſome blood from the arm, and the next day give a purge, and repeat it every other day, to a fourth time.

26. As to the regimen, the patient ſhould ſit up in the day time till the ſixth day, and afterwards keep his bed conſtantly till the ſeventeenth, but not have more cloaths laid on him than he was accuſtom'd to when in health.

27. His diet ſhould be water-gruel, barley-gruel, roaſt apples and ſmall-beer; and after the eleventh day he may drink four or five ſpoonfuls of canary, twice a day if he likes it.

28. If the ſwelling of the legs yields not to the above mention'd evacuations, it may eaſily be remov'd with a fomentation, made of the leaves of mallows, mullein, elder, and laurel, and the flowers of camomile and melilot, boil'd in milk.

29. If a ſpitting of blood, or bloody-urine happen in the firſt ſtage in the diſeaſe, let the powder and julep, ſet down in my diſſertation in the ſecond fever in the confluent ſmall pox *, be carefully exhibited every ſixth hour, till theſe ſymptoms entirely diſappear: in this caſe opiates alſo may be given freely.

Of St Vitus's *Dance.*

1. THis diſorder isa kind of convulſion, which ſeizes children of both ſexes, from the tenth to the fourteenth year: it manifeſts itſelf by a halting, or unſteadineſs of one of the legs, which the patient draws after him like an ideot. If the hand of the ſame ſide be applied to the breaſt, or any other part of the body, the child can't keep it a moment in the ſame poſture, but it will be drawn into a different one by a convulſion, notwithſtanding all his efforts to the contrary. Before a child who hath this diſorder can get a glaſs or cup to his mouth, he uſeth abundance of odd geſtures; for he does not bring it in a ſtrait line thereto, but his hand

* *See p.* 581.

hand being drawn ſideways by the ſpaſm, he moves it backwards and forwards, till at length the glaſs accidentally coming nearer his lips, he throws the liquor haſtily into his mouth, and ſwallows it greedily, as if he meant to divert the ſpectators.

2. Take away eight ounces of blood from the arm, or a quantity beſt adapted to the age of the patient.

3. The next day give him one half, or a little more of my common purging potion, according to his age, and at night the following draught.

Take of black cherry water, an ounce; compound piony water, three drams; *Venice* treacle, a ſcruple; liquid laudanum, eight drops; mix them together for a draught.

Repeat the purgative thrice, once every other day, and give an opiate at night, after the operation.

4. Afterwards bleed again and purge, as before, and in this manner let bleeding and purging be repeated a third or fourth time; allowing ſuch intervals between the alternate evacuations, as to prevent all dangers therefrom.

5. On the intermediate days of purging, let the following remedies be uſed.

Take of the conſerves of *Roman* wormwood and orange peel, each an ounce; the conſerve of roſemary, half an ounce; old *Venice* treacle, and candied nutmegs, each three drams; candied ginger, a dram; ſyrup of citron-juice, enough to make them into an electuary, of which let the quantity of a nutmeg be taken every morning, and at five in the afternoon, drinking after it five ſpoonfuls of the following wine.

Take of the roots of piony, elecampane, maſterwort and angelica, each an ounce; the leaves of rue, ſage, betony, germander, white horehound, and the tops of the leſſer centory, each a handful; juniper berries, ſix drams; the peel of two oranges: theſe ingredients being ſliced, cut, and bruiſed as they require, let them infuſe, without heat, in ſix pints of canary; ſtrain it off only as it is us'd.

Take of rue water, four ounces; compound piony and briony water, each an ounce; ſyrup of piony, ſix drams; mix them together for a julep, four ſpoonfuls of which muſt be taken every night at bed time, dropping into it eight drops of ſpirit of hartſhorn.

6. Apply a plaiſter ſpread on leather, of the plaiſter of gum caranna to the ſoles of the feet.

7. To

7. To prevent a relapſe, open a vein, and purge for ſome days, about the ſame ſeaſon of the following year, wherein the diſeaſe firſt appear'd.

8. It ſeems probable to me that this method might ſuit the falling ſickneſs in grown perſons, which, however, I have not yet experienced. But as St *Vitus*'s dance happens only to children, if this method be uſed in the epilepſy in grown perſons, more blood muſt be taken away, and the purgative made ſtronger.

Of the Apoplexy.

1. AN apoplexy is a total deprivation of ſenſe, and motion, excepting that of reſpiration, which is performed with difficulty and ſnoring.

2. Take away twelve ounces of blood immediately from the arm, and afterwards eight from the jugular, and preſently after exhibit a vomit of an ounce and a half, or two ounces of the antimonial wine.

3. Apply a large ſtrong bliſtering plaiſter between the ſhoulders, and during this procedure, let the patient ſit upright in bed, and a vial of highly rectified ſpirit of ſal-ammoniac be held to his noſe.

4. As ſoon as the vomit has done working, give three or four ſpoonfuls of the following julep, repeating the doſe at proper intervals.

Take of rue water, four ounces; compound briony and piony water, of each an ounce; ſpirit of hartſhorn, twenty drops; fine ſugar, enough to ſweeten it; mix the whole for a julep.

Or a ſpoonful of the compound ſpirit of lavender may be given by itſelf twice or thrice during the fit, at an hour or half an hour's diſtance between every doſe.

5. Care muſt be had not to adminiſter too hot cordials, nor to give them too often, as is commonly done; for whatever ſpecific virtue they may ſeem to be poſſeſſed of, they do more miſchief than good, as being apt to diſſolve the juices, and conſequently to increaſe the diſeaſe: which inconvenience is likewiſe occaſioned by keeping the patient too warm.

6. After the fit is over, let the following medicines be uſed to prevent a relapſe. Give two ſcruples of the greater pil. cochiæ, made into pills at four o'clock in the morning, ſo that the patient may ſleep upon them, and repeat them every third day to a ſixth time.

Take of the conſerves of the flowers of ſage and roſemary, each an ounce; the conſerve of orange peel, ſix drams; candied

candied nutmegs and candied ginger, each half an ounce; old *Venice* treacle, two drams; the powders for the electuaries of diambra and ſweet muſk, each a dram; ſyrup of candied citron, a ſufficient quantity to make them into an electuary; of which let the quantity of a cheſnut be taken morning and evening, drinking after it two ſpoonfuls of compound piony water.

Take of ambergreaſe, half a dram; the diſtill'd oils of aniſeed, cinnamon and nutmegs, each two drops; oil of cloves, one drop; fine ſugar diſſolv'd in the diſtill'd water of orange flowers) four ounces; make them into troches, according to the rules of art; one of which may be taken at pleaſure.

7. The patient ſhould refrain from all kinds of ſpirituous liquors, and live upon water-gruel, barley-gruel, and chicken-broth, and ſometimes alſo upon chicken, lamb, and the like food of eaſy digeſtion, eſpecially on thoſe days he purges.

Of an Inflammation of the Eyes.

1. THIS diſorder manifeſts itſelf by the inflammation of the part.

2. Take away ten ounces of blood from the arm, and next day exhibit my common purging potion, which muſt be repeated a third time, interpoſing two days between every purge; and at night, after the operation is over, give a quieting draught of an ounce of ſyrup of white poppies.

3. On the intermediate days of purging, let him take four ounces of an emulſion made with the greater cold ſeeds, and white poppy ſeeds, three or four times a day.

4. After the firſt purge, let the following eye-water be uſed.

Take of the diſtill'd waters of plantain, roſes, and frog-ſpawn, each an ounce; prepar'd tutty, reduc'd to powder, a dram; mix them for an eye-water, of which let a few drops be drop'd into the eyes twice every day.

5. If the diſorder yields not to theſe remedies, let bleeding be repeated once or twice more (eſpecially if the blood reſembles that taken away in a pleuriſy) and purging likewiſe.

6. The patient ſhould forbear wine, and all ſpirituous liquors, and all kind of food that is ſalt and hard of digeſtion, and on the intermediate days of purging, drink milk boil'd with water.

7. It muſt be obſerved, that bleeding and purging, tho' repeated with the greateſt frequency, often prove ineffectual in an inflamma-

flammation of the eyes, in which caſe an ounce of the ſyrup of white poppies, adminiſter'd every night, perfects the cure without any other helps from medicine.

Of the bearing down of the Womb.

TAKE of oak-bark, two ounces; boil it in two quarts of ſpring-water to one, adding towards the end of the operation, pomegranate bark, bruiſed, red roſe leaves and balauſtines, of each two handfuls; and laſtly, half a pint of red wine: ſtrain off the liquor for a fomentation, to be applied with flannels in the uſual manner, every morning two hours before the patient gets up, and at night, after ſhe is in bed, till the diſorder goes off entirely.

Of a fit of the Stone in the Kidneys.

1. IT is accompanied with the following ſymptoms. (1.) A fixt pain in the region of the loins, (2.) bloody urine, (3.) the voiding of a ſtone or gravel, (4.) a numbneſs of the leg on the ſide affected, (5.) the teſticle of the ſame ſide drawn into the ſcrotum, and (6.) a nauſea and vomiting. The colic is not much unlike a fit of the ſtone, tho' it manifeſtly differs from this diſorder in ſome ſymptoms, which we have already enumerated in treating of the bilious colic. *

2. If the patient be of a ſanguine conſtitution take away ten ounces of blood from the arm of the contrary ſide, then let a gallon of poſſet-drink, wherein two ounces of marſhmallows have been boil'd, be drank as expeditiouſly as poſſible, and the following glyſter injected.

Take of the roots of marſhmallows, and lillies, each an ounce-the leaves of mallows, pellitory, bear's breech, and camomile flowers, of each a handful; linſeed and fenugreek ſeed, each half an ounce; boil them in enough ſpring-water to leave a pint and a half of ſtrain'd liquor for a glyſter.

3. When the poſſet-drink is thrown up, and the glyſter comes away, give a ſufficiently large doſe of liquid laudanum, for inſtance, twenty five drops, or fifteen or ſixteen grains of *Matthew*'s pill.

4. But in perſons in years, and ſuch as are much weakened by a long continuance of the diſeaſe, and likewiſe in aged women that are ſubject to the vapours, bleeding is to be omitted, eſpecially if they part with black ſandy urine in the beginning of the fit,

* *See p.* 185.

fit, but in all other reſpects the above-mentioned method is to be followed.

Of Bloody-Urine from the Stone in the Kidneys.

1. THE patient ſhould take weekly, on a ſet day, two ounces and a half of manna, diſſolv'd in a quart of whey.

2. It is proper ſometimes to drink a large draught of ſmall beer.

3. If there be a large ſtone in the kidneys, a heavy dull pain is felt, which increaſes not at all, is not violent, nor accompanied with a fit of the ſtone.

