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 ... / by John Swan.

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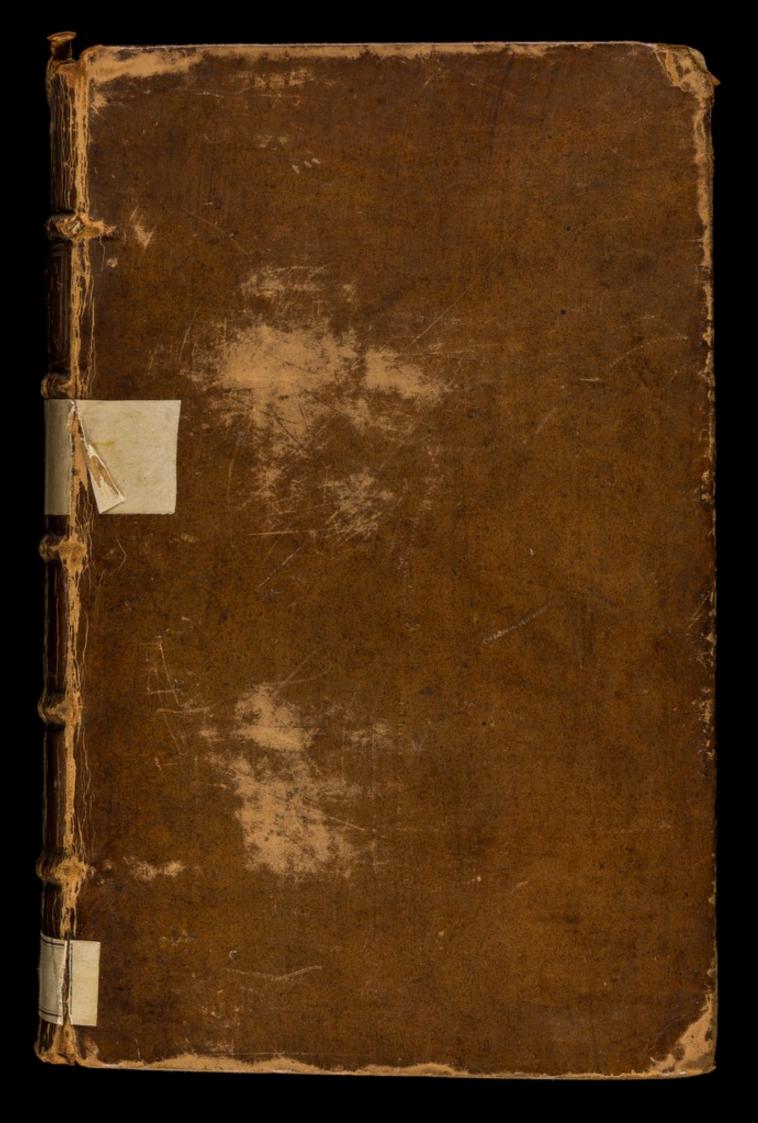
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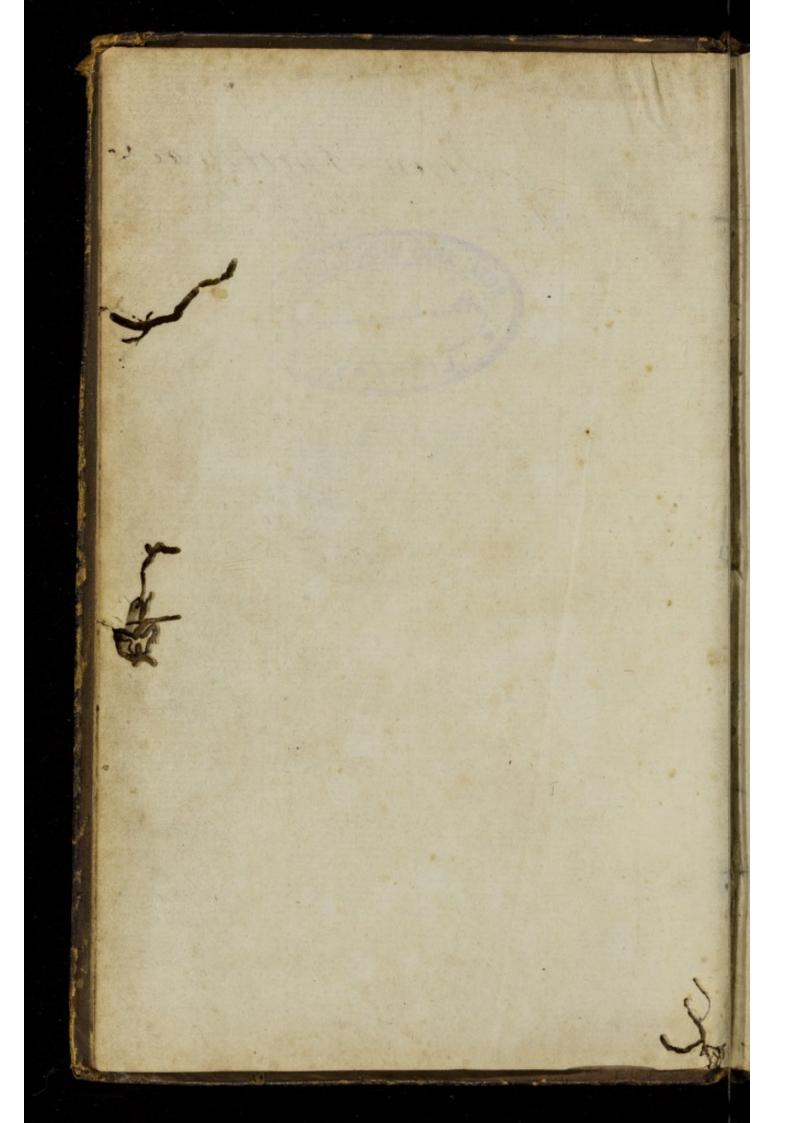
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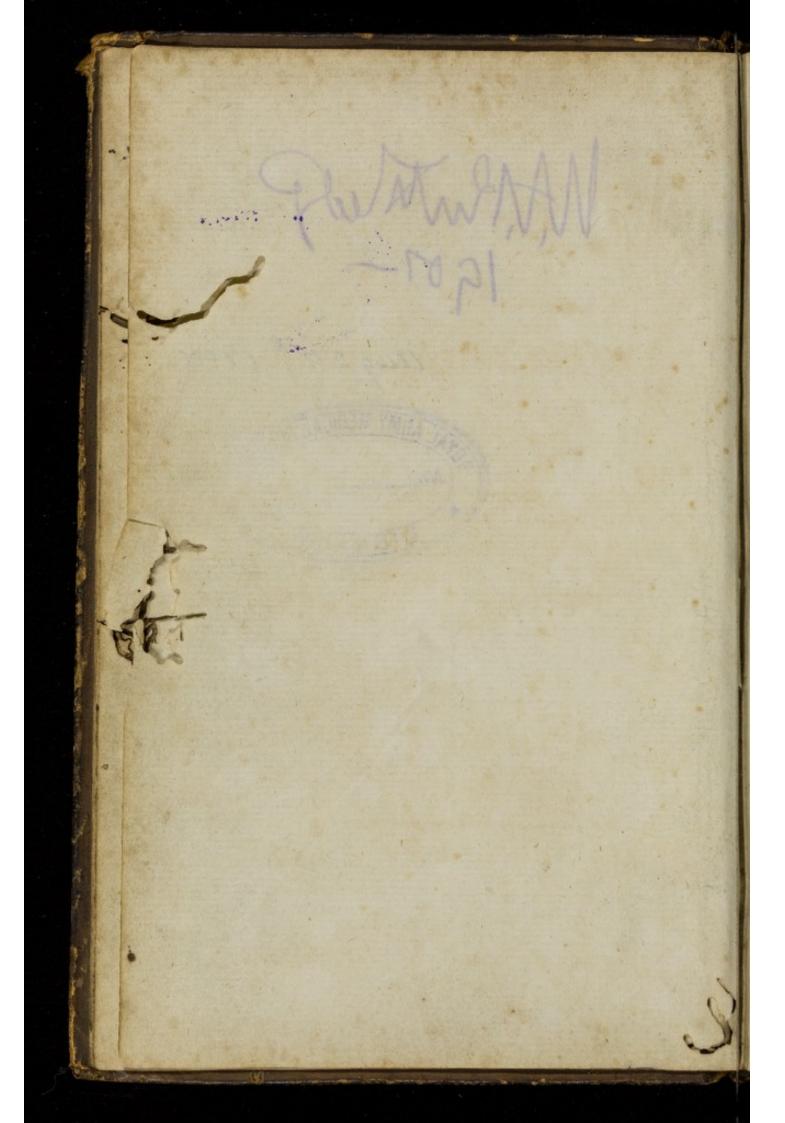
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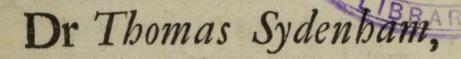


WARWALLED 1907aug 24"





OF



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, From the best medicinal Writers.

By JOHN SWAN, M.D.

LONDON:

Printed for EDWARD CAVE, at St John's Gate.

1742

# WORKINGS

T O

# Dr Thomas Sydenbam,

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By JOHN WWAM, M.D.

Printed for Howard Cave, and John's Gate.

# N. A. H. Z. PREFACE

SIR,

The Beg leave to offer the following translation to you, as a small but fincere return of gratitude for the many singular obligations which I have received from you. Your favourable acceptance of it will gratify me to the utmost extent of my wishes, and I desire no better recommendation of my performance than the honour I am allowed of sending it into the world under your patronage; which I am the more proud of for the opportunity it gives me of professing my-self in this publick manner,

SIR,

Your most obliged and

most humble servant,

JOHN SWAN.

# TRANSLATOR'S PREFACE.

HE great character that Dr Sydenham has justly acquired, both at home and abroad, is fo well known to those who are conversant in the art of medicine, that it may feem 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 affured his pupils, that no physician since the venerable Hippocrates has wrote of difeases with so much exactness. (a) And elsewhere he laments, that few if any of the modern writers on physic have attained to the perfection of the ancients. I can only (fays 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 efteemed 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

<sup>(</sup>a) Meth. discend. art. med. p. 497.

<sup>(</sup>b) In oratione de commend. stud. Hippoco

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# The Translator's preface.

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 prefent 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, I have used as few terms of art as possible, and studiously 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 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 taken from the best modern writers (c), except a few which 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. To this edition I have likewise added marginal notes, a copious index, and the author's life: And have also
- (c) Boerhaave, Hoffman, Baglivi, de Gorter, Goelické, Heister, Geoffroy, Astruc, Mead, Shaw, Hoadly, Cheyne, Huxham, Hilary, Turner, Fuller, Perry, &c.

### The Translator's preface.

alfo divided it into number'd paragraphs, for the conveniency of references.

6. These advantages and improvements will, I hope, render this new translation acceptable to the public, who may be assured, either that no additions will be made to it in any future impression, or that they shall be printed separate, with the necessary references, and delivered gratis to the purchasers of the first.

7. 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, compleat, and intelligible.

cuity, where-ever this could be done without an arms

of a Our author's entire violaries were mover before problished together in Lagrico, nor any part of them with a plantary and fraction roses, tending to little.

(a) Bombaare, Hoffman, Baglisi, de Gorter, Coelicke, Findibe, Confront, Africa, Meed. Siaw, Hoadly, Cheyac, Harliam, Hily

THE

the author's feafe.

# Dr SYDENHAM.

HOMAS SYDENHAM was born in the year 1624, at Winford Eagle in Dorfetsbire, where his father William Sydenham Esq; had a large fortune. Under whose care he was educated, or in what manner he paffed his childhood, whether he made any early discoveries of a genius peculiarly adapted to the study of nature, or gave any prefages of his future eminence in medicine, no information is to be obtained. We must therefore repress that curiofity which would naturally incline us to watch the first attempts of fo vigorous a mind, to perfue it in its childish enquiries, and fee 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 any 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; for he informs us himself, that he was witheld from the university by the commencement of the war; nor is it known in what state of life he engaged, or where he resided during that long series of

public

publick 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 sew years in the camp; for in 1648 he obtained at Oxford the degree of batchelor of physic, for which, as some medicinal knowledge is necessary, it may be imagined that

he fpent fome time in qualifying himfelf.

His application to the fludy of physic 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 physic to him, on what account, or with what arguments, it is not related; but his persuasions were so effectual, that Sydenham determined to sollow 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 physic, 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 incul-

cated, and implicitely believed.

It is the general opinion, that he was made a phyfician 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 shoud 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 felf-love which dazzles all mankind from difcovering that he might intend a fatire very different from a general censure of all the antient and modern

wri-

writers on medicine, fince he might perhaps mean either feriously, or in jest, to infinuate, that Blackmore was not adapted by nature to the study of physic, and that, whether he should read Cervantes or Hippocrates, he would be equally unqualified for practice, and equally unsuccessful in it.

Whatfoever was his meaning, nothing is more evident, than that it was a transient fally 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 physic 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 fatisfied with the opportunities of know-ledge which Oxford afforded, but travelled to Montpellier, as Default relates, [differtation on confumptions] in quest of farther information; Montpellier being at that time the most celebrated school of physick: So far was Sydenia and for far from thinking it reasonable to learn physic 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, than that he should dedicate several years to the rudiments of his art, and travel for further instructions from one university to another?

[viii]

### The life of Dr Sydenham.

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

Whatever may have produced this notion, or how long foever it may have prevailed, it is now proved beyond controverfy to be false, fince it appears that SYDENHAM having been for fome time absent from the univerlity, returned to it in order to perfue his phyfical enquiries before he was twenty four years old, for in 1648 he was admitted to the degree of batchelor

of physic.

That fuch reports should be confidently spread, even among the cotemporaries of the author to whom they relate, and obtain in a few years fuch credit as to require a regular confutation; that it should be imagined that the greatest physician of the age arrived at so high adegree of skill, without any affistance from his predecesfors; and that a man, eminent for integrity, practifed medicine by chance, and grew wife only-by murder, is not to be confidered without aftonishment.

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 fome men confide in natural fagacity, and how willingly most would spare themselves the labour of accurate reading and tedious enquiry, it will be eafily 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 practifed physic 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 be secured from the dangerous experiments of the ignorant and prefumptuous; and that those who shall hereafter assume the important province of superintending the health of others, may learn from this great

master

mafter of the art, that the only means of arriving at

eminence and fuccess are labour and study.

From these false reports it is probable that another arose, to which, though it cannot be with equal certainty confuted, it does not appear that entire credit ought to be given. The acquisition of a Latin stile did not feem confiftent with the manner of life imputed to him; nor was it probable, that he who had fo diligently cultivated the ornamental parts of general literature; would have neglected the effential studies of his own profession. Those therefore who were determined at whatever price, to retain him in their own party, and represent him equally ignorant and daring with themfelves, denied him the credit of writing his own works in the language in which they were published, and afferted, but without proof, that they were composed by him in English and translated into Latin by Dr Mapletoft.

Whether Dr Mapletoft lived and was familiar with him during the whole time in which these several treatifes were printed, treatifes written on particular occafions, and printed at periods confiderably distant from each other, we have had no opportunity of enquiring, and therefore cannot demonstrate the falsehood of this report: but if it be confidered how unlikely it is that any man fhould engage in a work fo laborious and fo little necessary, only to advance the reputation of another, or that he should have leifure to continue the fame office upon all following occasions, if it be remembered how feldom fuch literary combinations are formed, and how foon they are for the greatest part disfolved, there will appear no reason for not allowing Dr Sydenham the laurel of eloquence as well as phylic. 3

It

<sup>\*</sup> Since the forgoing was written we have feen Mr Ward's lives of the professors of Gresham College; who in the life of Dr Mapletost says, that in 1676, Dr Sydenham published his Observationes medica circa morborum acutorum historiam & curationem, which he dedicated to Dr Mapletost, who at the desire of the author had translated them into Latin; and that the other pieces of that excellent physician were translated into that language by Mr Gilbert Havers of Trinity College Cambridge, a student in physic and triend of Dr Mapletost. But as Mr Ward, like others, neglects to bring any proof of his assertion, the question cannot fairly be decided by his authority.

It is observable, that his processus integri, published after his death, discovers alone more skill in the Latin language than is commonly ascribed to him; and it furely will not be suspected, that the officiousness of his friends was continued after his death, or that he procured the book to be translated only that by leaving it behind him, he might secure his claim to his other writings.

HAM, with whom he was familiarly acquainted, was particularly versed in the writings of the great Roman orator and philosopher; and there is evidently such a luxuriance in his stile, as may discover the author which gave him most pleasure, and most engaged his imitation.

About the fame time that he became batchelor of physic, he obtained by the interest of a relation, a fellowship of All Souls college, having submitted by 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 physic 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.

It is a melancholy reflection, that they who have obtained the highest reputation, by preserving or reftoring 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, 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 Sydenia and 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 assistance.

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 which he has left, which it is not necessary to epitomise or transcribe; and from them it may likewise be collected, that his skill in physic 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.

American St. Co. No. Co. Co. Co. Co. Fiel The same to the state of the same file o named and or in the property for in-order bearing being likewise be collected, that he belief physic was not but the deplete was not En antime of the state of the separate of the separate 

## AUTHOR'S PREFACE.

I. CINCE the human body is fo formed by na- Origin of ture, as to be at fome times alterable by the Phylick. continual wear of its component particles, and the force of external agents, whence numerous difeafes have in all ages arisen, doubtless the necessity of discovering a cure for them, must have put mankind upon fludying phyfick, long before the birth of the Grecian, or even the Egyptian Æsculapius.

2. But as it would be difficult to affign the first in- Hard to be ventor of houses and clothing, for defence against the juries of the weather, fo the origin of physick can fcarce be discovered, notwithstanding that this art, as well as fome others, must have always subfifted, tho' cultivated more or less diligently, according to the dispositions of different persons, countries, and ages. (a).

3. The

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

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

In effect, it should feem highly probable, that fickness and pain must have necessarily excited mankind to seek for immediate relief . they could not be men, and be so thoughtless and insensible under

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 fome eminent men, who have spared no pains to render it more extensive 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 deferve the praifes of an abler pen. (b)

The endeaauthor.

4. But how confiderable foever their attempts have vours of the been, I should always have esteemed myself an useless member of the faculty, had I not contributed my mite towards

> 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 follicitous, as well to preferve his health, as to restore it when lost, since we see that brutes are so strongly impell'd to both by mere inftinct.

> After all Enquiries of this kind, the truth and usefulness of a science are more to be confulted than its antiquity: 'tis from thefe excellencies we ought to form our opinion of it, and be induced to protect and encourage it, and not from its antiquity only, fince this of itself adds no real value to any science, and is often found thro' a falle and flavish veneration to give currency and fanction

to very pernicious errors.