4. The patient cannot ſafely enter upon a courſe of the ſteel waters, without being firſt well aſſured that the ſtone is not too large to paſs the ureters, which can only be certainly learnt from his having had a fit of the ſtone before, attended with a very ſevere pain in one kidney, extending thro' the whole duct of the ureters, and exceſſive vomiting, in which caſe he may be certain there is no large ſtone, but rather a number of ſmall ones, one of which will fall from time to time into the ureter, and ſo cauſe a fit, which ſeldom terminates, till the ſtone is protruded into the bladder. Now in this caſe there is not a more efficacious remedy, than a courſe of ſteel waters. But if the patient hath never had a nephritic fit, by reaſon of the ſtone's being too large to paſs the pelvis, theſe waters muſt be refrained.

Of the Dyſentery, Looſeneſs, and Teneſmus.

1. THE dyſentery, or bloody flux, begins with (1.) a chilneſs and ſhaking, ſucceeded (2.) by a heat of the whole body, and ſoon after (3.) by gripes, and theſe (4.) by frequent mucous ſtools, accompanied with violent pain, and a painful deſcent as it were of the bowels at every ſtool, but ſometimes an excrementitious ſtool intervenes, (5.) the ſtools are ordinarily ſtreak'd with blood, but ſometimes not the leaſt blood is mixed with them throughout the whole courſe of the diſeaſe, (6.) pure blood is ſometimes voided in the courſe of the diſtemper, and the bowels are affected with an incurable gangrene, (7.) if the patient be in the prime of life, or has been heated by cardiacs, a high fever riſes, and the tongue is covered with a thick white mucus, and ſometimes is dry and black, (8.) a loſs of ſtrength and ſpirits is joined with the fever, and the inward parts of the mouth and throat are affected with aphthæ, eſpecially if the evacuation of the peccant matter hath been injudiciouſly check'd by

by aſtringents, without having been firſt carried off by purgatives. Sometimes the dyſentery is unattended with a fever, and begins with gripings, which are ſucceeded with the other ſymptoms of this diſorder.

2. In a looſeneſs, excrementitious humours are unmix'd with blood, and there is no ulceration of the bowels.

3. In a teneſmus there is a continual inclination to go to ſtool, yet nothing is voided but a bloody or purulent mucous matter.

4. Bleed immediately in the arm, and the ſame evening give an opiate, and next morning my common purging potion, and repeat it twice more, allowing a day between each purgation, and exhibiting an opiate alſo after every purge, as ſoon as the operation is over; but on the intermediate days of purging, give it morning and night.

5. After bleeding and purging once, let the following cardiac be taken throughout the whole courſe of the diſeaſe.

Take of the diſtill'd waters of black cherries and ſtraw berries, of each three ounces; plague waters, compound ſcordium water, and ſmall cinnamon water, of each an ounce; prepar'd pearl, one dram and a half; fine ſugar, enough to ſweeten the whole, and half an ounce of roſe water, to give it an agreeable taſte; make a julep, of which let the patient take four or five ſpoonfuls when faint, or at pleaſure.

6. The patient's common drink ſhould be milk boil'd with thrice the quantity of water, or the white decoction made as follows.

Take of burnt hartſhorn, and the crumb of white bread, of each two ounces; boil them in three pints of water to a quart, and afterwards ſweeten the liquor with a ſufficient proportion of fine ſugar.

7. Or if great weakneſs ſhould require it,

Take of ſpring-water, a quart; canary, half a pint; boil them together a few minutes, and let it be drank cold for common drink.

8. When the patient hath been purged thrice, the cure depends entirely on exhibiting laudanum twice or thrice a day, only a glyſter made of half a pint of milk, and an ounce and a half of *Venice* treacle, ſhould be given now and then; it being an excellent remedy in all kinds of looſeneſſes.

9. When the flux amounts to no more than a looſeneſs, omit the

the bleeding and purging above preſcribed, and give the following bolus every morning.

Take of rhubarb, half a dram (more or leſs in proportion to the ſtrength of the patient) diaſcordium, enough to make it into a bolus; to which add two drops of the oil of cinnamon.

10. In the evening, after the operation is over, adminiſter an opiate.

Take of ſmall cinnamon water, an ounce; liquid laudanum, fourteen drops; mix them for a draught.

11. The dry gripes are cured by diluting with cold whey, and giving glyſters of the ſame warm, in the ſame manner as we directed to be done in the cholera morbus, with chicken broth, or poſſet-drink.

12. If this diſeaſe proves of long ſtanding, ſo as to be totally fixt in the rectum, and attended with a continual inclination to go to ſtool, a reſtorative diet muſt be ordered, and ſome cordial liquor taken at pleaſure to recruit the ſtrength, and the teneſmus will go off ſpontaneouſly, as the ſtrength returns.

13. If the dyſentery has been ill treated, it ſometimes afflicts the patient for ſome years, in which caſe repeated bleeding will reſtore him to his former health.

14. It is to be obſerved, that in thoſe conſtitutions of the air which have a leſs tendency to promote this diſeaſe, omitting the evacuations above ſpecified, it may be cured with laudanum only, which is to be repeated morning and night, or even thrice a day, if there be occaſion, till the ſymptoms totally vaniſh.

Of the bilious Colic.

1. IT is a violent pain of the bowels, which begins with (1.) a fever, that laſts a few hours, and terminates in this diſeaſe, wherein (2.) the bowels ſeem to be tied together, or purs'd up, and perforated as it were, with ſome ſharp-pointed inſtrument; and the pain abates between whiles and ſoon comes on again, (3.) in the beginning the pain is not ſo certainly fixt in one place, nor the vomiting ſo frequent, and the belly yields with leſs difficulty to purgatives, (4.) but the more the pain increaſes, the more obſtinately it fixes in one place, (5.) the vomiting returns oftner, and the belly is more coſtive; the diſorder at length degenerating into an iliac paſſion.

2. It is diſtinguiſhed from a fit of the ſtone by the following

ſigns.

ſigns. (1.) In the ſtone the pain is fixt in the kidneys, and extends from thence along the ureter to the teſticle; whereas in the colic it ſhifts, and ſtraitens the belly as if it was bound with a girdle. (2.) In the colic the pain increaſes after eating, but in the ſtone it rather abates. (3.) The colic is more relieved by vomiting and purging than the ſtone. (4.) In the ſtone the urine is at firſt clear and thin, but afterwards lets fall a ſediment, and at length gravel and ſmall ſtones are voided therewith; whereas in the colic the urine is turbid from the beginning.

3. Bleed plentifully in the arm, and after three or four hours, give an opiate: next day exhibit a lenient cathartic, and repeat it a third time, allowing a day between each time of taking it.

4. But if this diſordet proceeds from a ſurfeit of fruit, or any other aliment, the ſtomach muſt firſt be well cleanſed by drinking a large quantity of poſſet-drink, and after it is thrown up, adminiſtering an opiate. Next day recourſe muſt be had to bleeding, and afterwards the proceſs above delivered is to be followed in the manner there preſcribed.

5. When this diſeaſe, by reaſon of wrong management, proves of long ſtanding, and brings the patient to the brink of the grave, plague water, aqua mirabilis, or any other cordial he liked beſt when in health, drank plentifully, gives ſurpriſing relief.

Of the Cholera Morbus.

1. THIS diſeaſe prevails only in *Auguſt* and ſeldom reaches to the firſt week of *September*. The diſorder occaſioned by a ſurfeit, which happens at any time of the year, tho' curable by the ſame method, is notwithſtanding of a very different kind. The cholera morbus hath the following ſymptoms. (1.) Immoderate vomiting, and a diſcharge of vitiated humours downwards, with great pain and difficulty, (2.) violent pain and ſwelling of the abdomen and bowels, (3.) heartburn, (4.) thirſt, (5.) a quick, ſmall, and irregular pulſe, (6.) heat, and reſtleſneſs, (7.) great nauſea, (8.) ſweating, (9.) contraction of the limbs, (10.) fainting, (11.) coldneſs of the extremities, and the like ſymptoms, which deſtroy the patient in the ſpace of twenty four hours.

2. Let a chicken be boil'd in about three gallons of water, ſo that the liquor may ſcarce taſte of the fleſh. The patient muſt drink ſeveral large draughts of this weak broth, warm, or, for want of it, of poſſet-drink, and at the ſame time glyſters of it are to be given ſucceſſively. An ounce of the ſyrup of lettice, purſlain, or water-lilly may be now and then added to the draughts and glyſters.

3. When

3. When the buſineſs of cleanſing the ſtomach and bowels is over, which requires three or four hours, an opiate completes the cure.

4. But if the phyſician be not called, till the patient is exhauſted by the continuance of the vomiting and purging for ſeveral hours, and the extremities are grown cold, he muſt immediately have recourſe to liquid laudanum, and give a large doſe of it; for inſtance, twenty five drops in an ounce of ſtrong cinnamon water, and repeat the laudanum daily, morning and night, but in a leſs doſe, even after the ſymptoms are gone off, till the patient recovers.

5. There is a kind of cholera morbus, occaſioned by dentition, or a ſurfeit, which frequently attacks children, and often deſtroys them.

6. And, as by reaſon of their tender age children cannot bear to have their ſtomachs cleans'd with large quantities of liquor, and much leſs the raiſing a greater diſturbance in the humours by purgation, the cure is therefore to be attempted only by laudanum. For this purpoſe give three, four, or more drops thereof, in proportion to the age of the child, in a ſpoonful of ſmall-beer, or ſome proper diſtill'd water, and repeat it as there is occaſion.

Of the Colic of the People of Poictiers.

1. THIS is a kind of colic, which ordinarily degenerates into a palſy, and a total loſs of the motion of the hands and feet. *Riverius* deſcribes it under this * name. 'Tis a common diſorder in the *Carribbee* iſlands, where it ſeizes abundance of perſons.

2. This ſevere pain is cured by giving balſam of *Peru* often in a large doſe; for inſtance, twenty, thirty, or forty drops, in a ſpoonful of fine ſugar, twice or thrice a day; but the palſy yields not to this remedy.

Of the iliac Paſſion.

1. IN this diſorder (1.) the periſtaltic motion of the bowels is inverted, (2.) cathartics and glyſters ſoon become emetic, and (3.) the excrements are vomited up.

2. Take away nine or ten ounces of blood from the right arm, and a few hours afterwards give the following powder.

* *Vid. op. River. cap. de paralyſ.*

Take of the roſin of ſcammony, or, for want of it, of jalap, twelve grains; calomel, a ſcruple; mix them together for a powder, to be taken in a ſpoonful of milk, drinking a ſpoonful or two of milk after it.

3. Or, if pills are more agreeable,

Take of the pills of two principal ingredients, half a dram; calomel, a ſcruple; balſam of *Peru*, enough to make them into four pills, to be taken in a ſpoonful of ſyrup of violets.

4. If theſe pills be thrown up, exhibit twenty-five drops of laudanum immediately in a ſpoonful of ſtrong cinnamon water; and the vomiting and pain being abated hereby, repeat the purgative. But if the vomiting and pain return, after the virtue of the opiate is gone off, and the purgative ſtill lodges in the body, we muſt return to the opiate again, and repeat it every fourth or ſixth hour, till the bowels be made perfectly eaſy, when the purgative will operate in its uſual manner.