(b) Upon comparing the ancient state of physick with the scientifical and truly ufeful improvements of the moderns, it will feem ftrange that fo small a progress should have been made in the art; which must furely be ascribed to our having departed from the only just method of improving it by the joint help of reason and experience. Whoever carefully perufes practical writers, will find that they have advanced feveral things, concerning the causes and nature of difeafes, contradictory to experience; as will manifeftly appear by confulting a number of them upon any particular difeafe. Hence we fee that great circumspection is necessary to prevent our being led into error. Again, experience teaches us a fhorter 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 forfake the beaten path occasionally, as reason and experience shall direct.

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 phyfick; and (2.) to publish a specimen of my endeavours in this way.

5. Now I judge that the improvement of physick The ways of depends (1.) upon getting as genuine and natural a de- improving scription, or history of all diseases, as can be procured, and (2.) a fix'd and complete method of cure. (c) It is easy enough to describe diseases unskilfully, but to write fuch a full and accurate history of them as to escape the censure that lord Bacon has passed upon some great promifers in another way, is a much more difficult task. " We are not to learn, says the noble auce thor, that we have a voluminous natural history, which ce is agreeable by the variety of its matter, and by the co pains bestow'd upon it render'd curious and entertain-" ing in many places : but if it were stript of its fables, ec quotations, trifling disputes, philology, and other ornaec ments, that are fitter for the conversation of learned ec men at their hours of relaxation, than for institutes ec of philosophy, the matter of it would be brought into a cc very

(c) The history of diseases, says Baglivi, or the medicina prima, ought to be diftinguish'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, declenfion, and termination, to the diligent and judicious observer. The medicina (ecunda, 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 physick, or may be confider'd as branches thereof; amongst which chemistry, botany, the knowledge of the fix 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. Bas glivi op. p. 14, 15.

design." And thus the cure of diseases is easily delivered according to the common method, but to do it compleatly, will appear a much harder task to those who know that there are abundance of distempers to be met with in practical writers that still continue in-

The history of diseases a work of disficulty.

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.

Diseases to be reduced to certain kinds.

7. (1.) All diseases then ought to be reduc'd to certain and determinate kinds, with the fame exactness as we see it done by botanic writers in their treatises of plants. For there are difeases that come under the fame genus, bear the fame name, and have the fame fymptoms in common, which, notwithstanding, being of a different nature, require a different treatment. Thus it is generally known, that the word carduus is extended to feveral 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 fufficient for a writer to deliver only the common figns or appearances of any difease: for tho' the fame variety does not happen in all distempers, yet, I hope to make it plainly appear in the following sheets, that there are feveral, which, notwithstanding their being treated of by authors under the fame name, without any diffinction of kind, are extremely different.

But not to 8. Furthermore, where we meet with this distribusupport any tion of distempers into kinds, it is commonly done to hypothesis. maintain some hypothesis, sounded upon the true phe-

nemena ;

nomena; and hence this distinction is rather adapted to the bent of the author, and his manner of philosophifing, than to the nature of the disorder. How much the improvement of physick has been obstructed by this desect appears in not a few diseases, the cure of which would not have been undiscovered at this day, if the writers of experiments and observations had not been impos'd upon in their own particular, 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.

9. (2.) In writing, therefore, a history of diseases, No hypotheevery philosophical hypothesis which hath prejudic'd the sis to be us'd writer in its favour, ought to be totally laid afide, and a history of then the manifest and natural phenomena of diseases, 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 errors that fpring from hypotheses, whilst writers, misled by these, assign such phenomena for diseases, as never existed, but in their own brains; whereas they ought to appear clearly, if the truth of the hypothesis, which they esteem fixed and certain, were well establish'd. Again, if any symptom properly fuiting their hypothefis, does in reality belong to the difease, to be describ'd, they lay too much stress upon it, as if it were every thing they wanted, whereas, on the contrary, if it feems repugnant to 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.

<sup>(</sup>d) Hypotheses owe their origin to oftentatious vanity and idle curiosity; whence 'tis easy to conceive how much they must needs obstruct the improvement of physick, which is a science that depends chiefly upon well-conducted experiments and close and saithful observation;

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

10. (3.) Again, in describing any disease, it is neceffary to enumerate distinctly both the peculiar and conftant phenomena, or fymptoms, and the accidental ones, of which latter kind are those proceeding from the age and conflitution of the patient, not omitting the different method of cure. For the appearance or outward look of a diforder often changes with the method of cure, fome fymptoms being rather occasioned by the phyfician than the diforder itself: fo that perfons labouring under the fame illness, being differently treated, have different fymptoms. And hence, unless great caution be us'd in this point, our notions of the fymptoms of diseases, must necessarily be very loose and imperfect: not to mention that uncommon cases do not more properly belong to the history of diseases, than the biting of the palmer-worm, in describing sage,

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fervation; whereas hypotheses are always built in great part upon feign'd, precarious, and often very obscure principles; so that they may aprly enough be shil'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 precariousness whereof have only serv'd to render the art uncertain, sluctuating, fallacious, mysterious, and in a manner unintelligible.

And if their usefulness and bad tendency be consider'd, it should feem 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 affistance, since the Introduction of them into physick above two thousand 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 sounded upon suppositious and unsettled principles; it were folly to expect truth, and certainty from them. See pag. 250. note (0)

is to be reckon'd amongst the characteristic marks of that plant. (e)

11. (4.) Lastly, the seasons of the year that princi- The seasons pally promote any particular kind of difeases, are to be of the year carefully remark'd. I own that some happen indiffe- fally noted. rently at any time, whilst many others, by a secret tendency of nature, follow the feafons of the year with as much certainty, as fome birds and plants. And indeed I have often wonder'd that this tendency of some diftempers, which is very obvious, has been hitherto obferved but by few, whereas abundance of persons have, with great exactness, noted under what planet plants fpring, and brutes ingender. But from what cause soever this inadvertency proceeds, certain it is that a knowledge of the feafons, in which difeafes ordinarily arife

(e) Hippocrates, by closely attending to observations discovered that diseases have certain constant and individual symptoms, and others that are adventitious, or casual, and common to other diftempers, and that the former depend upon the identical and confrant nature of the disease, and the latter either upon the different treatment of the patient, or the numerous and always various affemblage of causes. The first he form'd into aphorisms, as the rules of the art, and left the latter to the judgment of the phyfician.

The conftant symptoms which may be call'd the characteristic figns of difeafes, fometimes 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 leaft circumftance, fo the least motions of diseases, tho' somewhat obfeure, 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 likewife, which is still more valuable. To the obscure motions of diseases may be referr'd the critical days, the fecret changes of difeafes amongst themselves, their translation to one part rather than another, the latent mutual confent of the parts, the periods of diseases, and their increase at fet hours, which happens in some kind of pains, in fevers also, and several other diforders. Bazlivi op. p. 6, 7.

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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 Liseases to practice.

12. These are some of the most remarkable, tho' not the only particulars to be observed in writing a history of difeases; the usefulness of which to practice is not to be estimated, neither are the subtile enquiries, and trifling notions, with which the writings of the moderns are stuffed worth comparing with it. (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 clear and diffinct perception of the peculiar fymptoms? Even the fmallest 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 unchangeable manner in producing diftempers, that the fame difease appears attended with the like symptoms in different fubjects: fo that those which were obferv'd in Socrates, in his illness, may generally be applied to any other person, afflicted with the same diseafe, 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 its colour, tafte, fmell, form, and other properties, will find the defcription agree in most particulars with all the violets in the universe.

13. 'Tis

(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 foretell 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?

13. 'Tis my opinion, that the principal reason of our Why we yet being yet without an accurate history of diseases, pro- want an acceeds from a general supposition that diseases are no story of dimore than the confus'd and irregular operations of dif- feafes. order'd and debilitated nature, and confequently that it is a fruitless labour to endeavour at a just narration of them. (g)

14. But to refume our fubject : a physician may The curalikewise collect the indications of cure from the smallest tive indicacircumstances of the distemper, as certainly as he does gather'd the distinguishing figns from them. (b) And for this from the

reason smallest cir-

(g) A close and diligent fearch into the rife, progress, and termination of diseases will clearly shew the contrary, nature acting with great fleadinels and uniformity in producing, carrying on, and terminating diseases, provided she be not fore'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 fymptoms and appearances, without omitting the minutest particular.

For the causes that have hitherto prevented our having a full 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 fecond and third chapters of the fecond book of the judicious and industrious Baglivi's praxeos 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 fymptoms, which chiefly manifest the nature and violence of the difease. If therefore, for want of noting, and duly confidering 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 fenses, 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 constitytion of the patient, Oc. all which particulars being maturely reason I have often thought, that if I had a just history of any disease, I could always procure a suitable remedy for 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 great Hippocrates arrived at the highest pitch of physick, who, after laying down this folid and fixed foundation to build the art upon, has clearly delivered the fymptoms of every difease without deducing them from any hypothesis, as appears in his books concerning difeases, &c. He has like wife left us fome rules drawn from the observance of nature's method of promoting and removing diftempers; fuch are his prognostics, aphorisms, and other writings of this kind. Of these particulars the theory of this venerable father of phyfick chiefly confifted, which not being deduced from the infignificant fallies of a wanton imagination, like the dreams of diftempered perfons, 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 difeafed nature by all the means he could employ; and hence, likewise, he required no more of art, than to affift nature when the languish'd, and to check her, when her efforts were too violent; and to accomplish both these ends by the steps and method whereby fhe endeavours to expel the diforder: for this fagacious observer found that nature alone terminates diftempers, and works a cure with the affiftance of a

confidered and compar'd, will certainly direct us to the genuine curative indications, whence we may hope to fucceed in the cure, or at least to fecure our reputation by making the danger known, and foretelling the fatal confequence that is likely to enfue.

few fimple medicines, and fometimes even without any medicines at all. (i)

16. (2.) The other method of improving physick fur- Physick further, confifts chiefly, in my opinion, in delivering a fixed and every way complete method of cure; fuch a one, I livering a mean, as hath been fufficiently establish'd and verified complete by a competent number of experiments, and found effectual to cure any particular difeafe. 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 affured that a particular difease may be conquered

ther improvable by de-

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

He remarked with furprifing exactness all that preceded diftempers, the fymptoms 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, lest him neither inclination nor leifure to profecute enquiries of less confequence with diligence enough to make any confiderable progress therein. He greatly improved the art by being at the pains of collecting a large number of observations in order to discover the iffue of diffempers, 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 phyfick in a very confused and imperfect state, and lest 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.

quered by answering a certain indication, as we are of answering a particular indication by some certain medicine, that will generally produce the desir'd effect; thus, for instance we purge with senna, and cause sleep with poppies. However, I do not deny but that the physician ought to attend carefully to the particular success both of the method and medicines 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 inutilility of publishing particular observations.

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

(k) It were highly to be wish'dthat 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 constitutions, 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 peruling the writings of phylicians of a different nation, with this view, let it always be remember'd, that they are foreigners, and treat of difeases as they appear with them respectively, and suit the method of cure to the place of their residence, insomuch that their rules cannot be fasely followed by us any surther than they shall be found to correspond with our own obser-

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other circumstances relating both to the patient and the method of cure to be confidered before any advantage can be reap'd from a fingle observation? If the medicine never fails, why does the observer deal only in particulars, unless it be that he distrusts his skill, and judges it easier to impose upon the publick in part, than in the whole? (1) But how eafy a task it is to write large volumes of this kind, can be no fecret to one that is but little acquainted with practice; as, on the contrary, how difficult it is to lay down a perfect, and every way complete method of cure in any difeafe. If only one person in every age had treated but one disease in this manner, phyfick 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 fince forfook our fkilful guide

(1) The author here should seem not to have sufficiently attended to the advantages derivable from faithful and accurate obfervations, which are the principal foundation of the pathological and curative branches of phylick. For experience, the foul of the art, is the refult of a number of fuch observations made by ourselves and others, and physic 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 defign; 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 fatisfactory 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 eure employ'd, fetting down the medicines that were exhibited from day to day, and the effects they had, and specifying likewife the diet, regimen, &c. in a very particular manner. Many of the observations delivered both by the ancients and moderns labour under great defects, and are fo far from being complete, 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.

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Hippocrates, and the antient method of cure, founded upon the knowledge of conjunct causes, that plainly appear: infomuch that the art which is at this day practic'd, being invented by specious reasoners, is rather the art of talking than of heating. But that I may not feem to advance this affertion without fufficient grounds, I beg leave to make a fhort digression from the subject, in order to prove that the discovering and assigning of remote caufes, which engross the thoughts, and feed the vanity of curious enquirers, is an impossible attempt, 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. (m)

Reasons to proue this offertion.

Remote

causes not to be disco-

wer'd.

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 fome poison: by thefe, I fay, and the like causes, these humours are work'd up into a fubstantial form, or species, (n) that discovers itself by particular fymptoms, agreeable to its peculiar essence; and these symptoms, notwithstanding they may, for want of attention, feem to arife 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 diforders that proceed from the effence of the species, newly raised to this pitch: so that every specific disease arises from some specific exaltation, or peculiar quality of fome humour contain'd in a living body. Under this kind may be comprehended most diseases, having a certain form or appearance;

(m) See pag. 45. Note (a) and pag. 486. Note (q)

<sup>(</sup>n) Or, in plainer language, the humours undergo such 2 change from fome 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 diftemper hereby form'd.

nature in fact observing the same uniform method in producing and bringing difeases to a height or crisis, as she does in the production or growth of plants or ani-For as every plant or animal is poffes'd of peculiar properties, fo is it likewise in every exaltation of any humour after its being come to a species, or difease. 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 different effences, or species, from the tree or shrub that bears them.

19. In reality, whoever attentively confiders the Further prophenomena, or fymptoms, accompanying a quartan wed by a quartan fefever, viz. that it always comes towards autumn, and ver. 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 fucceeded by as fenfible a degree of heat, which terminates at length in a profuse sweat; and lastly, that whoever is seiz'd with this disorder, is feldom cur'd before the vernal equinox. I fay, whoever duly confiders these particulars, will find as strong reasons to believe that this distemper is a species, as a plant is one, which in like manner fprings out of the earth, flowers, and dies, and is in other respects affected agreeably to its nature or effence. For it is not easy to comprehend why this difease should arise from a combination of principles and manifest qualities; whilst a plant is on all hands allow'd to be a fubstance and distinct species in nature. However, in the mean time we do not deny but that as most kinds of animals or plants fubfift of themselves, so on the contrary the species of diftempers depend on those humours that produce them. 20.

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Difeafes eurable tho' their remote causes cannot be discovered.

20. But tho' from what has been delivered the caufes of most diseases should seem absolutely undiscoverable, 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, whereas they overlook the immediate and conjunct causes that come in fight, and must necessarily and may be discovered without such trifling helps, inafmuch as they disclose themselves to the understanding, fall under the notice of the fenses, or may be learnt from the anatomical observations of our predecessions. And as it is plainly impossible a physician should discover those causes that have not the least correspondence with the fenfes, fo neither is it necessary: 'tis fufficient for him to learn the immediate causes, and those effects and fymptoms of a distemper, that may enable him to diftinguish 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 difease originally proceeds; which are not to be comprehended, but whoever perfectly understands the immediate cause thereof, and can diftinguish it from all other diftempers will cure it no less certainly, even without attending to the useless and triffing search after remote causes .---- But this by way of digression.

Specifics wanting towards the further improvement of phylick-

21. But if it be asked now, whether besides the foregoing defiderata in physic, viz. (1.) a true history of diseases, and a certain (2.) and establish'd method of cure, a third may not be added, namely, the discovery of specific remedies? I answer in the affirmative, and wish as much as the querift to fee it effected. For the' that should feem the best method of curing acute diseases, which, after nature has pitch'd upon a certain kind of evacuation, affifts 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 fuch medicines can be discovered) and, which is of more imprortance, that the patient might be secur'd from the evils which are the consequence of those errors that nature cannot help committing in expelling the cause, even tho' she is affished in the most effectual and skilful manner by the physician. (0)

¢ 22. As

(o) 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 sew we have would have stood upon a much surer soundation, 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 beneficial. The best medicines often sail 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 medicine, but proceeds from their being exhibited improperly, without dissinguishing with the accuracy requisite in cases of this nature.

Certain it is, that a true specific is of that real value, that ? 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 fome hopes of fuccess, 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 posses'd of such peculiar virtues, as infallibly to relieve, or cure the particular diforder, of for which it is used, being exhibited as nearly as can be in the " fame given circumstances". (2.) The next thing to be done i to form a fet of rules to direct him methodically in the enquir and manner of making proper trials, fo as not to run the rifque 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 carefully and faithfully register'd, not omitting the least particular; fo that a right judgment may be form'd of the efficacy, or infignificancy 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. A part of this note is taken from Baglivi. See his prax. med. p. 224. 6.6.

## The Author's preface.

A method manting in the cure of seafes.

22. As to the cure of chronic diseases, tho' I believe that more advantage may be expected from the use of chronic di- a method only, than can be conceiv'd at first, yet 'tist plain that this is wanted in the cure of fome of the most confiderable distempers of this kind, which happenschiefly for this reason, that nature is not posses'd of fo effectual a method of expelling the morbific matter in chronic as in acute diseases, which might enable us to conquer the diffemper, by affifting her, and aiming at. the true end. In eradicating a chronic disease, therefore, whoever is possess'd of a medicine, powerful eanough to destroy the species of it, justly deserves the name of a physician; which he has no right to, who only introduces a new one from the first and fecond qualities, instead of the former, which may indeed be done without abolishing the species. Thus, for inflance, a person that has the gout may be heated or cool'd without curing the differmper; specific diseases being not more immediately cur'd by this method, which is only introductive of different qualities, than fire is extinguished by a fword. For pray what does heat, cold, moisture, dryness, or any of the second qualities contribute towards the cure of a distemper, the effence of which confifts in none of these?

There are jewer fpe-

23. But if it be objected, that we have long been possess'd of a sufficient number of specifics, I answer, are imagin- that the contrary will foon appear, provided a ftrick fearch 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 difeafe, without regarding any particular intention, or curative indication. To exemplify this: mercury and farfaparilla are usually reckon'd fpecifics 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 has prov'd a cure without caufing a falivation. and far faparilla without raising a fweat. (p) For other diseases are cur'd in the same way by other evacuations. and nevertheless the medicines exhibited for this purpose do no more immediately contribute to the cure of the difeafes that yield to those evacuations, which these medicines are principally defign'd to promote, than a lancet does towards the cure of a pleurify; which no body, I imagine, will call a specific in this disorder.