5. It is alſo proper to give a ſtrong purging glyſter an hour or two after bleeding; as, for inſtance, the ſmoke of tobacco, forced up thro' a large bladder into the bowels by an inverted pipe, and this may be repeated in a few hours, unleſs a paſſage downwards be ſooner opened.

6. As ſoon as the purgative hath done working, exhibit the following draught.

Take of ſtrong cinnamon water, an ounce; liquid laudanum, twenty-five drops; mix them together for a draught.

This draught muſt be repeated twice or thrice, or oftner in a day, till the vomiting and pain are quite gone off; and, in order to compleat the cure, it is proper, even after this, to give the ſame opiate in a leſs doſe every night at bed-time, for ſome time.

Of the immoderate Flux of the Menſes.

1. THE menſtrual diſcharge in its natural ſtate is eſteem'd to fill the ſhell of a gooſe's egg. It is known to be immoderate by (1.) the difficulty of bearing it, (2.) loſs of ſtrength and appetite, (3.) cachexy, (4.) ſallow complexion, and (5.) ſwelling of the feet.

2. Take away eight ounces of blood from the arm, and next morning give my common purging potion, and repeat it every other

other day to a third time, exhibiting a doſe of ſyrup of white poppies, at night after the operation.

3. On the intermediate days of purging, let the following remedies be uſed.

Take of the conſerve of dried roſes, two ounces; troches of Lemnian earth, a dram and a half; pomegranate bark, red coral prepar'd, and Armenian bole, of each two ſcruples; blood-ſtone, and dragon's-blood, each a ſcruple; ſyrup of quinces, a ſufficient proportion to make the whole into an electuary; of which let the quantity of a large nutmeg be taken every morning, and at five in the afternoon, drinking ſix ſpoonfuls of the following julep upon it.

Take of the diſtilled waters of oak-buds, and plantain, each three ounces; ſmall cinnamon water, and ſyrup of dried roſes, each an ounce; ſpirit of vitriol, as much as will make it agreeably tart.

Take of the leaves of plantain, and nettles, each a ſufficient quantity; bruiſe them well together in a marble mortar, and preſs out the juice, and laſtly clarify it. Let four ſpoonfuls of it be taken often, or at pleaſure.

4. After the firſt purge apply the following plaiſter to the region of the loins.

Take of the red lead plaiſter, and rupture plaiſter, each equal parts, melt them down together, and ſpread the maſs upon leather.

Of the hyſteric Colic.

1. IT is a kind of hyſteric complaint, or rather a remarkable and common ſymptom of the hyſteric paſſion, accompanied with a very violent pain of the parts near the ſcrobiculum cordis, and likewiſe with a diſcharge of green humours upwards.

2. The patient muſt drink a large quantity of poſſet-drink, for inſtance, a gallon and a half, and throw it up again, that the abundance of vitiated humours lodg'd in the ſtomach may not hinder the effect of the quieting medicine; and after the affair of vomiting is over, give twenty-five drops of liquid laudanum, in an ounce of ſtrong cinnamon water, plague water, or any other ſuitable vehicle.

3. With reſpect to the uſe of the opiate, let it be obſerved, that it muſt be repeated till the ſymptoms go off entirely, allow-

ing a proper interval between every doſe, ſo that we may conjecture what effect the laſt hath had before we exhibit another.

4. If the patient be of a ſanguine conſtitution, or hath been a little afflicted with this diſorder formerly, and not much weaken'd thereby, bleeding in the arm ſhould precede the vomit preſcrib'd. The clavus hyſtericus yields likewiſe to the ſame treatment.

5. But if the hyſteric colic hath continued long, and attack'd by fits, it is proper in this caſe to uſe the following medicines in the intervals of the fits.

Take of zedoary, in fine powder, a dram; ſyrup of candied citron, enough to make it into a bolus; to be taken morning and night for thirty days, with the following infuſion after it.

Take of zedoary, thinly ſliced, half an ounce; canary, four ounces; digeſt them together for twelve hours, without heat, then ſtrain off the tincture.

Or balſam of *Peru* may be uſed, as is directed in the colic of the natives of *Poictiers*.

6. It muſt be carefully noted, that what is here ſaid of the hyſteric colic, is to be applied to the hypochondriac colic likewiſe. The nature of both theſe diſorders ſhould ſeem to require a trial to be made of ſeveral medicines, till at length we hit upon one, in a manner naturally curative of this diſeaſe: tho' in general ſteel is moſt ſerviceable here.

7. The hyſteric colic both in hyſteric and hypochondriac ſubjects often terminates in a jaundice, which goes off by degrees ſpontaneouſly; but if it continues long, let the following apozem be exhibited.

Take of roots of madder and turmeric, each an ounce; the roots together with the leaves of the greater celandine, and the tops of the leſſer centory, each a handful; boil them together in equal quantities of *Rheniſh* wine and ſpring water, to a quart; and to the ſtrain'd liquor add two ounces of the ſyrup of the five opening roots: mix them together for an apozem, of which let half a pint be taken warm every morning and night, till the cure be finiſh'd.

Of that kind of Jaundice which does not ſucceed the Colic.

1. THIS diſorder manifeſts itſelf by the following ſigns: (1.) a yellowneſs of the whole body, moſt viſible in the whites of the eyes, (2.) a ſeeming yellowneſs of all objects, (3.) itching, (4.) heavineſs, (5.) laſſitude, (6.) bitterneſs of the tongue, (7.) bilious vomiting ſometimes, (8.) a hiccup, (9.) white excrements, (10.) the urine of a ſaffron colour, and ſtaining linen dipt therein yellow.

2. Exhibit my common purging draught, and then let the patient begin the following courſe of medicine, and, during the continuance thereof take the purging draught every fourth day.

Take of the conſerves of *Roman* wormwood, and orange peel, each an ounce; candied angelica and nutmegs, the compound powder of wake-robin, and ſteel prepar'd with vinegar, of each half an ounce; extract of the leſſer centory and gentian root, and cream of tartar, of each two drams; ſaffron in powder, half a dram; ſyrup of the five opening roots, enough to make the whole into an electuary, of which the quantity of a nutmeg is to be taken every morning, and at five in the afternoon, drinking after the morning doſe two quarts of the purging mineral waters, and after the doſe in the afternoon, half a pint of the apozem ſet down under the article of the hyſteric colic

Or inſtead of this electuary the patient may take ſteel pills.

3. But if the ſigns of a dropſy appear, the apozem muſt be taken morning and night.

4. If, notwithſtanding the long continuance of this proceſs, the diſeaſe yields little or not at all, the patient ſhould be ſent to drink the ſteel waters at the well-head.

Of preventing Miſcarriage.

1. FOR this purpoſe the ſame medicines are to be preſcrib'd as in the immoderate flux of the menſes; only omitting purgation, and the juices of the herbs.

Of the immoderate Flux of the Lochia.

1. TO conſtitute a natural flux of the lochia three things are required: (1.) a copious diſcharge of pure blood for the firſt three days, then (2.) of watery blood (like water in which raw fleſh has been waſh'd) for about four days more, and afterwards (3.) a viſcous mucilaginous matter, mix'd with little or no blood, for the five or ſix immediately following days, and thence to the end of the month.

2. An immoderate flux of the lochia is known by (1.) a loſs of ſtrength, (2.) fainting, (3.) the coming away of clotted blood, (4.) loſs of appetite, (5.) pain in the hypochondria, (6.) a ſwelling of the abdomen, (7.) a weak and quick pulſe, (8.) dimneſs of ſight, (9.) noiſe in the ears, and (10.) convulſions.

(3.) An incraſſating diet is to be directed, along with the following binding decoction.

Take of plantain water and red wine, each a pint; boil them together to the conſumption of a third part, and then ſweeten it with fine ſugar. Let half a pint of it be taken twice or thrice a day.

4. In the mean time exhibit ſome weak hyſteric julep, and let the following compoſition, or a ſmall vial of ſpirit of ſal ammoniac, be often held to the noſe.

Take of galbanum and fetid aſa, each two drams; caſtor, a dram and a half; volatile ſalt of amber, half a dram: mix them together for a nodule.

Of the Suppreſſion of the Lochia.

1. THIS diſorder is accompanied with (1.) a ſwelling of the belly, (2.) a dull pain in the abdomen, loins and groin, (3.) redneſs of the face, (4.) difficult reſpiration, (5.) a wild look, (6.) ſhivering, (7.) an acute fever, (8.) cold ſweats, (9.) fainting, (10.) pulſation and heat in the womb, (11.) a palſy of the lower parts, and (12.) ſometimes an epilepſy.

2. The patient ſhould be put to bed forthwith, and an hyſteric plaiſter applied to her navel, and immediately begin to take the following medicines.

Take of the conſerves of *Roman* wormwood and rue, each an ounce; the troches of myrrh, two drams; caſtor, ſaffron, volatile ſal ammoniac, and fetid aſa of each half a dram;

mix

mix them all together, and make an electuary thereof with a ſufficient quantity of the ſyrup of the five opening roots; let the patient take the quantity of a nutmeg of it every four hours, drinking after it four or five ſpoonfuls of the following julep.

Take of the diſtilled water of rue, four ounces; compound briony water, two ounces; fine ſugar enough to ſweeten it, and make a julep.

Or let her take a ſcruple of the troches of myrrh every four hours.

3. If, after having taken theſe medicines in the quantity here ordered, the lochia ſtill continue ſuppreſs'd, exhibit, only once, fourteen drops of liquid laudanum, in a ſmall quantity of compound briony water, or a grain and half of ſolid laudanum, and half a ſcruple of fetid aſa, made up into two pills.

4. And theſe not availing, give only a ſingle glyſter of milk and ſugar.

Of the Dropſy.

1. ONE of the firſt ſigns of the dropſy is, the pitting of the leg, when the finger is preſs'd againſt it, which is moſt apparent at night, but diſappears in the morning, eſpecially if the ſwelling of the legs be accompanied with a difficulty of breathing: tho' pregnant women, and thoſe that labour under a ſuppreſſion of the menſes, and men that are ſuddenly freed from an inveterate aſthma, often have ſwellings of a like kind. When the feet, legs, and thighs have received as much water as they can hold, it flows into the abdomen, and by degrees ſtretches it as tight as its coats will bear, till falling at length upon the vital and noble parts, the patient is deſtroy'd by a kind of deluge. In the ſame degree that the ſwelling of the parts affected increaſes, the other parts waſte away, and at the ſame time a difficulty of breathing, the making little urine, and great thirſt, accompany the diſtemper. The dropſy chiefly attacks men in years, and women after they are paſt bearing children.

2. The curative indications are (1.) to evacuate the water, and (2.) to ſtrengthen the blood, ſo as to prevent a freſh drain of water into the parts affected.

Take of white wine, four ounces; jalap in fine powder, a dram; powder'd ginger, half a ſcruple; ſyrup of buckthorn, one ounce; mix them all together for a draught, to be taken ear-

ly in the morning, and repeated every day, or every other day, as the ſtrength will bear, till the ſwelling of the parts affected vaniſhes.

Or,

Take of tamerinds, half an ounce; the leaves of ſena, two drams; rhubarb, a dram and half; boil them together in a ſufficient quantity of ſpring-water, ſo as to leave three ounces of ſtrain'd liquor, in which diſſolve manna and ſolutive ſyrup of roſes, of each an ounce; ſyrup of buckthorn, half an ounce; and of the electuary of the juice of roſes, three drams; mix them together for a draught, to be taken as the former.

Or,

Take of the pills of two principal ingredients, a ſcruple; elaterium three grains; make them into three pills, to be taken betimes in the morning, and repeated as there is occaſion.

Or,

Take of gamboge, fifteen grains; white wine, and the diſtilled water of ſuccory, of each an ounce and half; ſyrup of buckthorn, half an ounce; mix them together for a draught, to be taken as above directed.

Or,

Take of the inner bark of elder, three handfuls; boil it in a quart of milk and water equally mixt, to a pint, then ſtrain it off: half of it to be drank every day in the morning, and the remainder at night, till the patient recovers.

But this medicine is ſerviceable only in ſuch ſubjects as are eaſily purged.

3. With reſpect to purging in this diſeaſe, the three following cautions are to be obſerv'd.

4. (1.) It muſt be inquired, whether the patient is eaſy or hard to purge; becauſe in the former caſe an ounce of ſyrup of buckthorn, given by itſelf, will evacuate a ſufficient quantity of water; whereas, in the latter caſe, the purgatives above ſet down, tho' of the ſtrongeſt kind, will hardly anſwer the end.

5. (2.) All mild purgatives do more miſchief than good, for which reaſon rough purging is preferable to weak.

6. (3.) The water ſhould be carried off as ſpeedily as the ſtrength will permit, leſt by purging only at diſtant intervals, we allow time for a freſh collection thereof.

7. But

7. But there are ſome caſes where all kinds of purgatives muſt be forborn. Thus, for inſtance, in weak habits, and hyſteric women, the evacuation of the water is only to be attempted by diuretics, the moſt efficacious of which are prepar'd from lixivial ſalts.

Take of broom aſhes, a pound; digeſt them without heat in two quarts of *Rheniſh* wine; and take three ounces of the filtred liquor every morning, and at five in the afternoon, till the water be carried off.

8. When the water is all carried off, heating and ſtrengthening medicines are to be uſed.

Take of horſe-radiſh root, the leaves of common wormwood, ſcurvy-graſs and ſage, and the tops of the leſſer centory and broom, of each a ſufficient quantity; infuſe them in ſtrong beer, and uſe it for common drink.

This medicated beer does ſometimes cure a recent dropſy, without the aſſiſtance of purgatives: but inſtead of it the following medicines may be taken.

Take of the conſerves of *Roman* wormwood and ſcurvy-graſs, each an ounce; the extract of gentian, common wormwood, and the leſſer centory, of each three drams; ſyrup of citron peel, enough to make the whole into an electuary, of which the quantity of a nutmeg is to be taken every morning, at five in the afternoon, and at night, drinking after it four ounces of the following infuſion.

Take of the gentian root, the tops of broom, the leſſer centory, and common wormwood, each an handful; the ſeeds of fennel and parſley, each two drams; ſlice and bruiſe the ingredients, and pour upon them two quarts of *Rheniſh* wine, and let them ſtand together to infuſe without heat, and the liquor be ſtrained off only when wanted.

9. It is to be noted, that purgatives muſt abſolutely be forborn, during the uſe of ſtrengthening medicines, and likewiſe whilſt we exhibit lixivial ſalts, with which however ſtrengthening medicines may be commodiouſly given.

Take of horſe-radiſh roots three ounces; the leaves of ſcurvy-graſs, common wormwood and ſage, and the tops of the leſſer centory and broom, of each three handfuls; three *Seville* oranges; infuſe all together in ſix gallons of ale made without

out

out hops, whilſt it is working, and let it be uſed for common drink.

Of a gonorrhœa virulenta, or venereal running.

1. THIS diſorder begins with an uncommon pain in the parts of generation, and a kind of rotation of the teſticles; and in ſuch as have not been circumciſed, a ſpot not unlike the meaſles appears upon the glans, ſoon after which the fluid reſembling ſemen flows therefrom, which changes every day both in colour and conſiſtence, and at length turns yellow, but paler than the yolk of an egg; and when this diſeaſe is more virulent, and degenerated into the pox, this matter becomes green, and is mix'd with a watery humour, ſtreak'd with blood. The puſtule upon the glans terminates at length in an ulcer, reſembling the *aphthæ* in the mouths of children, and ſpreads and eats deeper every day, and the lips grow callous. Thoſe that have undergone circumciſion, or have the glans bare, have no ulcer in this part, but only the gonorrhœa. The running is ſoon ſucceeded by a pain in the penis at every erection, as if it were violently ſqueez'd with the hand, which ſymptom happens chiefly in the night when the patient grows warm in bed. The penis is bent by the contraction of the frænum, and with theſe ſymptoms are joined a heat of urine, ſcarce felt at the time of making, but immediately afterwards the patient is ſenſible of a burning heat all along the duct of the urethra, and eſpecially at its termination in the glans. Sometimes caruncles prevent the excluſion of the urine, and ſometimes a pain and inflammation of the ſcrotum ſucceed.

2. Let four of the following pills be taken every morning till the heat of urine be much abated, and the running grown conſiderably paler, or whitiſh; then every other day for a fortnight, and at laſt twice a week till the running ceaſes.

Take of the greater pill called *cochia*, three drams; the extract of rudius, a dram; roſin of jalap, and ſcammony, each half a dram; opobalſamum, enough to make them into a maſs; every dram whereof is to be made into ſix pills.

3. Thoſe that are hard to purge may take my purging potion now and then between the pills, to which may be added ſyrup of buckthorn, and the electuary of the juice of roſes, of each two drams: or, if the cure goes on ſlowly, eight grains of turbith mineral may be given twice or thrice, interpoſing four days between each doſe; or, inſtead of it the following.

Take

Take of the pills of two principal ingredients, half a dram; ſweet mercury, a ſcruple; opobalſamum, enough to make them into four pills, to be taken early in the morning.

4. If the patient has an averſion to this method of purgation, after having taken the pills above preſcribed for three mornings running; let the following glyſter be given every morning, and at five in the afternoon; only once or twice a week adminiſter a purgative, and omit the glyſter.

Take of the electuary of the juice of roſes, ſix drams; Venice turpentine, diſſolv'd with enough yolk of egg, half an ounce; diſſolve them in a pint of barley water, and add two ounces of ſyrup of violets to the ſtrained liquor: mix the whole for a glyſter.

5. Exhibit twenty-five drops of opobalſamum, or balm of Mecca, dropt upon a lump of fine ſugar, every night; or, inſtead of it, the quantity of a hazle nut of Cyprus turpentine. His common drink ſhould be milk boiled with thrice as much water, and ſmall beer at meals.

6. Or you may proceed in this manner.

Take of the pills of two principal ingredients, half a dram; opobalſamum, three drops; make them into three pills, to be taken at four in the morning, ſleeping upon them, and let them be repeated every other, or every third day.

7. On the intermediate days of purging, give the glyſter above preſcribed, in the morning, and at five in the afternoon.

8. Whatever method of cure be uſed, the patient muſt be blooded once or twice towards the middle of the courſe; and a cooling or thickening diet order'd, along with medicines of the ſame kind; as milk and water, emulſions of the four greater cold ſeeds, and the like.

9, If the penis be ſwell'd,

Take of the roots of marſhmallows and white lillies, each an ounce and half; the leaves of mallows, mullein, elder, and henbane, and the flowers of camomile and melilot, of each an handful; the ſeeds of flax and fenugreek, each half an ounce; boil them together, in a ſufficient quantity of ſpring water, for a fomentation, to be applied to the part affected for the ſpace of an hour, twice or thrice a day.

After fomenting the part, let it be anointed with freſh linſeed oil, and then apply the mucilage plaiſter, ſpread on leather, to the ſwell'd lips of the prepuce.

10. But

10. But if the lips of the prepuce, or glans, be ulcerated, have recourſe to the following liniment.

Take of the ointment baſilicon, ſix drams; the ointment of tobacco, two drams; red precipitate (waſh'd in roſe water and levigated) half a dram; mix them together for a liniment, to be applied upon lint to the ulcer, after uſing the fomentation above ſet down.

11. If the ſcrotum be ſwell'd, take away blood from the arm immediately, and apply the abovementioned fomentation twice a day to the part affected, adding a ſpoonful or two of ſpirit of wine to it, every time it is uſed: or inſtead of it, uſe a cataplaſm made of onyxcrate and bean-meal.

12. In the mean time the purgatives and coolers, above-enumerated, muſt be given inwardly.

Of the Venereal Diſeaſe.

1. WHEN the blood is tainted by the long continuance of a gonorrhœa, or the unadviſed uſe of aſtringents, the true pox appears, which is attended (1) with buboes in the groin; (2.) pains in the head, and limbs between the joints, which chiefly come in the night, after the patient is warm in bed; (3.) yellow ſcabs alſo, and ſcurfe in different parts of the body, which reſemble an honey-comb, and the more they ſpread, the leſs pain the patient feels; (4.) exoſtoſes in the cranium, legs, and arms; (5.) inflammation and caries of the bones; (6.) phagedenic ulcers in various parts of the body, which generally ſeize the throat firſt, and eat by degrees thro' the palate, to the cartilage or bridge of the noſe, which they ſoon conſume, ſo that the noſe for want of its ſupport falls flat; (7.) the ulcers, caries, and pains increaſing every day, the limbs rot away piece-meal, and the mangled carcaſe, being at length grown hateful to the living, is buried in the earth.

2. Take of hogs lard, two ounces; quick ſilver an ounce; mix them together according to the rules of art, for a liniment, to to be divided into three equal parts, with one of which the patient is to anoint his arms, thighs, and legs, with his own hand, for three nights running.

3. If the ſalivation riſes not in three days after the laſt unction, eight grains of turbith mineral may be given in a little conſerve of red roſes, or in weak habits a ſcruple of ſweet mercury. If the ſalivation abates before the ſymptoms are quite gone off, it muſt be in-

increaſed by exhibiting now and then a doſe of ſweet mercury occaſionally.

4. The ſalivation ſhould be ſo regulated, that the patient may ſpit about two quarts in twenty four hours.

5. If it riſes too high, and is accompanied with great inflammation, and other ſymptoms of a like kind, it muſt be lower'd to a proper degree by purgatives.

6. As ſoon as the ſymptoms are gone off, the patient's linen ſhould be chang'd for what has been worn ſince it was waſh'd.