- 24. Specific medicines, therefore, confider'd in our More might limited fense of them here deliver'd, are allotted but to be discoverfew persons, and are not to be discover'd without much ed by taking - application, and yet I am well perfuaded that nature, due pains. by the appointment of providence, abounds with fuch remedies for the preservation of mankind, who hath likewife provided that the principal difeases we are subject to should be cur'd, and that by fuch medicines as are within reach, and the produce of every climate. It is indeed pity that we are not better acquainted with Amisforthe virtues of plants, which I esteem the best part of tune that the materia medica, and most likely to afford fuch me- the virtues dicines as we have just treated of. For the parts of ani- are not betmals should feem to refemble the human body too near- ter known. ly, and minerals to differ too much therefrom; 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

(p) I see no just reason for excluding from the number of specific medicines, mercury, as a cure for the venereal difeafe, milk in one stage of a consumption, opium in pains, soap in some kinds of the jaundice and the stone, the setid gums in some hysteric diforders, nor oil in the bite of a viper; fince they all feem 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 surprising number or 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

fludy and experience.

the fense and manner above-mentioned. For my own part, I can only fay that I have fpent fome years in refearches of this kind, yet without fucceeding well enough to encourage me to communicate the refult of my enquiries. (q)

Other excellens medicines besides plants.

25. But the' I esteem plants most, yet I would not decry those excellent medicines, the productions of a different kingdom, that have been discover'd by the application of our predeceffors, 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)

26. To conclude: having engag'd myself in this preface, to publish a specimen of my labours for the publishes a preface, to publish a speciment of will now endeavour to ful-history of a improvement of physick, I will now endeavour to ful-fil

The author cute disea-

> (q) There does not feem to be fo much reason for this complaint now as there might be in our author's time, much pains having been taken of late years by feveral skilful persons, both in the way of analytis and experiment, in order to discover and settle their virtues upon a furer 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 confiderable improvements, inafmuch as the prescriber would not be at a loss to chuse in so small a number, and be abundantly better fatisfied 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 this may be added, that plants and simple medicines have great advantages over compounds : thus they are more fafe and certain than the latter, and we are feldomer deceiv'd in them, because they cannot be fo readily adulterated, and may be given in fubstance, or require only a few easy operations to fit them for ule; whereas the best compounds are often spoil'd by unskilful prepa-

> (r) The medicine that goes under this name is an highly volatile oleous alcaline spirit, drawn from dead filk-worms and their remains, and extoli'd for giving relief in convultions from acidities,

or worms: but the present practice takes no notice of it.

fil my promife, by prefenting the publick with the hiftory and cure of acute difeafes. And tho' in executing this defign, I am fenfible I shall expose the fruit of my labours for the best part of my life to the lazy 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; knowing 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 it be objected here, that there are those no The author less vers'd in practice than I am, who are of a different only solliciopinion; I answer, that 'tis none of my business to blish his enquire into what other persons think, but to establish own obsermy own observations; in order to which, I ask no fayour of the reader, but to peruse my writings with

(s) Our author, however well he deferv'd of mankind, should feem to have had but too much reason to apprehend that his laudable endeavours to ferve them, instead of procuring him their efreem 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 elfe but cenfure and contumely from an ingrateful world, in return for his generous and honest labours; and 'cis to be fear'd he was not disappointed in the iffue. See pag. 110. par. 40. pag. 272. par. 3. pag. 414. par. 140. pag. 416 0 493.

But what the malice, envy, and prejudice of fome of his cotemporaries refus'd him living, has been abundantly made up to him fince his death; for no one, the great Hippogrates himfelf not excepted, ever flood poffes'd of a fairer reputation than he has fince enjoy'd, and still bears. His judgment, integrity and candour are univerfally 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 honourable titles, and to fum 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 prophecy I may venture to foretel that our succesfors will do the fame, 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 perfued.

(4) See 1480 x85, migs (b).

## The Author's preface.

temper: 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 sellow creatures after my decease. (t) I only beg pardon for having delivered 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 hereaster, that I have here executed imperfectly.

Gives few particular observations to avoid swelling the work.

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.

and only a few preferiptions. 29. Whoever expects to meet with abundance of prescriptions will be disappointed; it being left to the 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 fimplicity of the medicines he recommends.

30. But if it be objected, that in some cases I have not only rejected the pompous part of prescription; but have likewise recommended such medicines, as on

account

account of their fimplicity, have little or no affinity to the materia medica: I answer, that I conceive that none but the vulgar will be offended at this procedure; for the judicious are fenfible that all things are valuable that are ferviceable. Thus Hippocrates in advising the use of bellows in the iliac passion, and nothing for a cancer, and the like, as appears in almost every page of his writings, is esteemed as able a physician, as if he had filled his works with pompous prescriptions.

31. I intended also to treat of chronic diseases, at Intended to least of those I was best acquainted with, but as this chronic will be a work of labour, and being desirous likewise to diseases. know how these sheets are receiv'd, I shall defer the profecution of it to fome other time. (u)

(x) The author, however, feems to have done this in a fummary way in his processus integri, here first annex'd to his other works; a very few chronic diftempers having escaped his notice, as will appear upon turning over this incomparable piece.

The Mucho's treface. illyx account of their firm history have brille or no efficient to the married medicar I and out that I concern that none but the rulear will be solvened at this spaceture; for the tions, is characterable a circle and action but hat but erhanner of territory in the rest of the farment I do To still to god office touckup as lost and I still beaugat -male at plantable with a property of the second of the and the representation of the property plan.

# SECT. I. CHAP. I.

## Of acute Diseases in general.

DISEASE, in my opinion, how prejudi- Diseases des cial foever its causes may be to the body, is fined. 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 diforders, which arise (1) either from such particles of the air, as having Their a difagreement with the juices, infinuate themselves causes. 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 in the body, for want of its being able to digeft, and discharge them, on account of their too large bulk, or unfuitable nature.

2. Thefe

(a) See the term Nature explain'd, Sest. II. Chap. II. Par. 48. (b) In order justly to define a difease in general, it should be first known what health is; a morbid state of the body being correlative to a found one. Now if health may be faid to confift "in a free and regular circulation, a just mixture and pro-"portion of the blood and juices, the due tone and motion of the folids, and a perfect exercise of the vital and animal functions", then a disease may be defin'd, "a considerable alteration in the motion, mixture, or quantity of the fluids, a too great tension, or relaxation, and consequently a too accelerated " or languid motion of the folids, affecting the whole body, or only " fome parts thereof, join'd with a remarkable diforder of the " fecretions, excretions, vital and animal functions, and tending either to recovery, death, or a depravation of 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 con-fists, namely, in a depravation 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.

ptoms.

with our constitutions that no man can be entirely free from them, Nature provides fuch a method, and train Their sym- of symptoms, as may expel the peccant matter that would otherwise destroy the human fabric. this end would be more frequently obtained by these difagreeable 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)

Mustration.

3. A little to exemplify this doctrine : What is the plague but a complication of fymptoms to throw out the morbific particles (taken in with the air we breathe) through the proper emunctories, by way of external abscefs, 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 receffes of the body? And the fame may be faid of many other diseases, when they are perfectly formed. (d)

4. But Nature performs this office, quicker or flower, according to the different methods made use of to expel the morbific cause. For when a sever is requir'd to loofen the morbid particles from the blood, to promote their feparation, and at length discharge them by sweat, a loofeness, 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 fudden, (according as Nature can conquer the morbific matter by a crifis,

Acute diseases, whence.

> (c) Constat, aterna positumque lege est, BOETIUS. Conftet ut genitum nihil.

(d) Nothing is more evident than that the body is a living machine, fo form'd 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 its the business of physicians to discover from observation, the several ways leading to these contrary ends, in the feveral diforders 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 effensive, sometimes fall short of this; and at others are so violent as to end in exhaustion and death. Accordingly the physician ought, in fome cases, to give emetics or purgatives, and in others opiates, as experience, with the reasoning resulting from it, shall direct.

or is forc'd to fubmit) and that these efforts must be Chap. 1. joined with violent and dangerous fymptoms. 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 esteem'd acute, which, with respect to their fits taken together, go on flowly, but with respect to a fingle fit, are soon terminated critically, of which kind are all intermittent fevers.

5. But where the matter of the difease is such that it cannot raise the allistance of a fever, for its thorough Chronic discharge, or is fix'd upon a particular part too weak diseaser; to expel it, either on account of the peculiar structure of that part, (as in the palfy, where the morbific matter is fix'd in the nerves, and an empyema, where it is discharged into the cavity of the breast) or through a want of natural heat and fpirits, (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 vigogorous endeavours to throw it off, overpowers and oppresses the part affected (e); in all these cases, the matter is flowly brought to concoction, or not at all; and therefore diseases proceeding from such indigestible matter, are what we properly term chronic. from these two contrary principles, acute and chronic difeases respectively arise.

6. As to acute difeases, of which I now design to treat, fome of them proceed from a latent and inexplicable alteration of the air, infecting the bodies of pidemical men; and not from any peculiar state or disposition of diseases. 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.

7. There are other acute difeases, arising from some peculiar indisposition of particular persons; but as these Intercurdo not depend upon a general cause, sew are seiz'd with rent, or them at once. These also appear in all years, and at sporadic any time of the year indifferently, some exceptions ad- ealer. mitted, which I shall hereafter mention, in treating of this kind particularly. Thefe I call intercurrent,

The causes

Of epidemic Diseases.

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.

I. IF one were to examine all the branches of phylic, I nothing, perhaps, would appear fo furprizing as the diseases dif- different, and perfectly dissimilar face of epidemic diffor surprize eases; which do not so much relate to, and depend upon the various feafons of the fame year, as upon the

different constitutions of different years.

require a different treatment.

ingly;

2. And this manifest diversity of these diseases still farther appears, not only from their proper and peculiar fymptoms, 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 fymptoms in common, are, in reality, of very different and dif-Whether a careful examination, fuch fimilar natures. as, perhaps, could not be well made in the life of one man, might shew, that certain tribes of epidemic diforders constantly follow others in one determined feries, or circle, as it were; or whether they all return indifcriminately, and without any order, according to the fecret disposition of the air, and the inexplicable fuccession of seasons, I am not certain.

3. This, however, I am convinc'd of from numerous careful observations, 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 fpecies of fevers, fuitably to its nature, I always prov'd fuccefsful (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 notwithflanding the utmost caution, could scarce ever preserve one or two of my first patients from danger, till I had thoroughly investigated the nature of the di-

stemper,

Remper, and then I proceeded in a direct, and fafer Chap.2.

way to the cure.

4. And tho' I have carefully observed the different constitutions of different years, as to the manifest qualities of the air, in order from thence to discover the causes of the fo great diffimilitude of epidemic difeafes; 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 feems to ftand 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 fecret and inexplicable alteration in the bowels of the earth, whence the air becomes impregnated with fuch kinds of effluvia, as fubject the human body to particular diffempers fo 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 Stationary never appears in any other; and therefore I call this fevers de-

kind of fevers stationary.

6. There are also certain particular constitutions of the fame year, in which, tho' fuch 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 rife either earlier or later; yet the fevers that appear in all years (which we therefore call intercurrents) do proceed from fome one or other manifest quality of the air; for instance, pleurifies, quinfies, and the like; which generally happen when an intense and long continued-cold is immediately fucceeded by a fudden heat. It may there- not produc'd fore be, that the fensible qualities of the air have some by the mathare in producing those intercurrent fevers which ap- nifest quapear in every constitution of the atmosphere, but they air. do not cause the epidemics peculiar to the general constitution. And yet, at the same time, it must be acknowledged that the abovemention'd qualities of the air may more or less dispose the body to the particular epidemic difease; and the same may be affirmed of any error in the non-naturals.

Sect. i.

Others irregular.

7. Now it must be observed that some epidemic diseafes, in fome years, are uniformly and constantly the fame, appearing in almost every patient with the same Some epide- train of fymptoms, and going off in the fame manmics regu- ner. And from this kind, as the most perfect, the genuine history of epidemic diseases is to be taken.

8. On the contrary, in other years there are other diffempers, which, tho' called epidemic, prove very irregular and diffimilar, as having no one fixt form, or constant appearance, but are extremely irregular, both as to the variety and diffimilarity of the symptoms, and the manner in which they proceed and go off. This great variety in epidemics happens from hence, that every conftitution produces difeases confiderably differing from those of the same kind, that prevailed in other conflitutions, at another time; which not only holds true of fevers, but of most other epidemic dif-

o. Nor is this all; for there is another fubtilty of nature still behind, viz. that the fame difease, in the very fame conftitution of the year, frequently appears in a various and diffimilar manner, as to the time of its beginning, flate and declenfion; which is an observation of such consequence as to regulate the indications of cure.

Epidemics, either vertumnal.

ones.

10. Again, it must be observed, that all epidemics are of two forts, viz. vernal and autumnal, and tho" nal or au- 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 fometimes the temperature of the air conspires so much with an epidemic difease, as to produce it before its time; and, on the other hand, it fometimes opposes it fo much, as to make it appear later, even in perfons disposed to receive it. When therefore I shall mention foring or autumn, I do not precifely mean the vernal or autumnal equinox, but take in a wider compass.

11. Some vernal epidemics appear early, as in Janua-The course of ry, and thence gradually increasing, come to their state some vernal about the vernal equinox; after which they gradually decrease, and at length disappear about the fummer folitice, except, perhaps, in a very few fingle inftances. Of this kind I reckon the meafles, and vernal tertians, which, tho' they rife fomewhat later, as in February,

do

do likewise disappear near the summer solstice. Whilst Chap. 2. others, rifing in the fpring, 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 fmall-pox, in those years when either of them is

the principal difease of the year.

12. The cholera morbus, which is of the number of autumnal epidemics, rifes in August, and finishes its The diffecourse in a month; tho' there are other diseases which tion of auarife at the fame time, and run on to the winter; as tumnal eautumnal dysenteries, tertians and quartans; all which, pidemics. however, notwithstanding the longer or shorter space they fometimes affect a few particulars, generally ceafe in two months.

13. As to fevers in particular, it must be observed that the greatest part of them, which are of the con- epidemic fetinued kind, have hitherto no names affign'd them, as vers whence they depend upon the influence of a general constitu- to be takens tion or state of the air; but the names whereby they are diftinguished are derived from some remarkable alteration made in the blood, or fome other apparent fymptom; whence they are called putrid, malignant, petechial, &c. But as almost every constitution, besides the fevers it produces, eminently favours some remarkable epidemic difease; as the plague, small-pox, dysentery, &c. I should think that these severs ought to derive their names from the constitution, as this tends more peculiarly to produce fome one of these remarkable diffempers, at the time they appear, rather than from any alteration of the blood, or particular fymptom; both which may equally accompany fevers of

different kinds. 14. Intermittents, indeed, derive their names from Intermitthe interval of two fits, and by this mark are sufficient- tents, how ly distinguished, provided regard be had to the two di- distinguishvilions of the year wherein they happen, viz. fpring and autumn. And yet fometimes fevers are of the true nature of intermittents, without any visible fign to difcover them by. So when autumnal intermittents en- Autumnal ter and appear early, as in July, they do not prefently ones someassume their genuine form, as vernal intermittents ge- pear ascons nerally do, but so far resemble continued fevers in all tinuals. respects, as not to be distinguished, without a very

A 4

Names of

Sect. r. firict examination. But, at length, when the force of the prevailing conftitution is a little weakened, they appear more genuine, and at the close of autumn, quitting their difguife, 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, phyficians will be deceiv'd to the difadvantage of their patients, by taking fuch kinds of intermittents for true continued fevers.

Some one (ually prevails over the reft,

to the nature of which the rest approach.

Instanc'd in the smallpox, and dyfenteries.

15. Again, it must be carefully remarked, that as epidemic u- many of these diseases appear in the same year, some one or other of them rules over the reft, which rage lefs at the fame time; fo 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 fenfible qualities of the air; and that diftemper which rages most violently about the autumnal equinox, gives its name to the constitution of the whole year; for whatever diftemper then prevails over the reft, will eafily be found to prefide over them during that year; and to the disposition thereof all the then reigning epidemics accommodate themselves, so far as their nature

> 16. Thus, for example; when the fmall-pox prevails much, the fever of that year, which is less general, plainly partakes of the fame inflammatory nature therewith; fo that both diftempers begin after the fame manner, and are attended with a great fimilarity of the most peculiar symptoms, as manifestly appears from the great tendency to fpontaneous fweats, and the difcharge of Saliva in both; and they only differ in the eruption of the puftules, and whatever depends thereon. Again, when dyfenteries are the principal raging difease of the year, the sever of the same year bears great. refemblance to their nature; excepting only that in a dysentery the morbific matter is discharg'd by stool, with a few fymptoms thereon depending. For they both attack in the fame manner, and in both cases Aphtha, and the like fymptoms, are equally apt to appear. And indeed the dyfentery 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

17. But it must be remark'd, that this principal e- Chap. 2. pidemic which rages about the autumnal equinox, tho' it may then lay all waste before it, is check'd upon the coming in of winter; whilft, on the contrary, the Prevailing

lower class of epidemics, subservient, as it were, to epidemic that principal one, now chiefly rage, till the faid reign- check'd by ing distemper of the year again prevails, breaks their the coming in of winter.

force, and abolishes their very name.

18. Laftly, it must be observ'd, that whenever any constitution produces various species of epidemics, all these species differ in kind from those which have the fame name, but are produced in another conftitution. But how many peculiar species soever arise in one and the fame conflitution, they all agree in being produced All epideby one common general cause, viz. some peculiar state mics of one of the air; and confequently how much foever they produced by may differ from one another in appearance, and specific one common nature, yet the constitution common to them all works general upon the fubject-matter of each, and moulds it to fuch 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 fame time. 'Tis further to be noted, that in whatever years these several species prevail at one and the fame time, the fymptoms wherewith they come on are alike in all.

19. Hence we may fee how very various and fubtile a method nature uses in producing diseases, which no of fevers one, I conceive, has hitherto traced in proportion to whence to the dignity of the subject. And it appears, from this be derived. thort account, that as the specific differences of epidemic differences, especially severs, depend upon the fecret constitution of the air (a), that those persons la-

(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 mentioned 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, falts, 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 difeases that may arise for the suture, provided due attention be given at the dame time to the age, fex, constitution, manner of living,

Sect. 1. 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 difease rages, he might in a few days be feiz'd with it, tho' it is fcarce credible that any manifest alteration should be made by the air in the juices of the same person, in so short a time (b).

20. Nor is it less difficult to lay down general rules lay down a for the cure of these severs, or to fix certain limits for general me- practice. Under fo much darkness and ignorance, shedof cure. therefore, my chief care, as foon as any new fever arifes, is to wait a little, and proceed very flowly, 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; fo as foon to embrace the one, and reject the other (c).

> Orc. of the patient; all which circumstances being carefully confidered, and compared together, might probably direct to ratio

onal, fix'd, and effectual methods of cure.

The profecution of this subject by experiment, and not by way of conjecture, or hypothesis, is surely worthy the notice of all fuch as have leifure and abilities for the undertaking; fince very confiderable advantages will accrue to mankind, when once a hiftory of this fort 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 Hale's statical Experiments, and Huxham de aere et morb. epid.

(b) There is a possibility that persons, seemingly in persect health, may have the principles, or femen, of some disease, actu-ally existing, but lying dormant in the juices; in which case the disease cannot be said to be produced, or caused, but only stirred into action by the secret constitution of the air. Is not this verified in many instances of persons seized with the small pox, oc. ? If fo, the morbific matter collected in the body, how little foever it be in quantity, may fometimes principally contribute to the production of fome 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 deferve a ferious difpute.

(c) Might not a due regard to the preceding and the then reigning manifest temperature of the air, the manner of living, conflitution, age and fex of the patient, together with a ffrict attention to the first symptoms of any epidemic fever, enable the phyfician to proceed with greater certainty in the method of curse

than our author feems to judge poslible?

21. In short, to reduce all the species of epide- Chap. 2. mics into classes, according to the variety of their appearances, to explain their peculiar figns, and point out the proper method of cure for each, is a very dif-ficult task, and requires much time; and as they arise not easily in no stated order of years, (at least this is not yet disco- class'd and ver'd) to procure a just collection of observations about explain'd. 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 faid we have done any thing confiderable towards discovering the intricacy

of these disorders. 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 Best distinfame kind for a fingle year, or fome certain feries of guilhed by years; but in another year differ from each other spe- describing cifically? 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 prefent, 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 feems to me impossible to do any thing to this purpose, by endeavouring to affign 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 fecret influence of the air. And it would be ftill more impossible to fet down the species of various epidemics, as arifing from some specific alteration of the air, however easy this might feem 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, whilft we do not follow nature, which is always the best guide, but indulge ourselves the liberty of conjecture, we might make as many species of diseases as we please; tho' at the same time we take such a liberty as no one would eafily 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

Sect. 1. at conjecture, however excellent he might be therein. 23. I prefume 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 difeafes 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 affiftance of a few years observations, how this matter flood lately with respect to my own country, and the city wherein I live; in order to affift in beginning a work that, in my judgment, will greatly tend to the advantage of mankind, when, at length, it shall be finish'd by posterity, and the whole series of epidemics be exhibited to view, as they shall succeed each other for the future (d).

CHAP.

(d) There are many particulars in this fecond chapter, which feem rather fuited 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 disserent natures. But that epidemics are not considerably influenced 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 confiders the remarkable alterations the air frequently fuffers in point of gravity, elasticity, heat, cold, dryneis and moisture, together with the infinite diversity of its contents, which are likewise perpetually varying, will, doubtless, conclude that the feveral epidemics, arifing at the fame 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 fymptoms, compared with the age, constitution, &c. of the patient; and not, as the author feems to intimate, that the fame different, 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 nofologicum, Huxham's observations de aere et morbis epidemicis, and the edition of our author's works printed at Geneva in 4to. 1716. to which is added a number of treatises on various epidemic distempers, and constitutions of the air, by different authors.

### H A P.

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

I. HE autumnal intermittent fevers which had The tertian with new force in the year 1661, especially a bad kind fitution des of tertian, about the beginning of July, which continually increas'd, fo as to prove extremely violent in August, seizing almost whole families in many places with great devastation; after which it gradually decreafed upon the coming on of the winter, fo as to appear feldom in the month of October. The fymptoms that attended these tertians differed from those of the intermitting tertians of other years, chiefly in the following particulars: (1) the fit was more fevere; (2) the tongue more black and dry; (3) the intermiffion between the fits more obscure; (4) the loss of strength and appetite greater; (5) a greater tendency to a double fit; (6) all the concomitants in fhort more violent; (7) and the disease itself more mortal than intermitting fevers usually are; (8) when it happened in perfons aged, or of a bad habit of body, where, befides, either bleeding or any other evacuations had diminished the strength, it would continue for two or three months.

2. A few quartans accompanied these tertians, but followed by both of them went off upon the first coming on of a continual winter, (for they feized upon none that were unaffected fever, 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 fame manner, and those that were violently attack'd with either had a vomiting, dryness of the external parts, thirst, and blackness of the tongue: fweats alfo, towards the end of the diftemper, readily difcharged the morbific matter in both cases.

3. And it may even from hence appear that this fever refembling belonged to the class of autumnal intermittents, be- the foregocause it very rarely shewed itself in the spring.

This ing inter-

con-

Sect. 1. continued fever, therefore, appear'd to me a kind of compendium of the intermittent; as, on the other hand, each fingle fit of the intermittent was a kind of compendium of the continued fever. The difference between them confifted 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 am not able to fay, having been hitherto sufficiently employed in observing the general symptoms of fevers, and not yet finding that fevers might be diffinguished, with regard to the various constitutions of different years, or the different feafons of the fame year. This, however, I can fay, that there was only one species of continued fevers to the year 1665, and that the autumnal intermittents, which were frequent to that year, ap-

fever from 1661 to 65. peared afterwards very rarely.

The order of the epide-

Only one Species of a

continued

5. The above-mention'd tertian fever, which fpread very wide in 1661, as was faid above, contractmies of this ed itself in the succeeding year; for in the following constitution. 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 fpring, when vernal intermittents fucceeded, which also going off at the beginning of May, the small-pox appeared a little, but difappeared 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 diftempers of this constitution.

6. I begin with this continued fever, which appears to me of a more capital kind than any of the reft; becaufe 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 fuch as

produce

This continued fever, of a capital kind;

produce other epidemics, it follows that the continu- Chap. 4. ed fever attending intermittents occurs oftener than any other continued fever.

7. Besides the symptoms which accompanied other ner than fevers, the present fever had these in particular; viz. (1) a great faintness, (2) vomiting, (3) a dry and black tongue, (4) great and fudden loss of strength, (5) a dryness of the external parts, (6) the urine constantly Its symeither turbid or thin, both of them here equally figns proms. of crudity, (7) a looseness in the decline, unless the phyfician 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 fweat, or rather a gentle moisture; (9) nor did any proper figns of concoction appear before in the urine; but at this time there generally did.

8. Other fymptoms also arose when this distemper was unskilfully treated; however, as not only these, but the nature of the diftemper 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: tho' at that time I was not aware of there

being any other species of fever in nature.

Occurs oft-

### H A P. IV.

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

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

2. And here I rather chuse to make use of the gene- The term ral word commotion, than fermentation or ebullition; in commotion .

order 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 ancients, and first by them, from some fancied harmony between numbers and the continuance of fevers?

to fermen-

bullition.

Sect. 1. order to prevent all fruitless disputes about words, that might arise from the use of those, which, tho' they may feem harsh and metaphorical to some, are capable of a tation or e. commodious interpretation. For the' the commotion of the blood in fevers does at different times refemble 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, fay they, fermenting liquors acquire a vinous nature, fo 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 fame 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 folution of a fever-fit by fweat.

Ebullition esteem'd the improperest term.

3. As to ebullition, this analogy, they fay, is still more harsh, and, in many cases, contrary to experience, where the commotion of the blood is too gentle to deferve the title of ebullition. But not to engage in these controversies; fince the terms fermentation and ebullition have prevailed among the modern phylicians, I likewife have not fcrupled to use them occasionally, meaning only to convey my thoughts more eafily thereby. Moreover, that this febrile commotion of the blood is raifed 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 feized with a fever; for fevers frequently appear in healthy bodies, where there was before

(a) In eruptive fevers the diforders of the pulse go off entirely, or abate very much upon a free eruption; and in the fmall-pox the matter deposited in the pustules becomes infectious after a time. It feems 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.

fore no previous indisposition; either from a plethora, Chap.4. cachexy, or tainted air, that could give rife thereto. Yet even in these cases, upon some remarkable preceding change of the air, diet, and others of the non-naturals a fever prefently 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 fome parts of our food should become corrupt and fetid, after having undergone a remarkable alteration in the body, and fuffered a separation from the rest (c).

5. With regard to this difeafe, I judge that the The comgenuine indications are, to keep the commotion of the motion of blood within fuch bounds as fuit the defign of nature; be duly refo as to prevent its rifing too high on the one fide, gulated, whence dangerous fymptoms might follow, or finking too low on the other, whereby either the exclusion of the morbific matter might be hindered, or the endeayour 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 diftemper will, in either case, be the same: And upon this foundation I

(b) This does no ways 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 advance-ment 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 it is in effect no more than a plaufible way of talking, and of gratifying the reftless 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.

Bleeding where prejudicial;

Sect. 1. proceed to the cure in the following manner (d). 6. When the blood is weak (e), as it generally is in children, or wants its due proportion of spirits (f), as in declining age (g), or even in young persons worn out by a lingering illness, I refrain from bleeding: Otherwife 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 hafty 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 ftrongly tend to taint the rest of the juices. I am well aware, however, that where bleeding has been imprudently us'd, the patient may be fometimes faved 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 ferviceable.

7. When the blood happens to be of a contrary dif-

(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 fee presently, by the symptoms. But why then could not the practice be requiated 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; fince so excellent a practitioner, and so protessed an enemy to theory, could not forbear entangling his practice with an hypothelis, which is rather a figurative description, than an explicit detail of the steps which he supposes nature to take, and for which he has produc'd no folid authority from facts.

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

an appeal to experience.

(f) This again, I prefume, can never be made out to the fenfes. (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 fatisfactory 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 sluids, than in robust and grown persons; neither do their relaxed vessels compress the sluids so strongly, and turn them into red blood so fast. They cannot, therefore, support the loss of red blood so position, as it usually is in young persons of a strong Chap. 4. and fanguine 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, phrenfies, and the like diforders 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).

8. As to the proportion, I usually take away no In what more than I conceive may prevent those inconveniencies, proportion which, as we faid above, might proceed from an im- to be used. moderate 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 warming cordials, and lastly by the use of laxatives or aftringents, as I observe the commotion to pre-

vail or languish.

9. After bleeding, where it was necessary, I careful- A vomit, ly enquire whether the patient has had any vomiting or where neretching at the beginning of the fever; and if he has, ceffary, and I order an emetic, unless the tender age, or some remarkable weakness, of the patient should contra-indicate. Where a retching has preceded, a vomit is fo necessary, that unless the humour be expelled, it produces feveral other different fymptoms, not eafy to be removed in the course of the cure, and highly dangerous to the patient. The principal and most common A loofeness of these is a looseness, which generally happens in the happens, if decline of the fever, if emetics were omitted when not given they were indicated; for in the progress of the different when rethey were indicated; for in the progress of the distemper, quired. 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, fo corrodes the intestines, that a looseness must

necessarily

(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 fee by the few confequent ones that are nam'd.

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

Sect. 1.

But not alvers.

Danger of the loofene s.

necessarily follow (k). I have however observed in such inflammatory fevers, as are commonly called malignant, that tho' a vomit has been omitted, when retchings at ways in ma- first appeared, yet a diarrhœa does not necessarily follignant fe- low, as it did in the prefent: But more of this hereafter (1).

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

Generally vomit.

11. What makes it still plainer, that this humour check'd by a lodged in the stomach, if not discharged by a vomit, may bring on a loofeness afterwards, is, that, upon examination, we fcarce find any inftance of a loofeness attending this fever, but where the patient was apt to vomit at the beginning, and an emetic was not given(m): as, on the other hand, tho' this inclination to vomit be over, yet the loofeness generally stops upon giving a vomit, provided the patient be ftrong enough to bear it: and I have frequently observed, that upon the coming on of a loofeness in this case, astringents, either internally or externally given, have very little, if any force in stopping it (n).

12. The emetic I generally us'd was of this kind.

draught.

Aftringents

ffectual.

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

vomits require plen-

I directed it to be given in the afternoon, two hours after a light dinner; and to make it work the fafer and Antimonial better, ordered three quarts or a gallon of poffet-drink to be in readiness, because this kind of emetic is dantiful ailuti. gerous 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

> (k) This is certainly a fufficient reason for a vomit, but as strong a one, at least, for a gentle purge.

(1) See below, Par. 11, 50, 51.

(m) This is an inftance of the practical reasoning.
 (n) These positions are abundantly confirmed by experience.

griping was prevented, and the vomiting rendered more Chap. 4.

eafy (o).

13. When I have fometimes happened carefully to Vomiting examine the matter here thrown up by vomit, and of admirafound it neither confiderable in bulk, nor of any re- ble service. markable bad quality, I have been furprized how it fhould happen that the patient has been fo much relieved thereby: for as foon as the operation was over, the fevere symptoms, viz. the nausea, anxiety, restleshess, deep fighing, blackness of the tongue, &c. usually abated, and went off, so as to leave the remainder of the difease tolerable (p).

14. We should not omit, that if the state of the Bleeding to patient requires both bleeding and vomiting, it is fafeft be first us'd, to bleed first, and give the vomit afterwards; otherwise if also rethere would be danger that, whilft the blood-veffels are quir'd. greatly diffended, 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 fome inflances, if it were proper,

but my defign is only to caution (q).

15. As to the time of giving a vomit, I would have Avomit. it done at the beginning of the fever, if possible, in when to be order to prevent those terrible symptoms arising from a given.

collection

(a) 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.

(p) The difficulty our author lies under here, in accounting for the relief obtained by a vomit, feems to proceed, either from his having not known, or not fufficiently confidered the good effects vomits produce beyond the prime via, by the confiderable shock they give to all the parts. As to the discharge being small, that almost always happens, in case a surfeit has not preceded from overloading the stomach with folid 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 furprifingly minute portion of morbid matter of a certain kind, as is manifest in several epidemic diseases. And indeed our author affures us, and daily experience confirms it, that perfons, apparently in good health, may be feized with distempers, according as the latent or sensible qualities of the air are dispos'd to taint their juices, and these, on the other side, are fitted to receive the infection. See Sect. I. Chap. II. Par. 19, and Chap. III. Par. 4.

(q) This is an extremely useful caution, and appears to have been derived from observation, whence all our reasonings in phy-

fic, to make them truly advantageous, should be drawn.

Vomiting not to be Stopped un-[ea]onably in the cho. lera morbus.

Sect. 1. collection of humours in the stomach, and parts adjacent; and thus, perhaps, the distemper may be crush'd in its infancy, 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 unfeatonably endeavour to stop the vomiting, whether by laudanum, or aftringents, and the attempt fucceeds, we fometimes bring on a no lefs dangerous train of fymptoms. For the acrimonious and corrupt humours, which ought in fome meafure to be discharged, being by this means detained, exert their force upon the blood, and raife a fever, which usually proves of a bad kind, and is accompanied with dangerous fymptoms, fo as fcarcely to be removed without giving a vomit, even tho' the patient has then no tendency to fuch an evacuation.

16. But if, as it frequently happens, the physician is called fo 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 diftemper, provided the patient is not too weak to bear it (r). I have fuccessfully ordered an emetic on the twelfth day of the diftemper, even tho' the fpontaneous retchings were over; and by this means have ftopp'd the loofeness that hindered the blood from finishing its depuration, and I should not scruple attempting the same later, if the strength

of the patient permitted (s).

An opiate to be given in the eveming.

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

A quieting draught.

Take of the distill'd water of red poppies, two ounces, Aqua mirabilis, two drams, fyrup of white and red poppies, each half an ounce: mix the whole for a draught(t). 18. But

(r) And where a particular symptom requir'd, as appears by what follows. (s) See below, Par. 51.

(t) The opiate here ordered is indeed gentle, but the reasons here given are not very fatisfactory, 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 bliftering; and without these helps, opiates often fail.

18. But if there be no danger of raifing too great an Chap.4. effervescence in future, either on account (1) of plentiful bleeding, used in the course of the cure, (2) fre- Or a large quent vomiting or purging upon the use of an emetic, dose of di-(3) the prefent disappearance of the fever, (4) its ascordium. mildness, or (5) its natural decline; then instead of the draught above fet down, I give, without apprehenfion, a fufficiently large dofe of diafcordium, either alone, or mixed with fome cordial water: and this is an excellent medicine, provided it be given in fuitable

quantity (t).

19. Under the article of vomits, we should not Vinum beomit to observe that it is by no means safe, at least in nedictum this fever, to give fuch as are made with the infusion of unsafe in children crocus metallorum, even in the smallest quantity, to chil- under 14. dren 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 fo fufficiently efficacious, as thoroughly to discharge the humour, which in the decline of this sever generally brings on a loofeness; or at least were possessed of fome proper remedy for changing (u) or diffolving this corrofive matter, and blunting its force, fo 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 confequence (w): but in grown persons I have hitherto found no ill effect from it, provided it were given with the cautions abovementioned (x).

20. When

(t) It may be questioned whether the cases here described be not those in which the fever is overcome, and by consequence where good nurfing is fufficient, especially with the addition of almost any cordial. If so, disacordium is the worse in this case for the opium it contains, wherein, however, its efficacy should chiefly feem to confift; for opium is apt to pall the stomach, and fink the spirits. And most persons fall into a found sleep naturally when the fever is gone, and this is much more refreshing than that procured by opiates. A grateful wine feems here a better opiate than any thing, if used moderately.

(u) Testaceous powders seem to answer this purpose very well. (w) Surely the author knew the fafe emetic virtue of oxymel of fquills, which he has prescribed in this very vomit; tho' he was unacquainted with the ipecacuanha, and the fafe ways of giving (x) See above, Par. 12. tartar emetic to children.

The continued Fever

24

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

(1) Whether, notwithstanding the preceding evacuations, the blood may not still hurry on fo 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 fuch a proper state, or degree, as that it may be fafely left to itfelf.

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

21. (1) If the blood hurries on fo fast, as to give a just fuspicion of a delirium, or other bad symptom A glyster to coming on, the day after the emetic I generally prebe given oc- fcribe a glyfter.

casionally.

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

This glyfter I order to be repeated occasionally, by which means the blood is often to refreshed and cooled, as sufficiently to check its effervescence. It sometimes likewife becomes necessary to repeat bleeding once or twice; as particularly in persons of a very sanguine constitution, and in the prime of life, or fuch 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 glyfters may fuffice to check the effervescence except in the case just now mentioned. If therefore the effervescence of the blood be too high, I order a glyfter to be injected, either every day, or every other day, as the cafe requires, and this I continue to do till about the 10th day of the distemper (z).

(y) 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 he uses the words fermentation and effervescence, rather as words commonly used, than as having any precise meaning in fevers.

(z) This practice of giving glyfters is certainly very good; but a purge, stronger, or weaker, according to the violence of the symptoms, their particular nature, and the strength of the patient, is, in general, greatly to be preserred. For the heat of a sever renders the contents of the intestines very setid and acrimonious, the fecretions 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 the bleeding cools and relieves more immediately than purging, yet purging does it in a very lasting manner, and disposes to quiet natural sleep.

22. But when a large quantity of blood has been Chap. 4. 'taken away, or the patient is in years, I at this time order no glyfter, tho' the effervescence of the blood Cautions reshould be confiderable: for, in these cases, as we need lating to not fear its rifing so high, without the use of glysters, glysters. as to bring on any great and dangerous symptoms (a); fo, on the other fide, it is certain that the strength and texture of the blood may be so impaired and relaxed by the use of them, as thus to disturb and hinder the procedure of nature, especially if the patient be in years; for glyfters do not succeed so well in the old as the young. But if only little blood has been taken away, then, as was faid before, I continue the use of glysters to about the 10th, and sometimes to the 12th day (b); as particularly when I durst not bleed at all. For fome persons are seized with a continued sever, after an autumnal intermittent, whether tertian or quartan, from a want of purging at the close of the preceding diftemper; and if blood fhould 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 fuch cases, I continue to use glysters to the 12th day, if the patient be young, and the fermentation too violent (c).