7. If a looſeneſs ſucceeds, as it generally does ſoon after the ſalivation riſes, it muſt be ſtopt by adminiſtring laudanum; increaſing and repeating the doſe, till it hath produced the deſired effect.

8. If the mouth be ulcerated, it muſt be gargariz'd or waſh'd with roſe-water, milk and water, or the following gargariſm

Take of the roots of marſhmallows, and pearl barley, of each an ounce; quince ſeeds half an ounce; boil them together in enough ſpring water to a quart, for a gargariſm, to be frequently uſed.

9. The ſame regimen and diet are to be order'd in a ſalivation as are uſed in a courſe of purging; only the patient may live upon poſſet-drink, water gruel, barley-gruel, and warm ſmall-beer, for a few days in the beginning of the courſe.

10. The courſe being duly finiſh'd, tho' the ſymptoms ſhould ſeem gone off, and the diſtemper conſequently cur'd, yet, in order to prevent a relapſe, the patient ſhould take a ſcruple of ſweet mercury, once a week, for a month, or ſix weeks, tho' he appears to be perfectly well and goes abroad.

Of the Fluor Albus.

1. THE flux in this diſorder is ſometimes white, ſometimes pale, yellow, green, or blackiſh, ſometimes ſharp and corroding, and ſometimes of a pungent ill ſmell. It is accompanied with a paleneſs of the face, a pain in the back bone, loſs of appetite, and a ſwelling of the eyes and legs. A piece of linen dipt in the diſcharge and dried, ſhews the nature of it.

2. Take away eight ounces of blood from the arm, and next morning at four o'clock let the following pills be taken, ſleeping upon them; and repeat them twice more, allowing a day or two between every doſe according to the ſtrength of the patient.

Take

Take of the greater pil. cochia, two ſcruples; caſtor, two grains; balſam of *Peru*, three drops; make them into four pills.

Take of the diſtill'd water of rue, four ounces; compound briony water two ounces; fine ſugar enough to ſweeten them, and make a julep, of which let the patient take three or four ſpoonfuls, whenever ſhe is faint.

Take of *Venice* treacle, an ounce and half; conſerve of orange peel, an ounce; diaſcordium, half an ounce, candied ginger, and nutmeg, each three drams; compound powder of crabs claws, a dram and half; the outward bark of pomegranate, *Spaniſh* angelica root, red coral prepar'd, and the troches of *Lemnian* earth, of each a dram; *Armenian* bole, two ſcruples; gum arabic, half a dram; ſyrup of dried roſes, a ſufficient quantity to make them into an electuary; of which let the patient take the quantity of a large nutmeg, every morning, at five in the afternoon, and at bed-time, for the ſpace of a month, drinking after it ſix ſpoonfuls of the following infuſion.

Take of the roots of elecampane, maſterwort, angelica, and ſweet cane, each half an ounce; the leaves of *Roman* wormwood, white horehound, and leſſer centory, common calamint, and dried ſage, of each an handful; juniper berries, an ounce; ſlice and bruiſe theſe ingredients, then pour upon them two quarts of canary, and let them ſtand together to infuſe without heat, and ſtrain it off as it is uſed.

3. The patient ought to live upon food of eaſy digeſtion, forbear all kinds of greens and fruit, and drink canary at meals.

Of a Diabetes.

1. IN this diſtemper the juices carried into the blood, being crude and indigeſted, paſs off by urine, which by degrees impairs the ſtrength, and waſtes the body; the ſubſtance of which is in a manner drain'd thro' this ſtrainer: it is accompanied alſo with thirſt, heat of the viſcera, a ſwelling of the loins and lips, and a frequent ſputation of a frothy ſaliva.

2. The ſame medicines are to be preſcrib'd in this caſe, as in the fluor albus, except bleeding and purging.

Of

Of the Piles.

1. THEY occaſion violent pain in going to ſtool, and the outſide of the excrements appears ſtreak'd with blood: they are ſmall tumours like warts, which ſometimes lie conceal'd in the ſphincter, and ſometimes appear outwardly in the anus.

2. Take away ten ounces of blood from the right arm.

Take of melon and pumpkin ſeeds, each half an ounce; white poppy ſeeds two drams; five blanched ſweet almonds; beat them together in a marble mortar, and pour on, by degrees, a pint and half of barley water; to the ſtrained liquor add two drams of roſe-water, and enough ſugar to ſweeten it. Let three ounces of this emulſion be taken often.

Take of the flower of ſulphur, liquorice powder, and ſage reduc'd to powder, of each a dram; *Locatellus*'s balſam, enough to bring them into a maſs for pills; and make ſix pills of a dram, three of which muſt be taken three times a day, drinking after them ſix ſpoonfuls of the emulſion above preſcribed.

3. Apply a piece of linen dipt in the following mixture to the part affected, or if the tumour be internal, throw up three ſpoonfuls of it into the anus with a ſyringe.

Take of the diſtill'd water of frog-ſpawn, four ounces; diſſolve therein two drams of litharge, and a ſcruple of opium, and make a mixture.

4. The patient ſhould uſe milk, boil'd with thrice as much water for his common drink, forbear fleſh, and take a doſe of ſyrup of white poppies every night.

Of the immoderate bleeding of the Piles.

1. THIS diſorder manifeſts itſelf, (1.) by the loſs of ſtrength; (2.) the large quantity of blood voided, and the long continuance of the flux; (3.) the ill colour of the ſkin, which looks yellowiſh, as in the jaundice; and theſe ſymptoms are ſucceeded by (4.) a cachexy; and (5.) afterwards a dropſy.

2. The ſame medicines may be advantageouſly uſed in this caſe, as in the immoderate flux of the menſes, purging only excepted.

Of

1. CHildren are seiz'd with this disorder, either in the first month after a looseness, in which case a few grains of diascordium, dissolv'd in the distill'd water of saxifrage, or the mother's milk is an excellent remedy: or it attacks them about the time of dentition, from the seventh to the tenth month, and is attended with a cough, or, which is much worse, a vomiting and looseness, with green stools, as is usual in hysteric subjects.

2. Sometimes the fit comes suddenly, distorting the mouth and eyes, causing the face to turn black, and convulsing the limbs. Sometimes the fit is known to be coming by an involuntary contraction of the finger into the palm of the hand, and an uncommon fixedness of the eyes. The fits are sometimes long and sometimes short, and sometimes return at set times, and at others keep no certain period: but upon the approach of death they follow one another very quick. Children are subject to a drowsiness in the intervals, till they are rouz'd by a fresh fit.

3. Apply a blistering plaister immediately to the neck.

Take of compound piony water, three drams; liquid laudanum, a drop or two, or more drops, according to the age of the child; syrup of piony, a dram; mix them together for a draught to be taken directly.

Take of the distill'd water of rue, three ounces; compound piony water, and compound briony water, each an ounce; syrup of clove-july-flowers, half an ounce; mix them together for a julep, a spoonful of which is to be given the child every hour, if the draught above prescribed does not remove the fit.

Of the Rickets.

1. THE rickets are attended with a laxness, flaccidness, weakness, and unequal nutrition of the parts of the body: thus, (1.) the head is over-large; (2.) the face too full and florid; (3.) the muscles of the neck wear away; (4.) knotty excrescencies appear in the joints, especially in the wrists, but less in the ancles; (5.) the tops of the ribs are swell'd; (6.) the bones grow crooked, especially those of the legs, the arms, neck, and sometimes also the shoulders and thighs; (7.) the teeth come slowly and painfully, and grow loose, black, and fall out by pieces; (8.) the thorax is strait, and the sternum rises in a point; (9.) the abdomen and hypochondria swell; (10.) a cough and disorders of the lungs succeed; (11.) and the patient cannot sometimes lie on the right side, and sometimes not on the left.

Take

Take of the leaves of common wormwood, the leſſer centory, white horehound, germander, ſcordium, common calamint, feverfue, meadow ſaxifrage, St. John's wort, golden rod, wild thyme, mint, ſage, rue, holy thiſtle, penny royal, ſouthernwood, camomile, tanſey, and lilly of the valley, all freſh gathered, and cut ſmall, of each one handful; hogs lard, four pounds; ſheeps ſuet, two pounds; claret, a quart; infuſe them together in an earthen veſſel npon hot aſhes for ſixteen hours, then boil them till the aqueous moiſture is exhaled, and laſtly preſs out the ointment, with which let the abdomen, hypochondria, and other affected parts, be anointed for the ſpace of thirty or forty days, or till the child gets well.

Take of each of the ingredients above preſcribed, two handfuls; infuſe them without heat in four gallons of beer, brew'd without hops, and let it be uſed for common drink.

2. In ſwellings of the belly in children, occaſioned by immoderate evacuations, the blood and the viſcera ought to be ſtrengthened with ſtrengthening herbs, as in the true rickets; but the armpits only, and not the limbs, muſt be anointed with the liniment above preſcribed.

Of Fevers caus'd by Dentition.

1. GIVE two, three, or four drops of ſpirit of hartſhorn, according to the age of the child, in a ſpoonful or two of black cherry water, or ſome other ſuitable vehicle, every four hours, for five or ſix times.

Of a hectic Fever in Children.

1. IN this diſorder children languiſh without much heat, loſe their appetite, and the body and limbs waſte away.

2. Infuſe two drams of rhubarb, ſlic'd thin, in a quart of ſmall beer, and let the child uſe it for common drink; and this being finiſh'd, pour another quart of ſmall beer upon the ſame rhubarb, and ſo a third time. But if it purges too much at firſt, after the child has drank a pint of it, add another pint of ſmall beer to the remainder.

Of the convulſive, or hooping Cough in Children.

1. THIS otherwiſe obſtinate, and almoſt incurable diſorder, yields to bleeding and repeated purging only; but none but lenient purgatives are proper here, and muſt be exhibited by ſpoonfuls, ſuiting the doſe to the age of the child.

1. THIS complaint is accompanied with pain and heat in the fore-part of the head.

2. Bleed often in the arm, and order a cooling and thickening diet, along with a cooling and thickening julep, and a cooling emulsion.

3. Give a cooling glyster every day, and an opiate of syrup of white poppies, every night; and exhibit my common purging potion once or twice.

4. Apply a piece of linen four times doubled, dipt in a solution of sal prunella, in cold water, and gently squeez'd out, to the nape and both sides of the neck often in a day.

5. And after due evacuations let the following liquor be used.

Take of *Hungarian* vitriol, and roch allum, each an ounce; the phlegm of vitriol, half a pint; boil them together till the salts are dissolved; filter the liquor when it is cold, and separate it from the chrystals that shoot between whiles; lastly, add a twelfth part of oil of vitriol to the remaining liquor.

Or, which is better,

Take of plantain water, three ounces; *Armenian* bole, very finely powder'd, half an ounce; mix them well together: put up a tent of lint, dipt in the mixture, into the bleeding nostril, and keep it there two days.