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 sermentation, 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 sermentation of wine, before the despumation

was

(a) This is contradicted by practice, and here his theory feems to have missed him. There are many bad febrile symptoms with

a weak pulse.

(b) Surely the procedure here ought to be regulated by the state of the symptoms, not the days, and the symptoms parti-

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

Sect. 1. 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 (d).

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 sebrile 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 sever go off before its due time, or should have arrived at its full period, I not only refrain from the use of glysters, but also call in the affi-

stance of cordials, and directly endeavour to prevent a purging (e).

Cordials when to be given. 25. Cordials, as I have experienced, when given too foon, 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 therefore 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. 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 fort (f).

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 sever; and on the 12th day, when the business of separation is at hand, I judge a freer use of

the

(d) 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.

<sup>(</sup>e) 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.

(f) This direction is very just.

the hotter remedies allowable; and they might be given Chap. 4. 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 bufiness of con-

coction is promoted (f).

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 diftemper, tho' at the fame time they order only such medicines as may moderate the fever. For the fever itself is no other than the infirument of nature, by means whereof the feparates the vitiated parts of the blood from the found; tho' fhe does this in a manner perfectly imperceptible at the beginning, and even at the flate of the diffemper, but more manifestly in the decline thereof, as appears from the fediment in the urine. The concoction of the fe- The concocbrile matter here means no more than a feparation of tion of the the morbific particles from the found, whence the way febrile matto haften this concoction is not by moderating the fever, but the effervescence must be kept up so long as the fafety of the patient will give leave: but when the difeafe is in the decline, and the feparation 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 fufficiently, despumation will be performed about the 14th Despumatiday; whereas if coolers are given too late, fo as to on finished check the effervescence, 'tis no wonder if the fever about the runs on to the 21st day, or even much longer, in per- 14th day. fons extremely weakened with ill treatment (b).

(f) The practice is very good, but the theory is here taken

from a different metaphor.

(g) In the beginning of a fever the circulation is irregular, and above par, as to force and ftrength; fomewhere 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 blifters, 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,

Sect. 1. 28. It is remarkable here that, tho' the patient may of fometimes feem to be a little relieved by the use of glyfters, or other purgatives unfeafonably 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 fo much appear to return, as a new one to arife; for chillness and shivering prefently come on, and are foon follow'd 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, tho' it be an afflicting confideration to the weaken'd patient, the depuration confequent upon this new effervefence will not be performed in lefs than 14 days (b).

The kinds to be uled.

29. I shall next fet down the cordials which I generally use in this distemper, the milder (i) 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 (k).

30. The

but is much too narrow to comprehend the fubtility of nature, and variety of cases. These therefore should all be particularised, and particular directions suited thereto, wherein our author eminently excells 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 fame words.

(b) Perhaps theory has more share in this position than observation, at least it does not occur frequently in the prefent 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 disprov'd.

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

(k) 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, fo as to enable the patient to overcome the disease; (2) all fuch medicines as act by a stimulating property, and of course augment the motion both of the solids and sluids. In severs, therefore, it should be carefully enquired whether a stimulus is

30. The milder cordials I mean are fuch, for ex- Chap. 4. ample, as are made of the distilled waters of borage, citrons, strawberries, the compound scordium-water, The milder with a mixture of the fyrup of balm, cloves, or juice and fronger cordials eof citrons (1), &c. But the stronger are Gascoign's pow-numerated. der, bezoar, confection of hyacinth, Venice treacle, with others of the fame kind. The following prefcriptions were frequently used.

Take of the distilled waters of borage, citron, black cherries, and compound scordium water, each two Forms of ounces, barley cinnamon water, one ounce, prepared cordials. pearl, two drams, fine fugar, two ounces, or a fufficient quantity; mix them together. ---- Take four spoonfuls of this mixture often in a day, especially when faint.

Take of the diffilled 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 emulfion: to the strain'd liquor add enough sugar to sweeten it to the taste. --- Take two spoonfuls of it thrice a day.

It would be needless to add any more forms of medicines, because a large number are, or may be, of use

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 feldom required, and therefore cordials are rarely proper; which our author only feems to have well confidered. BOERHAAVE, Prax. med. Vol. III. p.

(1) These are scarcely cordials at all.

Sect. 1. in the course of the distemper, and require to be vav ried according to its different stages, and the different fymptoms arifing therein.

Remedies

31. (3) But when the fermentation neither rifes too when need- high, nor finks too low, I leave it in that state, without prescribing any medicines, unless thro' the importunity of the patient, or his friends; and then I direct fuch only as may please without prejudicing (m).

Persons in ed.

given.

32. I should not omit, that frequently when I was called to persons of low circumstances, I ordered them to do nothing elfe, after bleeding and vomiting when low circum- required, but to keep in bed during the whole course of flances how the diffemper, and to fup only water-gruel, barleygruel, and the like; to drink moderately of warm fmall beer (n) to quench their thirst, and to take a glyfter of milk and fugar every day, or every other day, till the tenth or twelfth day of the distemper; but towards the end of the fever, when the feparation was begun, and proceeded flowly to promote it, I allowed them now and then a little stronger malt liquor, instead And thus, without any thing further, of cordials. except a gentle purge at the end of the distemper, they generally did well (0).

33. If the method above delivered was carefully obferved, 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 .

when to be

(m) All the foregoing are pretty much of this kind; being what the modern phylicians understand by non-fignificants.

(n) Clear old small beer, neither bitter nor sour; will agree very well with those who have no wausen, sickness at stomach, nor tendency to a losfeness. Where the symptoms are moderate, and where the blood is not too much rarefied, to deny fmall beer to be taken now and then moderately, is a needless severity, and very often hurtful, especially where it has always been us'd 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 its briskness, will irritate the fibrillae into more frequent and strong contractions; and as it contains a deal of very electricain, it is every ready to serve the it contains a deal of very elaftic 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 Physick, p. 150, § (IV).

(0) The author feems to have fallen into his eafy, natural, and excellent general method of practice from observations of this kind.

purging potion to drain off the sediment deposited Chap.4. 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 feparation being over, the gross and vitiated humours, transmitted from the arteries to the veins, eafily prevent the return of the blood, whence various kinds of obstructions, and, at length, new ferments arife (p).

34. But it may be here observed, that purging is not When less fo necessary after vernal, as after autumnal fevers, be- necessary. cause the sediment deposited by the former is neither fo copious, nor of fuch an earthy malignant nature as in the latter (q); which holds also in the small-pox (r), and many other diffempers that rage in the fpring; fo that here, as far as I have observed, it is not so dangerous to omit purging, as in the cases before-mentioned. And it feems to me, that more diffempers arise from an omission of purging after autumnal disorders, than

from any other fingle fource.

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

Take of 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 potion. 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 rife, and by degrees return

(p) There is great liberty of feigning taken here.

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

(r) This practical direction is absolutely contradictory to experience; one would wonder how so careful an observer could be led to affirm this; but his theory feems to have prevailed here.

recovery.

Sect. 1. turn to his ordinary manner of living. The diet I order to this time is nearly the fame with that above-The diet to mentioned; as water-gruel, barley-gruel, panada made be used upon of bread, the yolk of an egg, water and sugar, thin chicken broth, fmall 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 ferve for them all. But to forbid the drinking of small-beer in small quantities is a needless severity, and often pernicious.

the decline how to be relieved.

37. It fometimes happens, especially in the aged, A cough at 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 fpitting, expectorates a large quantity of viscid phlegm: a symptom terrifying not only to the patient, but also to the phyfician, if not apprized of it, who might otherwise mistake it for a beginning confumption: tho' I have found it no ways dangerous. In this case I order a glass of old Malmesey, Falernian, or Frontignac, with a toaft; which, by strengthening the texture of the blood, (weakened by the preceding fever, and therefore rendered unfit to affimilate the juices of the aliment lately taken in) removes this symptom in a very few days, as I have found by repeated experience (s).

> 38. By the method (t) here laid down, the patient will be preferved from feveral fymptoms and diforders ufually attributed to malignity; nothing being more common with physicians unskilled in their profession, than to cry out upon malignity, when by too cooling remedies, or the unfeafonable use of glyfters, they

Malignity and the fourty unjustly ac-C45'd.

> (s) It should seem that this matter rather proceeds from a weakness of the stomach than of the lungs, fince bitters fre-

quently give relief.

(t) The merhod laid down in this chapter, feems 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 lest to themselves, and recover, have the strongest figns of a favourable crifis. 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 thortens the period. And the author feems to have difcovered 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 folutions of the fame problem, exceeding one another however in brevity.

have weakened the texture of the blood, and reduced Chap. 4. hature fo low, whilft she was performing the office of feparation, as to bring on faintings, and other bad fymptoms, which are the genuine effects of fuch perverted rules of art: But if the long continuance of the difease 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 difease were neither owing to malignity, nor those that appeared in the decline to the feurvy, but both of them to wrong management, as I have frequently observed. Not that I, or any other phyfician, who is acquainted with the history of diseases, will say that there are no severs of a malignant nature; for there are manifest signs of fuch; nor will I deny that a fever may be fometimes complicated with a fcurvy and other diforders; but what I affert is, that both malignity and the fcurvy are here frequently blamed unjuftly.

39. When the fermentation of the blood proceeds Coolers and in a proper manner, the despumation of the morbific glysters, matter will be finished in the time abovementioned; given too but if cooling remedies, or glysters, are given too late, probut if cooling remedies, or glysters, are given too late, long the the fever will run to a much greater length, especially disease. in aged persons that have been improperly treated. When I have fometimes been called to fuch, after they had struggled with the fever above forty days, I have used my utmost endeavours to procure the despuration of the blood, which was now fo far weakened, partly by age, and partly by glyfters 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 feemed to go off, the strength of the patient was almost quite ex-

hausted (u).

40. But when other means failed me, I have made Good effects use of a fingular expedient with great fuccess, namely, of applying . the application of the heat of strong and healthy young the heat of men: nor will it be found furprizing, that by this young men. uncommon means the patient should be considerably strengthened, and debilitated nature assisted, so as to disburthen herfelf, and throw off the remains of the morbific matter; for it is eafy to apprehend that a con-

(4) Blifters here are of principal use.

Sect. I.

fiderable quantity of found 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 fo ferviceable as the prefent method, where the heat applied is not only more natural to the human body, but also more mild, moift, equable and constant. this way of transmitting, perhaps, balfamic spirits and exhalations into the body of the patient, however quaint it may feem, has also fince been successfully Nor do I think it below me to have used by others. mentioned this expedient, whatever cenfure may be pass'd upon me for it, by 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 quire a particular treatment. 41. By carefully purfuing the method hitherto delivered, the greater part of the bad fymptoms, that either accompany, or follow upon this fever, will be prevented, which otherwise, in the course of the cure, frequently perplex the physician, and prove satal 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 abovemention'd method.

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, speaks hastily, looks wild, drinks 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 (x).

43. By

<sup>(</sup>x) 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, &c. If it happens in an acute sever, with a full and quick pulse, bleeding in the foot is proper to lessen the pressure on the brain, and divert the blood to the extremities;

43. By these means I endeavour to support the pati- Chap. 4. ent, till the disease has run to a certain length, when I find it eafy 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 fervice whilft 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 equally mix'd with the blood, and not ripe for feparation, is confined, whence the expected 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.

Taken off by an opiate.

44. This, however, I can affirm from numerous observations; that laudanum, or any other narcotic used to take off this symptom, whether in the begin- of giving it ning, increase, or height of this fever, was either ineffectual, or prejudicial; whereas a moderate dose in the decline proved fuccessful. I once ordered a narcotic upon the twelfth day of the difease, with success, but never knew it given fooner to advantage; and if it be deferred to the fourteenth day, when the feparation is more perfect, it will prove still more beneficial. For I have frequently observed that the delirium may be difregarded, till it is proper to give an opiate, provided the diforder 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:

to the time

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

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

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 diforder be accompanied with a weak, flow, and irregular pulfe, bliffers are proper, warm attenuants, and all nervous medicines. Opiates are very unfafe in this cale.

Sect. 1. purge.

45. It may be proper to add, that if this fymptom be not very urgent, and the fever be prolonged, fo as To be pre- that the patient may be fafely purged before an opiate ceded by a is given, it will then be attended with greater fuccess. 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 fleep 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 rofe-water, and applied cold to the forehead and temples, prove of

greater fervice than any kind of opiate.

Treatment

46. 'Tis usual for the patient to be afflicted with a of a cough bad cough during the whole course of the disease, arifing from the violent commotion of the blood, whereby the juices being broke, are feparated 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 fenfi-The cough is first dry, the matter being then too thin to be expectorated; but the febrile heat gradually thickens it, and foon 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 Oil of sweet any other medicine than fresh-drawn oil of sweet almonds, unlefs, as it fometimes happens, the patient commended has an aversion to oil, and if so, I endeavour to relieve in this case. him by the common pectorals. Otherwise I prefer the oil of almonds to all other pectoral medicines, chiefly because that to answer the intention they must be given freely, and in large quantities; whereby the flomach, already too weak, and subject to retchings, is overcharged; and, befides, we are fometimes by this means prevented from giving what is proper upon other accounts.

Its difadvantages obviated.

almonds

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 confequently may tend to increase the diftemper; for granting it to be naturally hot, 'tis however certainly not fo hot, but that the advantages a-

rifing

rifing from its use are greater than the inconveniences. Chap. 4. For 'tis an excellent pectoral, opens and lubricates the passages, thereby promoting expectoration, which, when copious, frees the blood from the noxious humour, now feafonably feparated, and at the fame time tends to cool; fo that this fymptom thus proves of confiderable fervice, for which reason I am not anxious about it. Let it, however, be observed, that 'tis un- How to be fafe to give feveral spoonfuls of oil of almonds at once, given. as retchings and a loofeness may thereby be occasioned; but the frequent use of it in small quantities, throughout the day and night, not only eafes the cough, by promoting expectoration, but, which is very material, the patient, now almost worn out, is in some mea-

fure recruited by this kindly nourishment.

48. Sometimes a bleeding at the nose happens, either Ableeding from giving too warm medicines in the beginning of the at the Nofe fever, or from not fufficiently depressing the ebullition how to be of the blood, the patient either being in the prime of flopt. life, or the feafon of the year conspiring with the fever. Here the means commonly made use of to check the motion of the blood will be of littie fervice; fuch as bleeding, ligatures, aftringent, agglutinant, balfamick 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; tho', in reality, if this fymptom be confidered 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 fymptom, viz. the ebullition of the blood, 'tis imprudent to depend upon them; therefore, in this case, when all other means had proved inestectual, I ufually gave the following draught:

Take of the distill'd waters of pursain, and wild pop- Aquieting pies, each an ounce and a half; fyrup of white pop- draughtpies, fix drams; fyrup of cowflips, half an ounce: mix them together for a draught. (y)

(y) So gentle an opiate does not feem likely to put a stop to a bleeding at the nose, where the abovemention'd means fail. If the hamorrhage be violent, therefore, it will be proper to bleed in

49. But

## The continued Fever

Sect. r. Allhamor rhages not to be imme-

49. But I judge it improper to put an immediate ftop to every hæmorrhage after this manner; for 'tis frequently rather to be permitted, and may prove of great fervice, fometimes, by abating the too violent ediatelystopt. bullition of the blood, and, at others, by proving critical, put an end to the difeafe. And, in reality, no confiderable effect is to be expected from the abovemention'd remedy, unless the symptom has continued fome 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, foon after a stop has been put to them, unless a gentle purge be given, which therefore must not be omitted, even tho' it should feem too early to purge with respect to the stage of the fever, if this fymptom had not happened.

An hiccup, hom to be reated.

50. The biccup generally happens to the aged after an immoderate loofeness, 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 arise from some diffurbance raifed 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 affift her by art, by giving a large dose of diascordium, viz. two drams, which feldom fail'd to remove this fymptom, when the feeds of dill, and other celebrated fpecifics, had proved ineffectual (2).

51. If,

the jugular, fet cupping glasses on the shoulders, apply cooling lotions to the head and parts adjacenr, 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 emulfions, opiates, subaffringent 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 ferous, agglutinants should be freely exhibited. In case of great weakness from the loss of blood, refrain from opiates entirely, and direct mild cordials, a reftorative diet, and reft.

(z) The hiccup is a convultive motion of the diaphragm and fome parts contiguous thereto: happening in the declenfion of a fever it is a dangerous symptom. In this case it is generally accompanied with extreme weakness and depression of spirits; and

therefore

51. If, as above intimated, (a) a loofeness should Chap 4. happen in the course of the disease, for want of giving U a vomit at the beginning, when it was indicated by the Aloofeness retchings; one should be given at any time of the discourse ease, 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 loofeness should happen notwithstanding an emetic has been given; which is very feldom the cafe, except in an inflammatory fever, where this fymptom, fo far from being prevented, is fometimes occasioned by a vomit; which is an observation of consequence. And here I have found the following glyster more efficacious than any other aftringents.

Take of the bark of pomegranates, half an ounce; red An aftrinroses, two pugils; boil them in a sufficient quantity of gent glyster. 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 glyfter than is here directed, tho' it be naturally aftringent; because the intestines may be oppress'd by its bulk, whence the loofeness will rather be promoted than check'd (b).

therefore the opiates directed should be of the warm or cordial kind, and given in small quantities, otherwise they may fink the spirits still more, and bring on a fatal stupor. Hoffman here prefers gentle antispasimodics 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 occasion'd 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 corrofive poison, or other like cause, warm milk, and oil of almonds, or oil-olive, should be drank in large quantities, and also plentifully injected by way of glyster.

(a) See above, Par. 19. (b) 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 pro-moted. 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 finking of the pulse, fainting, &c. bliffers, perspiratives, and gentle cordials, both of the medicinal and dietetic kind, will prove of very confiderable fervice, in checking it, as well by way of revultion,

as by strengthening the patient.

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Rather to be check'd raged.

52. But it may be faid, that if a diarrhoea 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 than encou- undoubtedly may fometimes be the case, but it happens fo rarely, as not to encourage one to attempt it; befides, the reason before alledg'd, in treating of the cure of fevers in general, which tends to shew the necellity 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 seculent parts, but there is further required a separation of others by way of efflorescence, as we daily see in other rich and heterogeneous liquors. Confequently if the loofeness be too much promoted, the depuration will not be wholly compleated, and perhaps the matter, that ought to have been last expell'd, will pass off first. I own indeed that after the separation by way of efflorescence is finish'd, which is ufually perform'd gradually and infenfibly, and by means of a freer perspiration, rather than of a manifest fweat, if then a loofeness should happen, it would be attended with little danger; for it must be observed that now 'tis 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 confiftence of the excrement is a proof that the loofeness ought not to be accounted a critical folution of the difease ( $\epsilon$ ).

The iliac paffi n whence.

53. Possibly the iliac passion deserves to be enumerated among the fymptoms confequent upon fevers, fince it is fometimes occasion'd by immoderate vomiting in the beginning of the disease. This terrible diforder, which has hitherto been generally efteem'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, fo that the strongest glyfters become emetic, as do likewife cathartics, immediately after being taken. And I judge the exquisite and intolerable pain attending this diforder proceeds only from the inverted peristaltic motion of the bowels, whose natural formation is such, as by their many folds

(c) The reasoning of this paragraph is very theoretical.

to promote the descent of the sæces in the properest Chap.4. manner; and therefore whenever they are forc'd to yield to a motion opposite to that of their fibres, a pungent pain is occasion'd, 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 into the ileum, or any other membrance belonging to the cavity, fingly fustains the force of this preternatural motion. This inverted motion, productive of the pain, may proceed either from (1) obstruction, or (2) irritation.

54. (1) It is manifest that whatever blocks up the Whence the passage of the intestines, must needs occasion this con- inverted trary motion in them; and this may happen, according the inteto authors, (1) from hardened excrements, (2) much pines. flatus collected in the bowels, and as it were purfing them up, (3) strangulation from a rupture, (4) inflammation, (5) and laftly, large fwellings filling up their cavity. However, 'tis 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 fituated above the feat of the obstruction; for which

reason I call it the spurious iliac passion. 55. (2) I conceive the invertion 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 ftomach is first inverted, and its contents thrown up with violence, and then the fmall 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 fympathize with them. This is the true iliac passion, and the disorder under consideration. The method of curing it has hitherto remained a fecret, notwithstanding the pretensions of fuch as have had recourse to quickfilver, and leaden bullets, which do little fervice, and are frequently very dangerous.

56. As foon as it appears from glysters being vomited The intentiup, and other figns, that the difease is a true iliac paf- ons of cure fion, I endeavour to answer these three intentions:

(I) To Spered.

Sect. 1.

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

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

(3) To free the stomach and bowels from these

fharp humours.

In what

57. (1) I direct a fcruple of falt 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. cochia, disfolved 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.

58. I have observed 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 sorbear purgatives, till I had first used stomachies awhile.

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

60. In

(d) The true iliae passion will, doubtless, rarely be found to yield to so few and gentle remedies; and therefore we shall add fome further directions relating to the cure thereof. When a sever 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 is proper, and sometimes requires to be repeated a third or fourth time; an emollient and laxative glyster should be given every hour, or every two hours; for Beerhaave tells us, (whose method this is in great part) that several have perish'd, because glysters were not given

60. In these few particulars consists my whole method Chap.4. of curing this difease, which, 'tis hoped, no one will deliberately contemn, on account of its fimplicity, and the want of elegance of language, and the pomp of medicine to recommend it.

61. Thus I have enumerated the fymptoms that ufually happen in this fever; but there are others I fhall not now mention, as they are of less moment, and require no particular treatment, but go off fpontaneoufly, if the fever be skilfully treated. And let this suffice for the continued fever of this constitution, with its symptoms (e).

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given often enough. A rea made of linfeed, or marsh mallow roots, and I like, may be used warm for common drink; to which nitre, juice of lemons, dulcified spirit of nitre, &c. may be added in a proper quantity. 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 relapfe. Opiates may be exhibited along with purgatives. If the diforder be caused by strangulation from a rupture, we must, before exhibiting any medicines, endeavour to difengage and replace the intellines, by applying emollient fomentations and cataplasms to the part affected; and, all means failing, recourse must be had to the furgical operation requifite 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 mention'd 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.

(e) We have, as we went along, taken notice of the deficiencies this history of the cure of a lever labours under, as being too loofe, hypothetical, general, and incompleat; 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 confideration, a minute and particular detail both of its usual and unusual symptoms, together with safe methods of practice, judi-

ciously suited to the several changes thereof.

Sect. I.

## HAP. V.

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

HE constitution, as we observed above, that prevailed thro' all the preceding years, having fo eminently favour'd the rife of all kinds of intermittents, I will here fet down the observations I then made concerning them, and also add those which relate to the few intermittents that have happened fporadically fince 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 con-The 3 stages

of intermit- jecture fomething, 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.

Description of the 1st.

tents 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 affimilated by the blood, becomes, at length, not only useless, but prejudicial to nature, raifes a kind of violent motion in the mass, and endeavouring, as it were, to escape, causes a chilness and fliaking; which shew how pernicious in its nature the febrile matter is to the body, in the fame manner, as purging draughts in weak flomachs, or poifon cafually swallowed, immediately occasion a shivering, and other

fymptoms of the fame 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 the 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 feparated parts of the peccant matter, that were equably mixed with the blood, begin to be united together, in some measure, and confequently may be more eafily moulded, fo 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 Chap. 5. for that time. Both these stages are severe, (3) but in the third, namely the despumation, all the sym- The third. ptoms 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.

4. Having premised these particulars, I proceed next Whence the to shew why the fit returns, tho' the patient now feems return of to be out of danger: and this arises from the febrile the fit. 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 feveral flages above described. How it happens that this latent remainder (not fufficiently overcome by the preceding effervescence, and consequently not expell'd with the other peccant matter) does not proceed with the fame regularity in every intermittent, but sometimes requires one day, fometimes 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 fufficiently explained this fecret operation of nature.

5. I do not defire to be called a philosopher, and for fuch 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 exercise their faculties in accounting for the various works of nature that every where furround us, before they dictate to others. I would gladly learn, for instance, why a horse comes to his full growth in seven years, a man in twenty one; why fome plants usually flower in May, and others in June; not to mention innumerable other effects, whose causes are as hard to be discovered (a). Now if the learned think it no

(a) A fearch 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 fenses, 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 refolve them into the will and pleafure of the creator, without pre-

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way lessens their reputation, to confess their ignorance in these points, I see no reason, why I should be censured for remaining 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.

Their symptoms and particular kinds describ'd. 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 more copious, ends the sit (b). And now the patient continues tolerably well till the fit returns at the usual time:

fuming to penetrate into what he should seem to have cover'd 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 soundation, 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 racked 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.

ble to be controverted, as existing only in the imagination.

(b) The disease here being very impersectly describ'd, 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 sit, 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 sit; 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.

time; which, in a quotidian, happens once in the space Chap. 5. 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 the immediately preceding fit to the beginning of the next. But the two latter are frequently doubled, fo that a tertian comes every day, and a quartan, two days fuccessively, the third being the intermediate, or well day; and fometimes, when it proves a triple quartan, it comes three days fuccessively, the intermittent deriving its name

from the manner of its first appearance.

7. This redoubling of the fits is sometimes caused whence the by the too great quantity and activity of the febrile redoubling matter; in which case the additional fit precedes the of the fits. original one: but fometimes, when the patient is confiderably weakened, and the violence of the fit abated, either by too free an use of cooling medicines, or profuse evacuations, the additional 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, may depend: both which frequently happen in quotidians.

8. Intermittents are either of the vernal, or autumnal kind; tho' fome arise in the intermediate seasons; mittents but as these are not so frequent, and may be referred either verto Spring or Autumn, according as they approach nal, or aunearest to either, I shall comprehend them all under the tumnal two species abovementioned. These diseases make their first appearance in February and August particularly; tho' fometimes they appear fooner or later, according as the air is more or less disposed to produce them, which, of courfe, renders them more or less epidemic. The autumnal intermittents of 1661 were an instance of this; for I remember that a woman was this year feized with a quartan upon St John's day, and numbers very early in the feafon; and afterwards, in

the

the declenfion of the year, these distempers became Sect. 1. very epidemic.

The two essentially-

9. This diffinction of intermittents is fo necessary. kinds differ that unless it be well attended to in practice, no just prognostic can be formed of their continuance, nor a method of cure directed, fuitable to the different nature, both of the feafons, and diforders. It must be own'd that the intermittents of both feafons do not greatly differ, either as, (1) to the manner of their attack; which begins with a fhaking, is foon fucceeded by heat, and at length goes off with fweat; or (2) the difference of their appearance, in which respect some are tertians both in fpring and autumn : and yet I judge that they differ effentially from each other.

Vernal inmbence, and their progress.

10. I will begin with vernal intermittents, most of termittents which are either quotidians, or tertians, and appear fooner or later, according to the various difposition of the feafon. For the fpirits having been concentrated and invigorated by the winter's cold, are drawn out by the heat of the approaching Sun, and, being mixed with the vifcid juices, wherewith nature had flock'd the blood during that feafon, (which, however, are not fo viscid as those whose fluid parts have been nearly exhal'd by the preceding heat in autumn,) are, whilft they endeavour to escape, detain'd, and as it were entangled, and confequently occasion this vernal ebullition, in the fame manner as is observed to happen upon expofing bottles filled with beer to the fire, after having been long kept buried in fand, or in a cool cellar, whence the liquor begins to work, and endangers the burfting of the bottles. The blood, thus disposed, attempts its depuration, and, by means of its volatile falts, 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 lafting, but is usually divided into different fits. For the blood, abounding at this feafon nued fevers with active spirits, nature precipitates her work, and by particular fits perfectly compleats the fecretion of fome parts, before the finishes the univerfal Separation. And this feems to be the reason that there are but few continued fevers in fpring, and particularly in its decline, unless an epidemic constitution should happen to prevail; the fermentations which arise at this time,

either

Feno contiin pring.

either fuddenly ceafing, or haftening to an intermission; Chap. 4. or lastly, such parts of the juices as were best fitted for feparation, are fpeedily and violently thrown upon fome other part of the body; whence quinfies, peripneumonies, pleurifies, or the like dangerous difeafes immediately arise; these distempers happening chiefly

at the decline of the fpring.

II. It has been already observed that vernal inter- Vernal inmittents generally go off in a fhort time, and always termittents prove falutary; fo that the aged or infirm can scarce seldom lastbe endangered thereby, without very unfkilful treatment. But I have sometimes known vernal tertians lutary. prolong'd to autumn, by improper bleeding and purging, together with an unfuitable regimen; but this feafon 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, fo that he feemed in great danger, tho', as far as I have hitherto been able to obferve, he always recovered.

12. Neither have I met with those dangerous symptoms, in fuch as are cur'd of this difeafe, which, as shall hereafter be shewn, follow upon inveterate autumnal intermittents; viz. a mortal inflammation of the tonfils, a hard belly, dropfical swellings, &c. when the patients have been extremely debilitated, by fucceeded by the long continuance of the difease, the doubling of a madness. the fits, and repeated evacuations, they have been feiz'd with a madness, when they began to recover, which went off proportionably as they gathered strength.

13. But autumnal intermittents differ very much An autumfrom vernal ones. For tho' a tertian in those years, nal epidewhen 'tis not epidemic, and feizes healthy perfons, mic rertia, does fometimes go off in a fhort time, and is accom- fometimes panied only with the fymptoms common to vernal ter- dangerous. tians; yet when it is epidemic, and feizes the aged, or persons of an ill habit of body, it is not without danger, and continues two or three months, and perhaps runs on even to the following fpring. But quartans are more dangerous and obstinate than tertians; for very old persons are sometimes destroyed by a few fits, dying in the cold fit. Those who have just entered upon old age are not indeed in fo much danger of finking under the disease in so short a time, but are scarce ever

Sect. 1. cured before the return of the fame period of time of the following year, wherein they were at first feiz'd: and fometimes this difease leaves some disorder behind, that in the end proves mortal.

A quartan *Sometimes* dangerous (ymptoms.

14. A quartan now and then changes its form, and likewise produces a train of different symptoms, as the Succeeded by scurvy, a hard belly, a dropsy, &c. But young perfons are better able to bear this diftemper, from which they are fometimes freed about the winter folftice; 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 fucceeding autumn. I have often wonder'd to fee infants struggle with this disease for fix months, and at length recover.

Soon goes off, when it comes a fecond time.

Vernal intermittents, how to be tredted.

15. 'Tis well worth observing here that when a perfon is feiz'd with a quartan, who has had it before, tho' long fince, it terminates spontaneously after a few fits, of whatever age or constitution he be (c).

16. I have always been of opinion that vernal intermittents might be wholly left to themselves, having never known a fingle 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 (d). But if the patient will not be fatisfied, unless something be done to relieve him, various methods may be fuccessfully employ'd for this purpose, as I have frequently experienc'd.

17. A vomit feafonably given, fo as to have done working before the fit begins, fometimes proves a cure; and especially if a moderate dose of syrup of white poppies, or any other opiate, be given after the operation is over. Sometimes diaphoretics, especially in vernal quotidians, effect a cure, by promoting the fweat that breaks out towards the end of the fit, provided the

patient

Sometimes cured by a vomit,

> (c) This observation is sometimes contradicted in practice. (d) In general, vernal intermittents are not dangerous, and may be fuffered to go off spontaneously; but sometimes physicians find it necessary to attempt their cure; otherwise they are apt to prove inveterate in some constitutions, and occasion other obstinate disorders. And 'sis observable that they are commonly cured by evacuating medicines, fuch as vomits, gentle laxatives, fudorifics, blifters, and fometimes bleeding. So that it may feem frange our author should except against a method, which yet in the next paragraph he lays down for fafe and fuccessful.

patient be well covered, and the fweat continued as Chap. 5. long as he can bear it; for the juices not being very t thick in this feafon, the difeafe is perfectly cured, which would otherwise return: but this never happens in autumn. I have also sometimes cured tertians by giving Sometimes glysters upon three or four of the intermediate days.

18. But if bleeding be used too freely (e), which in- Copious confiderate persons easily yield to on account of the bleeding refeafon, or by reafon of the preceding weakness of the tards the patient, the spirits, which should directly attempt the bufiness of despumation, be so far impoverish'd 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 fo long, but either go off spontaneously, or soon yield to the use of a few gentle remedies.

19. But autumnal intermittents, of which I am now Autumnal to treat, are not fo eafily conquered. When the con- intermitstitution is epidemic they usually appear about June, tents debut otherwise not till August, or the beginning of Scribed, September, and very rarely in the following months. When numbers are feiz'd at the fame time, we may generally observe that the fits come exactly in the same manner, and at the fame hour of the day, a little fooner, or later perhaps, unless this order be disturbed by remedies that either haften or retard the coming of the fit.

20. It must likewise be noted that 'tis a difficult Hard to be matter at the first appearance of intermittents, especi- distinguishally of those that are epidemic in autumn, to distin- ed. guish them exactly, because, at this time, they are accompanied with a continued fever; and for fome 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 feafon of the year.

21. They

(e) There is often no necessity for bleeding at all; it may however be used to-advantage when the intermittent, at its first coming, refembles a continued fever, and is accompanied with great heat, and a delirium, the patient in the prime of life, of a fan-guine constitution, and accustomed to drink 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 the disease is render'd more stubborn, and made chronical, as experience thews.

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21. They are, however, either tertians or quartans; (but the latter are defervedly 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 intermit-tents.

22. I judge that these intermittents are occasioned nearly in the following manner; viz. as the year advances the blood is likewife proportionably enrich'd, (just as vegetables manifest 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 declenfion thereof, it also declines; and more particularly when fome accidental caufe contributes thereto, as a great loss of blood, taking cold, the use of indigestible and excrementitious food, unfeafonable 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 fucceeding ebullition tends, which happening fometimes, in extremely vitiated blood, occafions a bad fever, accompanied with feveral malignant and dangerous fymptoms. But from whatever cause it arifes, the blood, having been confiderably impoverished, and, as it were, torrefied by the heat of the preceding fummer, will perform its ebullition flowly, and require much time to finish its depuration (f).

Whence so 23. In order now to shew how difficult it is to cure hard to cure. autumnal intermittents, the dissimilitude between the

(f) 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 trisling to make such nice researches into causes, that, in all probability, will always remain latent, whilst the effects are overlook'd, from which alone we are to expect any advantage?

continued and intermittent fevers of this feafon must Chap. 5. be well confidered; which chiefly confifts in this, that continued fevers carry on the effervescence once begun, regularly and uninterruptedly to the end of the difease; whilst intermittents perform the business by parts, and at different times: but in both the effervescence is The time finished in about three hundred and thirty fix hours, spent in the the time that is ordinarily requir'd for the depuration of effervethe mass of blood in a human body, when the business scence. is wholly left to nature; in the fame manner as wine, beer, and cyder have each a peculiar time wherein its

depuration is finished.

24. But tho' the blood fometimes in intermittents, as The fame in it happens in a quartan, attempts, and at length finishes continued its depuration in fix months; yet by an exact compu- fevers and tation it will appear that there is no more time employ'd quartans; 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 fix hours; fo 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 fix hours. If now it should be faid that a quartan sometimes lasts above fix months, which also holds in other intermittents; I answer, that the continued fevers of this conflitution are likewise often prolonged beyond sourteen days: but, in both cases, if care be had to regulate the effervescence in a proper manner, and keep it brisk, especially towards the declension of the disease, the despumation will be finish'd in the time abovementioned. Whereas if, at this juncture, the fermentation be unfeafonably check'd by cooling medicines, or glyfters, no wonder the disease proves lasting; the procedure of nature being by this means disturb'd, and the texture of the blood in a manner loofened or broken, fo that it cannot effectually attempt the despumation; which also fometimes happens fpontaneously in weakly constitutions, unless drooping nature be affished with cordials to enable her to finish the business of despumation.

25. It must here likewise be observed, that what has But diffebeen faid of the continuance of the fermentation is to rent in forms be understood only of such fevers as have arrived to a fevers. fixt state: for there are fevers, both of the continued

Sect. 1. and intermittent kind, which are of a variable nature, and do not reach the limited period in their effervefcence. Such are those that sometimes arise from a fmall error in the non-naturals, respecting aliment, drink, air and the like: but they often terminate in a fhort time; as they also do in young persons whose blood is pure, and rich in spirits. For as their fevers proceed from a certain spirituous, subtle, and volatile matter, they finish their fermentation speedily, and go off.

The requimentation.

26. Now in order to raife a fermentation, 'tis necesfites for fer- fary that the fermentable matter, whether blood, wine, or any other liquor, be of fo vifcous and tenacious a nature, as to detain, and, as it were, envelope the spirits therein contained; yet fo as they may be able to be moved brifkly in the liquor, but not to fly off. Let it, however, be remember'd, that the liquors abovemention'd must not be so viscous, as to oppress the spirits entirely, and fo prevent their being moved at all (g).

Intermitbe treated.

27. These particulars being laid down, which I contents how to ceive are rational and well-grounded, it will not feem strange that I propose no other method of cure in intermittents than should feem to be us'd in order to finish the despumation in continued severs; fince there is no difference between them, as to the manner wherein nature usually expells 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 from continued fevers, and also confiderably from each other. The curative indication. therefore, must be taken either (1) from a careful observance of the steps which nature takes to overcome the difeafe, that fo we may quicken the fermentation already raised, and by this means recover the patient: or (2) we must endeavour to investigate the specific

> (g) It will not feem strange that we have here so lame and imperiect an account of the requisites for fermentation, if it be confidered 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 slourishing state we now see it in. Whoever desires to see a particular account of fermentation, may have recourse to Boerhaave's Chemistry, Vol 11. where he will find the subject largely treated: Or to Dr Shaw's Chemical lectures, where it is treated with great clearness, order and concileness.

cause, in order to remove the disease by effectual and Chap. 5. specific remedies: Indications are to be deriv'd from one of these two sources.