6. If these applications avail not, make a solution of *Roman* vitriol in common water; dip a tent therein, and thrust it up the nose: compresses dipt in this liquor, and applied to the part affected, stop any outward bleeding.

Of the Chlorosis, or Green-sickness.

1. THIS indisposition is attended with (1.) a bad colour of the face, and whole body; (2) a swelling of the face, eye-lids, and ancles; (3.) heaviness of the whole body; (4.) a tension and lassitude of the legs and feet; (5.) difficult respiration; (6.) palpitation of the heart; (7.) pain in the head; (8.) feverish pulse; (9.) drowsiness; (10.) an unnatural longing for such things as are noxious, and unfit for food; and (11.) a suppression of the menstrual discharge.

2. Let the steel pills, or powder, ordered in the hysteric passion, be taken in a dose adapted to the age of the patient, with a few spoonfuls of wine after it, or of the strengthening infusion made with the roots of angelica there set down. And if the patient be not very weak, give her a purge or two, before putting her into this course of medicine.

Of

1. THIS diſorder is accompanied with (1.) a loathing of food; (2.) bad colour; (3.) univerſal indolence; (4.) pain in the forepart of the head, abdomen, loins and legs, and (5.) a ſwelling of the feet.

2. The ſame medicines are to be preſcrib'd in this caſe as in the hyſteric paſſion; but if it yields not to them, the following proceſs muſt be directed.

3. Exhibit five ſpoonfuls of the hyſteric julep without caſtor, with twelve drops of the ſpirit of hartſhorn, every morning, and at four in the afternoon, and a ſcruple of the troches of myrrh, made into a bolus, or pills, with ſyrup of mugwort, every night at bed-time.

Of vomiting, or ſpitting of Blood.

1. A Spitting of blood is accompanied with pain and heat in the breaſt, and ſome kind of debility.

2. Take away ten ounces of blood from the right arm, and next morning give my common purging potion, and the ſame night an opiate.

Take of the black cherry water, three ounces; ſyrup of white poppies, an ounce; mix them together for a draught.

3. Then let the patient begin to take the following medicines.

Take of *Armenian* bole, an ounce; comfrey root, in powder, two drams, ſeal'd earth, blood-ſtone, and dragons blood, of each a dram; fine ſugar the weight of all the other ingredients; mix them together for a powder, a dram of which is to be taken every morning, at five in the afternoon, and at night, drinking four ounces of the following apozem upon it.

Take of the leaves of plantain, the bramble and yarrow, each a handful; boil them in a ſufficient proportion of water to a pint and half; and diſſolve two ounces of the ſyrup of comfrey in the ſtrained liquor; mix them together for an apozem.

Or, inſtead of it, let the patient take ſix ſpoonfuls of the following tincture.

Take of the leaves of red roſes, and the inner bark of oak, each half an ounce; the ſeeds of plantain, a little bruiſed, three drams; ſpring water a quart; ſpirit of vitriol, enough to give it a grateful acidity; infuſe them together in a cloſe veſſel, with a gentle heat for four hours; to the ſtrained liquor

add three ounces of ſmall cinnamon water, and fine ſugar, enough to give the tincture an agreeable taſte.

4. If he has an averſion to powders, he may uſe the electuary preſcribed in the immoderate flux of the menſes.

5. Let a glyſter be given every day, and a doſe of ſyrup of poppies every night at bed-time.

6. Bleeding is alſo to be repeated again, as there is occaſion, a firſt, ſecond, or third time, at convenient intervals, and the purging potion given once more, if neceſſary.

7. A cooling and thickening diet is to be uſed.

Of the Puncture of a Tendon.

1. IN this caſe a watery humour, or ichor, flows continually from the orifice of the opened vein.

Take of the roots of the white lilly, four ounces; bruiſe and boil them till they grow ſoft in a quart of milk; then add oatmeal and linſeed flour, of each three ounces; boil them to the conſiſtence of a cataplaſm in the milk wherein the white lilly roots have been boiled; and apply it to the parts affected morning and night.

Of Burns.

1. BATHE the part affected with a piece of linen dipt in ſpirit of wine till the pain ceaſes; and renew the application three or four times a day.

Of the common Madneſs.

1. THIS diſorder proceeds from the over-richneſs and ſpirituouſneſs of the blood. But there is alſo another kind of madneſs, that ſucceeds an intermittent of long ſtanding, and at length degenerates into ideotiſm, which ariſes from the depreſſed ſtate of the blood, occaſioned by its long fermentation. In this caſe therefore ſtrong cordials are to be preſcribed, ſuch as *Venice* treacle, the electuary of the egg, the Counteſs of *Kent*'s powder, Sir *Walter Raleigh*'s cordial, and the like, in plague water, or any ſimilar vehicle along with a reſtorative diet.

2. But in the diſorder under conſideration, take away eight or nine ounces of blood from the arm in young ſubjects, and repeat the operation twice or thrice, at the diſtance of three days between each bleeding, and then bleed once in the jugular. Afterwards the cure depends wholly upon the uſe of the following purgative, which muſt be adminiſter'd every third or fourth day, till the patient recovers: obſerving in the mean time to omit it for a week or a fortnight, after the patient has been purged eight or ten times.

Take

Take of the root of white briony in powder, a dram; milk, four ounces; mix them together for a draught.

Or,

Take of the root of white briony, half an ounce, or ſix drams; let them ſtand a night in infuſion, and diſſolve an ounce of ſyrup of violets in the ſtrain'd liquor: mix the whole for a draught.

Or,

Take of gamboge, fourteen grains; black cherry-water, three ounces; ſyrup of clove-july-flowers, half an ounce; mix them together for a draught.

Of Bruiſes.

1. TAKE away ten ounces of blood from the arm of the affected ſide, and next morning exhibit the common purging potion, and then repeat bleeding and purging by turns in this manner, till the cure is completed. In the mean time, if the inward parts be hurt, let the following medicine be uſed.

Take of the common pectoral decoction, a pint and half; ſyrup of violets and maiden-hair, of each two ounces; mix them together for an apozem, half a pint of which is to be taken thrice a day.

2. A ſpoonful of freſh-drawn oil of ſweet almonds may be given often.

Take of the oil of ſweet almonds, ointment of marſhmallows, and pomatum, each an ounce; mix them together for a liniment, to anoint the affected part with, morning and night, covering it with a cabbage leaf.

Of the Scab of the Head.

1. EXhibit the common purging potion, and afterwards anoint the whole head with the following liniment, rubbing it in well, and then cover it with a bladder.

Take of oil of bitter almonds, and bay leaves, and the aſhes of ſouthernwood, of each an ounce; mix them well together for a liniment.

2. The head ſhould be ſhaved in the firſt place, and then the ſcales rubb'd off every morning by degrees, as they grow looſe.

Of the Bite of a Mad Dog.

1. IN forty days, or more after the bite, the ſigns of melancholy appear, which are (1.) a fever, (2.) thirſt, (3.) hydrophobia,

or dread of water, and at length (4.) convulſions of the extremities.

Take of highly rectified ſpirit of wine, four ounces; *Venice* treacle, an ounce; make a mixture of them, with which let the wounded part be bathed thrice a day, covering it with a piece of linen dipt in the ſame.

Of an Ulcer of the Bladder.

1. THE ſymptoms in this diſorder are (1.) a voiding of fetid matter, or blood, and ſometimes ſcales or a membranous pellicle along with the urine: (2.) a continual *dyſuria*, and pain in the urinary paſſages.

2. In an ulcer of the kidneys, (1.) fleſhy excreſcencies of a different thickneſs are voided with the urine; (2.) the dyſuria and pain come by intervals; (3.) the matter alſo that comes from the kidneys is more copious, and likewiſe white and thin, and not fetid; (4.) the urine looks like milk when it is firſt made, but after ſtanding a conſiderable time, the matter ſeparates from it, and falls to the bottom.

Take of the plaiſter called the flower of ointments, three drams: make it into nine pills, three of which are to be taken in the morning, at four in the afternoon, and at bed-time, with ſix ſpoonfuls of the following diſtill'd water after them.

Take of the roots of fennel, comfrey, birthwort, and avens, of each three ounces; the leaves of agrimony, St *John*'s wort, ſanicle, and plantain, of each ſix handfuls; the ingredients being ſliced and bruiſed, pour thereon white wine and milk, of each two quarts; and afterwards draw off only two quarts for uſe.

Take of comfrey root, and gum arabic, each an ounce; fine ſugar, two ounces; make them into a powder, a ſpoonful of which muſt be taken twice a day.

Of an obſtinate Aſthma in ſanguine Conſtitutions.

1. THERE are three kinds of this diſorder. (1.) A dyſpnœa, which is a denſe, quick and difficult reſpiration, without a ſtertor or rattling, and proceeds from a ſtuffing of the lungs. (2.) An aſthma, which is a quick and difficult reſpiration, accompanied with violent motions of the diaphragm, intercoſtal and abdominal muſcles, and a rattling in the throat. In the former ſpecies the lungs themſelves, and in the latter the bronchia are ſtuffed. (3.) An orthopnœa, which is the greateſt difficulty of breathing, inſomuch that the patient cannot breath but in an erect poſture

poſture, and is attended with violent motions of the muſcles of the breaſt and ſhoulders.

2. Take away ten ounces of blood from the right arm, and next day give the common purging potion, which muſt be repeated twice more, once every third day.

3. On the intermediate days of purging let the following medicines be uſed.

Take of the ſeeds of aniſe, finely powder'd, two drams; *Locatellus*'s balſam, enough to bring it into a maſs for pills, and make ſix pills of a dram, three of which are to be taken every morning, and at five in the afternoon, drinking four ounces of the bitter decoction without purgatives, warm, after them.

4. If the diſorder does not go off, let the whole proceſs be repeated.

Of the Palſy.

1. THE palſy is a total deprivation or diminution, either of the motion or the ſenſe of feeling in the affected parts, or of only one of them.

2. Two ſcruples of the leſſer *pil. cochia* muſt be exhibited every other day for ſix days, and afterwards two drams of the antiſcorbutic electuary, with ſix ſpoonfuls of the antiſcorbutic water hereafter preſcribed for a ſcurvy, thrice a day, for the ſpace of thirty days.*

Take of the nerve ointment, three ounces; compound ſpirit of lavender, and ſpirit of ſcurvy-graſs, each an ounce and half; mix them together for a liniment, with which the affected parts, as the ſpine, *&c.* are to be anointed morning and night.

3. Moſt of the remedies we ſhall there ſet down, tho' they ſhould ſeem appropriated only to the cure of the ſcurvy, yet inaſmuch as they are beſt adapted to volatilize crude and fixt humours, are likewiſe proper in the palſy.

Of a Cough and a Conſumption.