28. I have tried both methods with care and application; but have not hitherto been able to cure autumnal intermittents before they had finish'd their stated fermentation above specified, however disagreeable it has been to the patients to wait fo long for their recovery. If therefore any one is posses'd of either a certain method, or specifick remedy, that will not only put a stop to, but thoroughly cure these disorders, he is, in my opinion, bound to discover it for the good of mankind; which if he does not do, he neither deferves the character of a good, nor of a wife man. For it would not be acting the part of a good man, to convert to his private advantage what might prove fo eminently ferviceable to the public: nor of a wife 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 intermit- Bleeding tents, yet I will fet down what I have found most ef- and purging fectual to this end. Frequent experience has taught unfafe in me that there is great danger in attempting the cure by me that there is great danger in attempting the cure by interior. purging, (unless in the way hereafter to be mention'd) tents. but more by bleeding. For in tertians, particularly in a very epidemic constitution, unless bleeding directly removes the difeafe, it is prolong'd thereby, even in ftrong 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 tonfils, as abovemention'd (b). Again bleeding causes those symptoms to come fooner, which, as we faid above, accompanied autumnal intermittents at their decline, or foon after their removal; but it is so detrimental in quartans, as to occasion the disease to last a year, in young perfons, which otherwise would have gone off in fix months. And in the aged, who, if bleeding had not been used, might have recover'd in a year, there is danger of the difease being prolong'd thereby beyond that time, and of its proving mortal in the end. What

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(h) See above, Par. 12.

Sect. 1. has been observ'd of bleeding holds also of purging, with this difference, that the latter is less dangerous, unless it

be frequently repeated (i).

The cure of antumnal 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 foon as the fweat begins I give two fcruples of the greater Pil.cochiæ diffolved 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 (k).

These remedies being taken as directed, the sweat is to be encouraged for some hours after the beginning of the fit, with care to prevent a stoppage of it, which might otherwife be occasioned by the operation of the purgative.

Successfulness of the method.

31. I have found this method more successful in the cure of this disease, than the use of the common decoction, fuited to the fame intention, and prepared with gentian root, the tops of the leffer centaury, &c. with a small quantity of fena and agarick. For as it produces two contrary motions at at the fame time, viz. fweating and purging, it acts in the fame manner as the decoction, in diffurbing and interrupting the ordinary course of the fit; and is doubtless more effectual. and as fafe (1).

(i) Bleeding may fometimes be very advantageously us'd; as where the intermittent is suspected to proceed from an obstructed circulation in the viscera of the abdomen, which hypochondriac persons, and such as have been formerly afflicted with the piles, are subject to; and in pregnant women, who are in general ple-thoric, 'tis absolutely necessary, in order to prevent a miscarriage from the violent motion rais'd in the blood by the scbrile symptoms. A fingle bleeding, properly directed, has remov'd a flubborn quartan. To guide us in this particular, the feafon 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 confidered and compared.

(k) Many inconveniences may justly be apprehended from the use of this extremely heating medicine, in young persons of a sanguine constitution; so that if sweating be judg'd proper, it would be safer in most cases to give some mild sudorific, with sre-

quent draughts of fack-whey, fage-tea, or the like.

(1) This method feems impracticable, unle's in ftrong phiegmatic conflitutions, for in tender, weak and delicate habits, the exciting two fuch directly contrary motions may be attended with faral consequences; and this may be the reason that it has not hitherto greatly prevailed, notwithstanding the uncommon defe-

32. When a tertian has varied its form, and is be- Chap. 5. come a double tertian, on account of the patient's having been weakened, either by evacuations, or any Manner of other way, a fweat must likewise be raised, as above double terdirected (30) and at the fame distance of time from the tian. coming of the next fit, either by giving the remedy there specified, or some other powerful sudorific, which may also be repeated in the succeding genuine fit: but the Pil. cochia 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 direct the following electuary.

Take of the conserve of flowers of borage and bugloss, The eleceach, one ounce; conserve of rosemary, half an ounce; candied citron-peel, and nutmeg, 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.

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

Instead of the julap I sometimes give some simple plague water fweetned, with fugar; 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 slen- Quartans derly skill'd in physic cannot, I conceive, but know how to be how unfuccessful all the usual methods of cure hitherto treated. directed have prov'd, unless by means of the bark, which yet more frequently checks, than cures the difeafe. For after it has lain dormant for two or three weeks, and the patient has thus had a fhort respite from its violence, it returns afresh, as severely as before, and generally requires a length of time before it can be conquer'd, notwithstanding the bark be frequently repeated. This however shall not hinder me from fetting down what I have experienced, with relation to the method of giving this valuable medicine. 34. (1) Great

rence that has been univerfally paid to our author's judgment. The present practice is highly improved both as to the eertainty and fafety of removing all kinds of intermittents, but the procedure is very different from that here directed.

Sect. 1: The bark how to be given.

34. (1) Great caution must be had not to give it too early, namely, before the disease be in some measure fpontaneously abated, unless the extreme weakness of the patient requires it to be given fooner; for the giving it too foon may render it ineffectual, and even fatal, if a fudden stop should thus be put to the vigorous fermentation raised in the blood in order to its despumation (m). (2) We must not direct purging, much less 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 difeafe returns fo much the more expeditiously 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, belides, the mischief is avoided that might happen by putting a fudden and unfeafonable stoppage to the fit, just approaching. (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 difease will, at length, be perfectly cur'd.

35. These reasons led me to prefer the following

method of giving the bark.

Take of the Peruvian bark, one ounce; conserve 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 (n).

36. The

(m) The ill consequences attending the over hasty use of the bark in this case should seem owing to the reughness and astringency it is manifestly possess'd of; whereby the sebrile matter is prevented from passing off, and perhaps driven back upon some of the noble internal parts: whence the intermittent is either changed to a continued sever, 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, 'tis much safer to wait, if the disease will give leave, till its violence be abated by a few sits, and a portion of the morbid matter discharged; which is partly agreeable to our author's sentiments on this head.

(n) The fimplicity and inelegance of this electuary are not fuffi-

The elec-

36. The bark might perhaps prove as successful in Chap. 5. vernal and autumnal tertians as it does in quartans : but, indeed to fpeak frankly upon this occasion, in children Medicines and young persons, affected with either of these dis- not needful in children eases, I think it best to forbear the use of medicines, and young and make no change as to air and diet; having hitherto perfons. found no inconveniency in leaving the cure wholly to nature, at which I have often been furprifed, especially in infants; for the depuration of the blood being finish'd, these distempers go off spontaneously. But contratiwife, if (1) a flender diet be directed, or (2) purgatives be now and then given, as they generally are under pretext of opening obstructions, and discharging the humours lodg'd in the first passages, or (3) especially, if bleeding be used in an epidemic constitution, the dif-

cient reasons to reject it, the' the method may upon the whole be liable to exception; and therefore I shall here subjain some expe-

rienced rules and cautions, relating to § method of giving § bark, (1) The general rule that forbids exhibiting the bark, whilft the urine remains high-coloured, and lets fall no lateritious fediment, will admit of an exception, frequent experience having shewn that if the habit be not over-charg'd with vitiated juices, the vifeera be found, and manifest no figns of internal inflammation, this valuable medicine, preceded by proper evacuations, may be given with all defirable advantage and fafety, even to the aged, debilitated, and young perfons of a lively florid constitution. (2) When the heat and other symptoms thereon depending are violent, nitre is advantageously mix'd 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 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 declention of the fit. (8) During a course of the bark, moderate exercise will do very considerable service; but all kinds of medicines must be refrain'd 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 physick, vol. I. p. 140, 4th ed. and his chemical lectures

De Gorter tells us that an ounce of the bark has been taken at once, without occasioning any inconvenience, and yet has entirely remov'd 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 'ris needless to be so timorous in determining the dose. See his Med. compend. tom. 1.

p. 274.

Sect. 1.

The ngcd require cordials, and a firengthening diet, ease will be considerably prolong'd, and also accompanied with several dangerous symptoms.

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 here, and every other method prove ineffectual to a cure, nature must at least be supplied with fuch helps, as may enable her to finish her work. For doubtlefs, where the conflitution is nearly worn out, unless the fermentation be kept up by cordials, a strengthening diet, wormwood wine, and the like, the patient will be debilitated by uncertain and ineffectual fits, and the disease continue, till some violent fit comes, which, on account of his extreme weakness, may prove destructive to him during the shaking. And this frequently happens in aged persons, who have been debilitated by a long courfe of purgatives; whereas they might have been supported, at least for a time, by fome fufficiently ftrong cordial.

And change of air.

38. When the time requir'd for the despumation of the blood is finish'd, or even earlier, persons in years must remove to a very different air, or, which is better, to a warmer climate, or at least leave the place where they were first seiz'd with the disease. It is very furprizing how much a change of air conduces to a perfect cure at this juncture, but before it is not only ineffectual, but improper. For the a person were to go to a warm Southern climate, the blood notwithflanding, being once reduc'd to a morbid state, must necesfarily finish its depuration, which would vainly be expected from breathing a new and unufual air, till the motion thereof be amended, and fo 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 diftemper is capable of being put off; so that in a quartan, for instance, which arose in autumn, it should be deferr'd till the beginning of February (0).

39. But

<sup>(</sup>a) The present practice can abundantly surnish 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.

39. But if the patient does not care to change the Chap. 5. air, or cannot conveniently, he should at this juncture make use of a medicine of sufficient strength at once to If not, the promote, and, if possible, finish the languishing fer- fermentation mentation; for which I number would advise the fel on to be mentation: for which I purpose would advise the fol- quicken'd. lowing.

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

I have directed this with fuccess at the declension of the But not till difease; but I acknowledge that an earlier use of such the declensiheating medicines either doubles the fit, or changes the on of the difease to a continued sever; which has also been ob- disease. ferved by Galen. They may be given with caution to young persons in this disease, but are unsafe in children (p).

40. Before I quit this subject, I must admonish the reader, that what has been faid concerning the continuance of autumnal intermittents, and the time requir'd for the defpumation of the blood, is to be understood of that alone which nature usually finishes by means only of the common medicines in use. We have not treated of these matters with intent to discourage able and diligent physicians from fearching after better methods of cure, and more effectual remedies; in reality fo far am I from this, that I do not defpair myself of diffcevering, in time, fuch a method, or remedy.

. 41. After the difease is gone off the patient must be purging carefully purg'd; for a number of difeases proceed from necessary a neglect of purging after autumnal intermittents: and after it is I am aftonish'd that this has been so little taken notice gone off. of, 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 fore-

(p) It would now perhaps be thought rash, imprudent and fomewhat favouring of empiricism to venture upon so fiery an alexipharmic, unless in some extraordinary case. For when the tone of the folids is already greatly relax'd, and the juices much impoverish'd, fatal effects may justly be apprehended from the use of fuch a remedy. But in the present improv'd 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.

tel, that they would be feiz'd with fome dangerous difeafe afterwards, tho' they themfelves had not any fuspicion of it, on account of their feemingly perfect recovery.

But not before. 42. But purging must absolutely be refrained, till the disease is quite gone off; because tho' the natural parts, or intestines, may, by this means, seem to be cleansed from the soul humours left behind, yet a fresh quantity of matter will soon be supplied by the sever, returning a-new, occasioned by the violence of the cathartic, and the disturbance of the juices; whence the disease will be render'd more obstinate. And daily experience shews the mischief of attempting the cure at the declension of the distemper, by removing obstructions, and evacuating the melancholy humour, which is the common reputed cause thereof; for, in effect, of whatever nature the humour be that is evacuated, purging manifestly renders the sever more inveterate.

Method of purging.

43. It is therefore become aftanding rule with me, never to give a purge till both the perceptible fits are entirely gone off, and also the alteration, how flight soever it be, which is perceiv'd on those days, when the fit usually came; and even not till a month after the cure. And at this time I prescribe a common laxative potion, ordering it to be repeated once a week, during 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 raised even by the mildest cathartics (q).

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 (r): but when there is no further danger from this quarter, I prescribe the following apozem.

Take

(q) 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 sew instances where a long course of purging may not prove very pernicious: so that this ought not to be esteem'd a general rule.

(r) A dropfy is produced by frequent purgation, especially in a femi-tertian and a quartan: and this species of a dropfy is increas'd by purgatives, and either causes a return of the intermittent, or changes it into a continued sever of a bad kind; but the

Take of Monk's rhubarb, two ounces; the roots of Af- Chap. 5. paragus, 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 cleans'd 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 feeds, 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 fuccessively, and let it be repeated as there shall be occasion.

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

46. The principal of these symptoms, which fre- ones. quently happens, is a dropfy; wherein the legs first fwell, and then the abdomen: it arises from a great paucity of symptom in spirits, occasioned by frequent fermentations of the the latter. blood, in confequence of the length of the difeafe, efpecially in the aged; fo that being extremely impoverish'd, it can no longer assimilatethe juices taken in with the aliment, a crude and indigested quantity whereof is, at length, thrown upon the legs; and thefe being fo diftended as to admit no more, the remainder is difcharg'd into the abdomen, and thus forms a true dropfy. But this diforder rarely happens in young persons, unless it has been imprudently occasioned by purging often, during the course of the intermittent.

47. A

body being strengthened by astringent, warm, stomachic, and antifcorbutic medicines, expells the water fpontaneoufly.

When the intermittent is remov'd 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 relapfe. If a vomit or purge be given foon after the cure, the difease generally returns: but as at this time the appetite is usually too quick and sharp, care must be had not to overcharge the stomach. De Gerter, Med. compend. tom. 1. P. 152, 274.

tumnal

A drop (v.

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Sect. 1. How to be treated.

47. A recent dropfy from the abovementioned cause is eafily cur'd by aperients and purgatives; neither am I anxious about the confequences when it proceeds from this cause, for I then conceive great hopes of success: and, in reality, have recovered feveral by the use of the apozem above fet down, (44) even without the admixture of any thing more particularly appropriated to the dropfy. But I have observed that 'tis a fruitless attempt to endeavour to remove it, whilft the intermittent continues, and ferves to render the difease more obstinate; for which reason we must wait till that is gone off, and then the cure of the dropfy may be fuccefsfully under-

Infusions proper in this cafe.

48. But if the distemper be so urgent as not to admit of this delay, the cure must be attempted by infufions 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 fupplying the blood with fresh spirits, but likewise seasonably affist languid nature upon the point of overcoming the difeafe.

The rickn. hod of curing them described.

49. Children sometimes become hectic after continu'd ets, and the or intermittent autumnal fevers. The abdomen, in this case, swells and grows hard, a cough also and other confumptive fyinptoms frequently arife, which manifestly refemble the rickets: fuch patients must be treated in the following manner. Let the purging potion, above fet down (t), be prepared; and a spoonful or two of it given, according to the age of the child, every morning, for nine days, omitting a day or two occasionally, if neceffary; care being had at the fame time that the purgative be fo dofed, as to give but five or fix motions a day. When the course of purging is over, let the abdomen be anointed with an opening liniment for fome days; for which purpose I generally direct 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 exhald; then add thereto of the ointment of marshmallows, and

(s) In this case all the water has been frequently discharg'd in a fhort time fpontaneously by the conduits of urine, without the help if any medicine. De Gorter, Med. compend. tom. 1. p. 152.

(t) See Sect. I. Chap. IV. Par. 35.

and fresh butter, of each an ounce; of gum-ammoniac, Chap. 5. dissolv'd in a proper quantity of vinegar, half an ounce; of yellow wax, enough to make the whole into a liniment.

By this method I have cured feveral children of the true rickets. But the caution, before inculcated, concern-

ing purging, must also be observed here (u).

50. 'Tis worth observing that when children have The swelling been long afflicted with autumnal intermittents, there of the abdois no hopes of their recovery, till the abdomen (especially men in that part of it near the spleen) swells and grows hard; and of the the distemper abating in the same degree, as this sym- legs in ptom manifests itself. Nor can we, perhaps, more cer- grown pertainly foretel that the intermittent will go off in a fons, a good thort time, than by carefully attending to the fwelling of fign. the abdomen, in children, and to that of the legs, which fometimes happens in grown perfons.

51. The fwelling of the abdomen which happens in The true children after intermittents, in those years wherein the rickets constitution of the air has a tendency to produce autum- when most nal intermittents epidemically, appears to the touch, as if the viscera contained matter harden'd to a scirrbus; whereas that which comes in other years yields to the touch, as if the hypochondria were only distended by wind. Hence 'tis worth notice that the true rickets rarely happen, except in those years wherein autumnal intermittents prevail.

52. A pain and inflammation of the tonfils, after con- Pain and tinued or intermittent fevers, attended first with a dif- inflammaficulty of deglutition, then a hoarfness, hollow eyes, tion of the and hippocratic face, certainly foreshew imminent death, bad signs. no hopes of recovery remaining. And I have generally observ'd that profuse evacuations, in patients almost worn out by the violence of the difease, together with the long continuance thereof, have conspired to produce

these fatal symptoms.

53. There are feveral other fymptoms, which usually follow the fedifeafes, 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 fediment deposited by the preceding effervescence, which sediment, by its continuance in the body, has given rife to these bad symptoms. It may

however

(u) See above, Par. 47.

A peculiar kind of madness, how to be treated.

however be proper here to take notice of a confiderable fymptom, which neither yields to purging, nor any other evacuation, and especially not to bleeding, but is render'd more violent and fixt thereby. This is a peculiar madness, differing from all other kinds, which sometimes follows upon inveterate intermittents, especially of the quartan kind; here the ordinary method of cure proves ineffectual, the disorder, after copious evacuations, terminating in a kind of folly for life.

Mischief of repeated bleeding and purging here.

54. I have often been furpriz'd to find no mention made of this diforder by practical writers, confidering that 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 upon the point of recovery, if a glyster only of milk and fugar be given, it immediately returns; and if a course of bleeding and purging be used, these evacuations may indeed abate the violence of the difease, but will certainly render the patient an ideot, and the difease incurable. Nor will this seem strange, if it be confidered 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 (if the expression may be allowed me) vapidity, which the feyer has occasioned by continuing the fermentation too long, whence the fpirits are become utterly unable to perform the animal functions.

The process of the cure.

55. I attempt the cure in the following manner: I give a large dose of some strong cordial three times a day; for instance, of Venice treacle (x) the electuary of the egg, the countess of Kent's powder, Sir Walter Rawleight Gh'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 sever may be apprehended, especially on account of the heating medicines here taken; but there is in reality no danger of it, because the

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

spirits are so far wasted by the preceding disease, as not Chap. 5. 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 living must be still continued, and the cordials repeated, after a short interval, and the use of them continued till the perfect recovery of the patient.