1. A Cough diſcovers itſelf; but a conſumption attacks perſons from eighteen to thirty five years of age, the ſigns of which are, (1.) a waſting of all the parts of the body; (2.) a hectic fever, diſcoverable by the quickneſs of the pulſe, flushing of the cheeks, and its increaſing after eating; (3.) the matter expectorated by coughing is either bloody or purulent, ſinks in water, and being thrown into the fire emits a fetid ſmell, and theſe

* See p. 665.

ſymptoms are ſucceeded by (4.) night-ſweats; (5.) a lividneſs of the cheeks at length; (6.) paleneſs of the face, and (7.) ſharpneſs of the noſe; (8.) ſinking of the temples, (9.) incurvation of the nails, (10.) falling of the hair, and (11.) a colliquative looſeneſs; which latter ſymptoms foreſhew immediate death.

2. If the cough be recent, and unattended with a fever, or the other concomitants of a baſtard peripneumony, and does not ſucceed a pleuriſy or peripneumony ill cur'd for want of ſufficient bleeding, the patient need only forbear wine and fleſh, and uſe the following remedies at pleaſure.

3. Let ten drops of balſam of ſulphur with oil of anniſeed be taken in a ſmall ſpoonful of fine ſugar, twice or thrice a day, and one of the following troches often, which ſhould be carried in the pocket for this purpoſe.

Take of ſugar-candy, a pound and half; boil it in a requiſite proportion of common water till it ſticks to the ends of the fingers; then add powder of liquorice, elecampane, anniſeed, and angelica, of each half an ounce; powder of *Florentine* orice root, and flour of ſulphur, each two drams; oil of anniſeed, two ſcruples; mix them together according to the rules of art, and make them into troches, to be entitled family troches.

4. The following linctus ſhould be uſed at the ſame time.

Take of the oil of ſweet almonds, two ounces; ſyrup of maiden-hair and violets, of each an ounce; ſugar-candy, enough to make them into a linctus, to be taken frequently off a liquorice ſtick, when the cough is troubleſome.

5. If the matter expectorated be thin, an incraſſating linctus ſhould be exhibited.

6. But if the cough yields not to this treatment, and eſpecially if it be attended with a fever, or ſucceeds a pleuriſy, or peripneumony, it would be trifling to truſt to pectorals, inaſmuch as it muſt be cured by bleeding and purging, according to the method above delivered for the cure of the baſtard peripneumony.*

7. And if notwithſtanding this procedure, the cough does not only continue troubleſome, but by long ſhaking the lungs has weakened them ſo much, as at length to cauſe a conſumption, recourſe is to be had to the following method.

8. Give ten drops of balſam of *Peru*, in a ſpoonful of ſyrup of ground-ivy, or, if that be diſagreeable, in a ſpoonful of ſugar, thrice a day, with four ounces of the bitter decoction without purga-

* *See p.* 621.

purgatives after it, or only three ounces, if the former quantity open the body.

9. But the beſt remedy hitherto diſcovered in this caſe, is riding ſufficiently long journeys on horſe-back, provided this exerciſe be long enough continued: obſerving that the middle-aged muſt perſiſt in it much longer than children, or young perſons. For, in reality, the *Peruvian* bark is not more certainly curative of an intermittent fever, than riding is of a conſumption, at this time of life.

Of the Scurvy.

1. THE ſcurvy is accompanied with (1.) ſpontaneous laſſitude, (2.) heavineſs, (3.) difficulty of breathing, eſpecially after exerciſe, (4.) rottenneſs of the gums, (5.) fetid breath, (6.) frequent bleeding at the noſe, (7.) difficulty of walking, (8.) a ſwelling ſometimes, and ſometimes a waſting of the legs, on which ſpots always appear, that are either livid, or of a lead, yellow, or purple colour, and (9.) a ſallow complexion.

2. Let eight ounces of blood be taken away from the arm, provided there be no ſign of a dropſy, and next morning give my common purging potion, and repeat it a third time, interpoſing three days between each time of taking it.

3. On the intermediate days of purging, let the following medicines be taken, and the uſe of them continued for a month or two afterwards.

Take of the conſerve of garden ſcurvy-graſs, two ounces; conſerve of wood-ſorrel, an ounce; compound powder of wake-robin, ſix drams; ſyrup of oranges enough to make them into an electuary, of which let the quantity of a large nutmeg be taken every morning, at five in the afternoon, and at night, with ſix ſpoonfuls of compound horſe-radiſh water, or the following diſtill'd water after it.

Take of the root of horſe-radiſh, ſlic'd thin, two pounds; the root of wake robin, a pound; the leaves of garden ſcurvy-graſs, twelve handfuls; mint, ſage, water-creſſes, and brook-lime, of each ſix handfuls; ſcurvy-graſs ſeed, a little bruiſed, half a pound; nutmegs half an ounce; white wine, ſix quarts; draw off only three quarts for uſe in a common ſtill.

4. Or diſtil ſcurvy-graſs, freſh gather'd for the ſame purpoſe. The patient ought likewiſe to uſe the following medicated beer for common drink.

Take

Take of the root of horſe-radiſh, freſh gather'd, two drams; twelve leaves of ſcurvy-graſs, ſix raiſins ſton'd, and half a *Seville* orange; bruiſe and ſlice the ingredients, and infuſe them in a large glaſs veſſel, well corked, in a quart of ſmall-beer.

5. Let ſix bottles of this beer be made at one time, and in a few days, before it be finiſhed, ſix more, and renew them for the future in the ſame manner.

6. Or inſtead of this beer, three or four ſpoonfuls of the following mixture may be added to every draught of the patient's common drink.

Take of the root of horſe-radiſh, and the ſeeds of ſcurvy-graſs, of each half an ounce; the leaves of ſcurvy-graſs, two handfuls; and a *Seville* orange without the peel; bruiſe them together in a marble mortar, pouring thereon by degrees half a pint of white wine; and afterwards preſs out the liquor gently, and ſet it by for uſe.

7. The ſame remedies are likewiſe very beneficial in the ſcorbutic, or hyſteric rheumatiſm, except bleeding and purging, which muſt not be uſed in theſe diſtempers.

Of the Gout.

1. THIS diſtemper comes towards the latter end of *January*, or the beginning of *February*, and begins commonly about two in the morning, with a pain in the great toe, but ſometimes in the heel, the ancle, or the calf of the leg; immediately, a chilneſs, ſhivering and ſlight fever ſucceed, the pain increaſes gradually every hour, and the chilneſs and ſhivering abate in proportion as the pain grows more ſevere, which at length comes to its height towards night, ſometimes reſembling a violent tenſion, ſometimes the gnawing of a dog, and ſometimes a weight and conſtriction of the parts affected, which becomes ſo exquiſitely painful, that the patient cannot bear the weight of the clothes upon it, nor the ſhaking of the room from a perſon's walking briſkly therein. The pain does not abate till two or three the next morning, that is, in twenty-four hours from the beginning of the fit, when the patient, being in a breathing ſweat, falls aſleep, and at waking finds the pain much abated, and the part affected newly ſwell'd. A ſlight pain is felt next day, and ſometimes the two or three following days, which encreaſes towards evening and remits, towards break of day. In a few days it

ſeizes

ſeizes the other foot in the ſame manner, and after attacking both feet, the ſubſequent fits prove irregular both with reſpect to the time of ſeizure, and their duration; and what we term a fit of the gout is made up of a number of theſe ſmall fits, and goes off ſooner or later, according to the age of the patient. Thus for inſtance, in ſtrong conſtitutions, and ſuch as ſeldom have the gout, the fit often goes off in a fortnight; but in the aged, and thoſe that have frequent returns of the diſeaſe, it laſts two months; and in ſuch as are more debilitated either with age, or the long continuance of the diſtemper, the fit does not go off till ſummer advances, which drives it away.

2. During the firſt fortnight the urine is high colour'd, and lets fall a red gravelly ſediment, and the patient is uſually coſtive. A loſs of appetite, and a chilneſs of the whole body towards evening, accompany the fit throughout; and when it is going off, a violent itching ſeizes the affected foot between the toes, and afterwards the Skin of it peels off by ſcales.

3. In this ſtate of the diſtemper the pain only affects the foot; but when the gout is exaſperated either by wrong management, or long continuance, ſo that the ſubſtance of the body is in a manner chang'd into gouty matter, it then ſeizes the hands, wriſts, elbows, knees, and other parts; ſometimes rendering one or more fingers crooked, by degrees deſtroying their motion, and forming at length ſtony concretions in the ligaments of the joints, like chalk, or crabs eyes. Sometimes it occaſions a whitiſh ſwelling upon the elbow, almoſt as large as an egg, which gradually inflames and grows red. Sometimes it ſeizes the thigh, which ſeems to ſuſtain a great weight, yet without much pain, and thence gaining the knee, attacks that part more violently, and the limbs are now ſo contracted and diſabled, that the patient halts with pain. The urine reſembles that which is voided in a diabetes, and the back and other parts itch much towards bedtime.

4. After many ſevere fits, the ſubſequent fits are leſs painful, nature being partly oppreſſed by the large quantity of peccant matter, and partly by old age; but inſtead of the uſual outward pain, the patient is ſeized with a ſickneſs at the ſtomach, pain in the belly, ſpontaneous laſſitude, and ſometimes a tendency to a looſeneſs. Upon the return of the pain into the joints the ſymptoms go off, and the pain and ſickneſs coming thus by turns, prolong the fit conſiderably.

5. In many perſons the gout breeds the ſtone in the kidneys. It ſeldom attacks women, and only the aged of this ſex, and thoſe

of

of a maſculine habit of body. Children and young perſons rarely have it.

6. The curative indication conſiſts in ſtrengthening the digeſtive powers, having firſt carried off the foul humours, and this is done either by medicine, diet, or exerciſe, or any other of the non-naturals.

7. Bleeding, purging, and ſweating, do not anſwer the end; tho' in ſuch as have the ſtone in the kidneys, and in conſequence thereof make bloody urine, it is proper to open the body once a week with a doſe of manna, and exhibit an opiate in the evening after the operation.

8. The medicines that anſwer the above-mentioned intention, are ſuch as are moderately heating, and are either bitter, or of a mild pungent taſte. For inſtance, the roots of angelica, and elecampane, the leaves of wormwood, the leſſer centory, germander, ground-pine, and the like; whereto may be added ſuch as are entitled antiſcorbutics, as horſe-radiſh root, garden ſcurvy-graſs, water-creſſes, and the like: but theſe, as they agitate the morbid matter, and increaſe the heat, muſt be uſed more ſparingly than the former, which by their mild heat and bitterneſs ſtrengthen the ſtomach. The following electuary and diſtill'd water are no contemptible medicines.

Take of the conſerve of garden ſcurvy-graſs, an ounce and half; the conſerves of *Roman* wormwood, and orange peel, of each an ounce; candied angelica and nutmeg, each half an ounce; *Venice* treacle, three drams; compound powder of wake robin, two drams; ſyrup of orange enough to make the whole into an electuary, two drams of which is to be taken twice a day, with five or ſix ſpoonfuls of the following diſtill'd water after it.

Take of horſe-radiſh root, ſlic'd, three ounces; garden ſcurvy-graſs, twelve handfuls; water-creſſes, brook-lime, ſage and mint, of each four handfuls; the peel of ſix oranges; and two nutmegs bruiſed; *Brunſwick* beer, or mum, ſix quarts; draw off only three quarts, for uſe, by the common ſtill.

9. Theſe digeſtive medicines are to be taken daily with great exactneſs, and eſpecially in the intervals of the fits.

10. Such a moderation ſhould be obſerved in point of diet, as, on the one hand, to avoid eating more than the ſtomach can digeſt, and on the other hand not to be ſo over-abſtemious, as to rob the parts of the proportion of nouriſhment, requiſite to keep up the ſtrength. As to the quality of the food, the patient's

palate

palate is to be conſulted, but he ought to eat only of one kind at a meal; as to the reſt, excepting fleſh, he may eat other things at pleaſure, provided they are not acid, ſalted, or high ſeaſon'd. As to the time of eating, it is beſt to be content with a dinner only, and inſtead of a ſupper, to drink a draught of ſmall beer, which is preventive of the growth of the ſtone.

11. The beſt liquors for gouty perſons are ſuch as are weaker than wine, and not ſo weak as water, leſt they hurt the ſtomach by their coldneſs. Of this kind is our ſmall beer, or wine diluted well with water, for water by itſelf is pernicious: but when the whole ſubſtance of the body is in a manner degenerated into the gout, the patient ſhould forbear all fermented liquors, even of the ſofteſt and ſmalleſt kind, and uſe the following diet-drink for common drink; beginning with it immediately after the fit is gone off, and continuing it for the remainder of life.

Take of ſarſaparilla, ſix ounces; ſaſſafras wood, *China* root, and the ſhavings of hartſhorn, each two ounces; liquorice-root, an ounce; boil them together in two gallons of ſpring water for the ſpace of half an hour, and afterwards infuſe them upon hot aſhes, cloſe cover'd, for twelve hours; then boil them till a third part of the liquor is exhal'd; and as ſoon as it is taken off the fire, infuſe therein half an ounce of anniſeeds for two hours; laſtly, ſtrain it off, and let it reſt, till it grows clear, and bottle it for uſe.

12. But if the patient, either (1.) from a long-continued and over-free uſe of ſtrong liquors; (2.) from old age, or (3.) extreme weakneſs, cannot digeſt his food without wine, he may drink a glaſs of *Spaniſh* wine at meals, and leave off the diet drink.

13. The patient ſhould both go to bed and riſe early, eſpecially in winter, keep his mind eaſy, and avoid too much application to ſtudy and buſineſs.

14. But the beſt remedy is moderate exerciſe daily uſed: as to the kind, riding on horſeback, or in a coach in a healthy air, is to be prefer'd, if not contra-indicated by age, or the ſtone. Venereal pleaſures muſt not be indulged, and all outward applications ſhould be forborn.

15. But tho' nothing of moment muſt be attempted in the fit, yet the patient ſhould forbear fleſh for a few days in the beginning of it, and inſtead thereof uſe water-gruel, or the like aliment; but if the ſpirits are ſubject to be diſorder'd, the patient ſhould refrain fleſh no longer than the ſtomach is ſet againſt it; but he muſt carefully guard againſt all errors in the quantity or quality of the diet.

16. The ſymptoms endangering life muſt be relieved, the moſt

frequent

frequent of which are, the faintneſs of the ſtomach, attended with gripings, as if occaſioned by wind; in which caſe nothing is ſo effectual as a ſmall draught of canary now and then, uſing exerciſe at the ſame time. But if ſome violent ſymptom threatens immediate death, (provided the head be not affected) we muſt have recourſe to laudanum directly, exhibiting twenty drops of it, in a ſmall draught of plague-water, and the patient muſt compoſe himſelf to reſt in bed. But if, thro' ſome error committed in the uſe of the non-naturals, a violent ſickneſs at ſtomach ſucceeds, with vomiting and gripings, and the limbs at this time, from the ſtriking in of the morbific matter, are free from pain, and better diſpoſed to motion than ordinary, the following method is to be uſed, which formerly ſnatch'd me from imminent death. Let the patient drink a gallon of poſſet-drink, or ſmall beer, and as ſoon as it is all thrown up again by vomiting, give him a ſmall draught of canary, with eighteen drops of laudanum in it. And if the ſymptoms yield not to this treatment, let a ſweat be raiſed morning and night for two or three days running, and kept up for two or three hours at a time, by a method and medicines adapted to procure it.

17. A tranſlation of the morbific matter to the lungs, the limbs in the mean time being freed from the pain and ſwelling, is to be treated like a true peripneumony, *viz.* by repeated bleeding, cooling and thickening medicines, and a regimen of the ſame kind, and purging with lenient purgatives in the intervals of bleeding: but raiſing a ſweat is prejudicial in this caſe.

Of a Conſumption.

1. THERE are ſeveral kinds of conſumptions. (1.) The firſt moſtly ariſes from taking cold in winter; abundance of perſons being ſeiz'd with a cough upon the coming in of cold weather, a little before the winter ſolſtice, which happening to ſuch as have naturally weak lungs, theſe parts muſt needs be ſtill more weakened by frequent fits of coughing, and become ſo diſeaſed at length hereby, as to be utterly unable to aſſimilate their proper nouriſhment. Hence a copious crude phlegm is collected, which by the continual agitation of the lungs, occaſioned by the vehement cough accompanying this diſtemper, is plentifully expectorated. The lungs being hereby ſupplied with purulent matter taint the whole maſs of blood therewith, whence ariſes a putrid fever, the fit whereof comes towards evening, and goes off towards morning with profuſe and debilitating ſweats. Laſtly, to cloſe the ſcene, a looſeneſs ſucceeds, occaſioned partly by corrupt humours, diſcharged from the meſenteric arteries into the inteſtines,

tines, and depoſited there, and partly by the weakened tone of the viſcera; and thus the patient periſhes at length the following ſummer by a diſtemper occaſioned by the foregoing winter. And this is the principal kind of this diſeaſe.

2. Moreover, as the blood in winter abounds with moiſt particles, and perſpiration is too much check'd by the ſudden contraction of the pores, theſe particles inſinuate themſelves into the lungs, thro' the ramifications of the arterial vein, or pulmonary artery, which runs thro' the whole ſubſtance of the lungs, or are diſcharged by the ſalival ducts, and depoſited in the glands of the throat, whence the humour being now fallen thro' the aſpera arteria upon the lungs, irritates theſe parts continually, like a catarrh, and the frequent and violent fits of coughing, ſoon cauſe the weakneſs and other ſymptoms above-enumerated. And when the lungs loſe their natural tone, tubercles ordinarily breed therein, which, upon viewing the lungs of thoſe that periſh by this diſtemper, generally appear filled with a purulent matter.

3. When this diſeaſe is confirmed, it for the moſt part proves incurable. The cure, however, may be attempted, (1.) by leſſening the cauſe of the defluxion upon the lungs, by bleeding and mild purgatives joined with pectorals, ſuited to the different ſtates of the diſeaſe: for inſtance, exhibiting incraſſants when the humour is too thin to be expectorated, and attenuants when it is thick, and expectorated with difficulty. (2.) The hectic fever muſt likewiſe be check'd by cooling medicines; ſuch as aſſes milk, milk-water, emulſions made of ſweet almonds, the ſeeds of melons, pumpkins, and white poppies, cowſlip flower water, and the like. (3.) Laſtly, the cure of the ulcer muſt be undertaken; for which purpoſe the liquid turpentine, vulgarly call'd opobalſamum, is eſteem'd an excellent remedy.

4. The cure of this diſeaſe, in my opinion, is moſt ſucceſsfully attempted in the following manner. (1.) Firſt bleed in the arm, then purge three days with the greater pil. cochiæ, or my common purging potion, and the third night give half an ounce of ſyrup of white poppies. (2.) After an interval of two or three days give another purge, and repeat it as often as there is occaſion, till the ſymptoms either go quite off, or at leaſt abate. (3.) After the operation of every purge, let the patient take twenty drops of opobalſamum upon a piece of fine ſugar, without drinking after it, or a pill made of *Chio* turpentine, and fine ſugar: but opobalſamum is not to be uſed unleſs ſuitable evacuations have been previouſly made. An electuary may be ſubſtituted inſtead of it, made of *Locatellus*'s balſam, liquorice powder, anniſeeds, and turpentine. (4.) After uſing evacuations care muſt be had to abate

the

the cough, for fear the lungs ſhould be weakened by the continual agitation thereby caus'd. And for this purpoſe ſyrup of white poppies is the beſt remedy, and may be adminiſter'd in the following form.

Take of the pectoral decoction, a pint; ſyrup of white poppies, and maiden hair, of each two ounces; mix them together, and let five ſpoonfuls be taken three times a day.

5. This medicine being frequently uſed, will abate the defluxion upon the lungs in ſome meaſure, and help to recover their former tone, unleſs the weakneſs has been of long ſtanding, and will likewiſe promote the concoction of the purulent matter lodged therein.

6. But the principal aſſiſtant in the cure of this diſeaſe is riding on horſeback every day, inſomuch that whoever has recourſe to this exerciſe in order to his cure, need not be tied down to obſerve any rules in point of diet, nor be debarr'd any kind of ſolid or liquid aliment, as the cure depends wholly upon exerciſe. Some perſons that have been recovered by this method have been ſeiz'd with a tumor in the neck, not much unlike thoſe in the king's evil.

7. (2.) There is another kind of conſumption, proceeding from a cough, which comes at a different ſeaſon of the year, namely, at the beginning of ſummer: and frequently attacks young perſons of weakly conſtitutions, whoſe blood is over-ſtocked with hot acrimonious particles. Having over-heated themſelves by drinking wine too freely, they force up blood from the lungs by coughing, and feel a ſlight ſort of pain in thoſe parts: and theſe ſymptoms not being removed in due time by proper remedies, firſt an hoarſneſs, and ſoon after an ulcer is generated in the lungs, whence pus is at length expectorated.

8. This kind of conſumption is eaſily cured, at leaſt in the beginning, by bleeding and purging twice alternately, along with a cooling and thickening diet, and a total abſtinence from fleſh.

9. (3.) The third kind of this diſtemper ariſes from the tranſlation of febrile matter to the lungs in the declenſion of a fever, which being more debilitated hereby, are attack'd with the ſymptoms juſt enumerated.

10. Sometimes a conſumption proceeds from the purulent matter left behind in a pleuriſy, for want of having been plentifully enough expectorated, and requires the ſame treatment as an empyema.

11. (4.) Thoſe that have been weaken'd by immoderate and too frequent evacuations are ſeiz'd with a fourth kind of conſumption, in which a hectic fever comes every night after ſupper; and theſe perſons are moſt ſubject to aphthæ.

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