56. This method has sometimes cured a madness, successful that did not fucceed upon intermittents, particularly in in another cold and weak constitutions. I was called last year to Species of Salisbury to confult with my friend Dr. Thomas for a madness. lady, who was diffurbed in her fenfes, and fhe was recovered by it, tho' she was then in her pregnancy.

57. But the common kind of madness, wherewith strong and lively persons are usually seiz'd, without a preceding fever, is of another kind, and must therefore be treated in a quite different manner, with respect to evacuations; tho even in this kind also such medicines should be given as strengthen the brain and animal spirits. I shall here subjoin the cure thereof, tho' it does not properly belong to this place, in order to prevent mistakes from the similitude of the two diseases.

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

(y) This appears too limited a direction for bleeding, which in all cases should be prudently suited to the circumstances and exigencies of the difease. The kind of madness here described is rarely found to yield, especially in young and fanguine persons, with-out 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 fometimes uled with advantage.

Hoffman recommends warm bathing in maniac diforders, in the following terms. "It is not from reason alone, (fays he) but from a long course of experience, that we affert the excellence of this remedy in these cases; for we have seen numerous instances, both of inveterate melancholy, and raving madness, happily cured by

Sect. 1. dram, or two scruples of pil. ex duobus, according as it operates, upon a fet day, and repeat it once a week, precifely upon the fame day of the week, till the diforder goes off. By this method the humours, which in this difease 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 fome other equally

effectual medicine.

A cordial electuary.

Take of the conserve of Roman wormwood, of resemary, and of Venice treacle, each one ounce; of the conferve 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 fmall draught of canary, wherein cowflip flowers have been infused cold.

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

Particulars ncerning the smallconstitution.

61. I should here also treat of the small-pox of that conftitution, fince, as I before observed(z), they vary confiderably, according to the different constitutions wherepox of this in they appear: but as I did not fufficiently attend to them at that time, I shall only mention this peculiarity of them, viz. that in those years they prevail'd 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

> 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 wonder'd that this method of cure for madness should be so much neglected in our time; whilst bathing has, from the earliest ages, been employ'd for this purpose: insomuch that the antient physicians had recourfe to it as a thing they entirely depended upon." See New experiments &c. upon mineral waters, by Dr Frid. Hoffman, translated by Dr Shaw. p. 188. Par. 16. (2) See Sect. I. Chap. II. Par. 12, 16.

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fmall pits for the most part, about the fize of the head Chap. 5. of a fmall pin, and in the distinct kind the eighth day was attended with most danger; at which time the sweat or moisture, which had hitherto continued, went off fuddenly, and the external parts became dry, neither could the fweat be raifed again by any kind of cordials; whence arose a delirium, great restlessiness, pain and fickness, a frequency of making urine in small quantities; and the patient died in a few hours very unexpectedly.

### SECT. II. CHAP. I.

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

HE preceding winter having been extremely The difcold, and accompanied with a continued frost eases of this till fpring, which went off fuddenly towards constitution the end of March, that is, in the beginning of the year enumerated. 1665, according to the English computation of time, there then arose peripneumonies, pleurisies, quinsies, and other inflammatory diforders, which quickly made great devastation; and with these there also appear'd a continued epidemic fever, of a very different nature from those of the foregoing constitution, which were very rare in this feafon. For(1) the pain in the head here was more violent; (2) the vomitings more copious; (3) and the loofeness, which was generally prevented in the former fevers by a vomit, was increased thereby in the present sever, and yet the vomiting continued; (4) the external parts were dry, as in the fevers of the preceding constitution; but after bleeding, especially, a fweat was eafily procured, whereby the fever was foon abated; whereas in those severs it could not be attempted with fafety till the thirteenth or fourteenth day, nor indeed could it eafily be raifed; (5) the blood taken away in this fever refembled that of persons in pleuritic and rheumatic diforders, but was lefs fizy.

2. Thefe

Sect. 2. and its progress de-scrib'd.

2. These were the diagnostic figns of this disease at its rife; but towards the middle of the year, the plogue The plagne, appeared, accompanied with feveral of its peculiar fymptoms; as carbuncles, buboes, &c. and spreading more univerfally every day, came to its height about the autumnal equinox, at which time it destroy'd near eight thoufand 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 upon the coming of winter was fo far conquered, as to feize very few during that feafon and the following fpring, when it went off entirely: whereas the fever prevail'd, (tho' not fo epidemically) all the subsequent year, and continued to the spring of the year 1667. I intend now to treat of this fever, and the plague.

#### CHAP. II.

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

alfely eecrid malignant.

Some fewers I. W Have already curforily observed that some fevers are usually rank'd amongst those of the malignant kind (a), whereas the great violence of their fymptoms. which feems to countenance this opinion, does not proceed from the contagious nature of the difeafe, but from unskilful treatment. For when the solution thereof, in the manner appointed by nature, is not fufficiently attended to, and a different method unadvifedly begun, the animal occonomy is eminently diffurb'd thereby, and the difease, contrary to its nature, accompanied with irregular fymptoms, so that it seems of a different kind. But a true malignant fever rarely happens (b),

A true malignant fever rare.

(a) See Sect. I. Chap. II. Par. 13.

(b) The unskilful are frequently deceiv'd by imagining a kind of malignity in difeases, and this error proceeds from a want of fufficient enquiry into the antecedent causes, and inattention to the symptoms and entire state of the disease; and hence arise great mistakes in practice. 'Tis not yet universally agreed on what is meant by the term malignity, whence 'tis difficult to form fo clear and just an idea of it, as may enable us to apply it with certainty to some severs, and authorise the method of cure thence deriv'd. The fevers which are generally call'd malignant, upon examining their various fymptoms, seem to proceed from a congulation, or

and totally differs from other kinds of fevers, that are Chap. 2. fo called from the irregularity of the fymptoms, being indeed of the fame species with the plague, only 'tis not fo violent; and on this account I intend to treat of the

cause and cure of both in the same chapter.

2. That the air obtains a fecret disposition, or tem- The air properature, productive of different diseases at different duces diftimes, will be apparent to fuch as shall only consider eases by a that the very same disease, in one season, proves epide- ferret dismic, and destroys great numbers, and in another seizes sition; but few persons, without proceeding further: as is manifest in the small-pox, and more particularly in the

plague, our present subject.

3. But of what nature the constitution of the air is, Not easily which gives rife to these diseases, I am as ignorant, as discoveraof feveral other things, about which philosophers can-ble. not agree(c): whatever it be, we ought at least to thank providence that pestilential constitutions of the air, productive of that great destroyer, the plague, happen much more rarely than fuch as produce other lefs fatal distempers: for the plague seldom rages violently in England, above once, in thirty or forty years (d). 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 chang'd

diffolution of the juices, and accordingly require a different treatment; volatile and attenuating medicines being proper in the former, and mild acids, cooling emulfions, agglutinants, harts horn jelly, &c. in the latter. And as these medicines act by manifest qualities, it may reasonably be inferr'd, that the fevers also arise from a manifest cause: so that the mistaken notion of malignity falls to the ground. The severs that are generally esteem'd of a truly malignant kind proceed from some particular contagious qualities of the air, not cognizable perhaps by the fenfes, from corrupt and putrified aliment, the bite of venemous animals, &c., but these are not near so common as is usually imagined.

(c) 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 visifible effect should always be carefully noted, in order from thence

to form fafe rules for practice.

(d) It is a common opinion, and propagated by authors of great name, that we are usually visited with the plague once in thirty or forty years; but this is a mere fancy, without any foundation either in reason or experience: and therefore people ought to be deliver'd from the subjection to such vain fears. See a discourse concerning Pestilential contagion, by Dr Mead.

Sect. 2.

to a healthful state; and therefore this should be esteem'd only as the gleanings of a former haryest. And to the fame cause it is owing that the severs which prevail for a year or two after a fevere plague, are generally peftilential; and tho' fome have not the genuine figns of the plague, yet they are much of the fame nature, and require a fimilar treatment, as shall hereafter be shewn.

Causes productive of the plague.

4. But befides the constitution of the air, or more general cause, another previous circumstance is required to produce the plague, viz. the receiving the effluvia, or feminium, from an infected person, either immediately by contact, or mediately by pestilential matter, convey'd from fome other place. For when this happens in fuch a conftitution, as we have mention'd above (e), the whole air of that tract of land is quickly infected with the plague, by means of the breath of the difeas'd, and the steam or vapour arising from the dead bodies, so as to render the way of propagating this dreadful difeafe by infection entirely unnecessary: for tho' a person should cautiously keep at a distance from the infected, yet the air, received in by breathing, will of itself be fufficient to infect him, provided his juices be disposed to receive the infection.

Time of its rife, and its progress.

5. Tho' this distemper, when it is only sporadic, feizes fome few perfons without any regard to the feafon, the infection being, as it were, communicated from one to another; yet when it is joined with an epidemic conflitution of the air, it arises in the intermediate feafon between fpring and fummer; this feafon being the fittest to produce a disease, whose essence chiefly confifts in an inflammatory state of the juices, as we shall afterwards shew. Again, this difease has its times of increase and declension, like-other kinds of natural things. It begins at the time above fet down, as the year advances it spreads, and as that declines it abates, till, at length, winter introduces a disposition of the air contrary to it.

6. For if the changes of the feafons should exercise no power over this difeafe, the true pestilential seminithe changes um, unconquerable by any alteration of the air, would of the seasons be convey'd from one to another in a continued succession; so that when once it should have gain'd endestructive. trance into a populous city, it would not cease till the

inha-

If not influenc'd by would prove exceedingly inhabitants were all destroyed. That the contrary, Chap. 2. however, has often happen'd, appears from the number U of the dead, which rose to some thousands in one week in August, but decreased very much, and was inconfiderable towards the end of November. I'must acknowledge however, and fome authors have affirm'd, that the plague also appears at other seasons of the year; but this feldom happens, and it is then not very violent.

7. In the mean time I much doubt if the dispositi- Apefilenon of the air, tho' it be pestilential, is of itself able to tial air unproduce the plague; but that, being always predomi- able of itself to breed the nant in some place or other, it is convey'd to others by plague. pestilential matter, or the coming of an infected perfon from fome place where the plague prevails; and that even there it is not epidemic, unless the constitution of the air favours it. Otherwise I cannot conceive how it should happen that in the same climate, at a time the plague rages violently in one town, 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 entering the borders of Tufcany.

8. The plague usually begins with chilness and The Jimshivering, like the fit of an intermittent; soon after, a proms of violent vomiting, a painful oppression at the breast, and the plague. a burning fever, accompanied with its common fymptoms fucceed, and continue to afflict the patient, till the difease proves mortal, or the kindly eruption of a bubo, or parotis, discharges the morbific matter, and frees him from danger. Sometimes the difease, tho' rarely, comes without a fever having preceded it, and proves fuddenly mortal; the purple fpots, which denote immediate death, coming out, even whilst the persons are abroad upon their bufiness. But 'tis worth obserying that this only happens in the beginning of a very fatal plague, and never in its decline, or in those years wherein it is not epidemic. Again, fometimes fwellings appear, without having been preceded either by a fever, or any other confiderable fymptom; but I conceive that fome flight and obscure shivering always goes before: fuch as are feiz'd in this favourable manner may

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The effence of this and other difeafes inexplicable. fafely follow their business, as if they were in health; and need not observe any particular way of living.

9. As to the effence of this difeafe, I do not undertake to define it with exactness (f); and whoever should require me to shew what it is that constitutes any particular species of a disease, might perhaps seem as impertinent, in the opinion of the thinking part of mankind, as I should appear, were I to put the same question to him, with respect to a horse, for instance, amongst animals, or betony, amongst plants. For nature produces all things by fixt laws, and a method of operation known only to herfelf, whilft their effence and constitutive differences lie hid in the greatest obscurity. Hence every species of diseases, as well as of animals and vegetables, is endowed with certain peculiar and univocal properties, refulting from its effence. However, an enquiry into the manner of curing difeases may proceed very fuccefsfully, tho' we are ignorant of their causes, because the cure of most diseases is effected not by this kind of knowledge, but by a fuitable and experienc'd method.

The cause of the plague.

fimilar difeases is usually deduc'd by us, in our present ignorance of things, from some depravation of first or second qualities, it is probable that the plague is a peculiar sever of its own kind (g), arising from an inflam-

(f) The specific nature of the pestilential miasm, (See the term explain'd in Quincy's Physical distionary,) wherein the effence 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.

(g) "The plague, or pestilential fever, is defin'd by Hoffman, the most acute of all the species of severs, proceeding from a contagious or poissonous seminium, or miasm, usually brought from the eastern parts, and proving mortal, unless the poisson be soon expell'd by bubbes 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 'tis neither epidemic nor sporadic, but only caus'd by contagion brought from insected places; (3) It does not go off, like other putrid and malignant severs, by a copious sweat, a looseness, Oc. but is terminated critically by humors that come to suppose the suppose of the suppose

mation of the spirituous particles of the blood, which, Chap. 2. by reason of their fineness and subtlety, seem chiefly dispos'd to receive it. When it is possessed of the highest degree of subtlety, it suddenly dishipates the natural heat, and destroys the patient without previous notice; as is manifest in the beginning and height of an epidemic constitution. The bodies of such as die in Whence it this violent manner are totally covered with purple occasions spots, the fibres of the blood being broke, and its tex- sudden ture wholly dissolved, by the violence of the intestine death; struggle.

11. Now it is owing to the exceeding fubtlety of the contagious matter, that this fatal catastrophe happens without a febrile ebullition, or the presence of any other lymptom; quite otherwise than when the morbific cause is not so subtle, and the instrument that endangers life more obtufe. To shew the difference by a familiar example. Let a needle or any other sharppointed inftrument be forcibly thrust under a pillow, and instead of raising it up, as an obtuse instrument

would do, it will go through it (h).

12. But fudden death rarely happens, and only, as And when before intimated, towards the beginning, or increase of chiefly. the plague (i). For this disease generally begins, like other fevers, with chillness and shivering, which are foon fucceeded by heat, and this continues till the inflamed parts of the blood are expelled by nature to the emunc-

suppuration; (4) the pestilential seminium readily adheres to fpungy and porous matters, and is conveyable thus to a great difrance, without any lofs of its pernicious quality; and (5) the plague has this farther remarkable particularity, that its progress is check'd by cold; whence it feld m, if at all, prevails in a cold feason, and in cold countries; but, on the contrary, rages violent-

ly and frequently in a hot season, and in warm climates.

(b) The simile here us'd is very inadequate, and not at all illustrative of the author's reasoning; and many such occur in his writings. It must be acknowledg'd, this method of illustration, when rightly applied, lets in great light to the argument; but if otherwise, nothing is more fallacious and inconclusive. False simples and expenses analogies always and inconclusive. miles and erroneous analogies always render matters more ob-feure, and create great confusion and perplexiy in the mind. With respect to similes in particular, let it be remember'd that, to be perfectly conclusive, the fimilitude should only be carried on between fuch things as fall under the fame genus; as between animals and animals, plants and plants, minerals and minerals; and fo of the rest.

(i) See above, Par. 8.

Sect. 2. emunctories, and there suppurated in the manner of common phlegmons. But if the inflammation be less confiderable, 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 severs becomes extinct.

The eryfithe plague.

13. In my judgment, the inflammation which the pelas nearly Latins call ignis facer, and we St Anthony's fire, or an erysipelas, is not unlike the plague. For tkilful physicians efteem it a continued fever, arifing from the corruption and inflammation of the thinner part of the blood, which nature, to free herfelf from it, throws out upon fome external part of the body, where a tumor, or rather (for frequently no very remarkable tumor is perceived) a large red fpreading fpot, ufually called a rofe, arises; but the sever is critically terminated in a day or two by the tumor, or eruption, and fometimes is accompanied with a pain in the glands of the arm-pit, or groin, as in the plague.

Proofs shereof.

14. Moreover, the erysipelas begins nearly in the same manner as the plague, viz. with a shivering, followed by a feverish heat; fo that such as have never been afflicted with this difease 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 fome authors fuspect there is a kind of malignity join'd with this difeafe, and accordingly place the cure of it in the use of fudorifics and alexipharmics (k). But the inflammation here, as foon as it has rais'd an ebullition, by means whereof the lightly torrefied particles of the blood are in a fhort time expell'd, goes off spontaneously, and does no farther mischief (1).

15. But

(k) Vid. Sennert, lib. II. cap. XVI. de Febr. symptomat. contin. (1) The Eryfipelas and plague nearly refemble each other in 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 tumor, redness, and pain being first perceived in or near the groin, and thence descending to the feet; (4) in affecting the haratides when the head is threatened, and the glands of ting 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.

15. But the plague is much more violent than an Chap. 2. erysipelas; being, by its exceeding subtlety, fitted to pass through the innermost recesses of the body like The plague lightening, whence the spirits are suddenly dissipated, more vioand the texture of the blood fometimes diffolv'd, be- lent than fore nature, oppress'd by the speedy progress of the disease, is able to raise a feverish ebullition, which is the common inftrument the uses to expel whatever vitiates the blood.

16. If my opinion, viz. that this difease arises from Caused by inflammation, appears unfatisfactory, let it be confi- inflammadered that the presence of a fever, and also several other tion. particulars confirm it; as for inflance (1) the colour of the blood taken away here, which plainly refembles that taken away in pleuritic and rheumatic diforders; (2) the dark livid colour of the carbuncles, not unlike the mark left by an actual cantery; (3) the buboes, which are equally dispos'd to inflammation, as other tumors of any kind, and terminate by way of abfcefs, as most inflammations usually do; (4) the season of the year in which an epidemic plague arises, seems likewife to ftrengthen my opinion, for at the fame time, namely betwixt Spring and Summer, pleurifies, quinfies, and other inflammatory difeafes usually become epidemic; and I never knew these more frequent than they were for fome weeks preceding the beginning of the late plague at London. Neither is it at all material that the very fame year, that proved fatal to fo many thousands, was otherwise very mild and healthy, and that fuch as escap'd the plague never enjoy'd better health; and likewise that those who recovered were not fubject to a cachexy, and other indispositions, usually arifing from the foul remains left by preceding diftempers; and farther, that impost humes and carbuncles, tho' of the largest fize, after the inflamed particles, together with the fanies, was discharg'd, were easily cur'd by the common chirurgical methods.

17. But here perhaps it may be asked, allowing the plague to be an inflammatory difease, how it happens mics only that heating medicines, as most alexipharmics are, do service should be so successfully us'd, both for prevention and as sudorie cure. To this I reply, that these medicines only relieve fics. by accident, inafmuch as this depends upon their procuring fweat, whereby the inflamed particles of the

Sect. 2. blood are exhal'd and expell'd; but if they fail of raifing a fweat, as it frequently happens, the blood, being more inflamed by this additional heat, foon manifests the bad effects of fuch 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 appear'd. Too free an use of wine, and the taking of other strong preservatives every day, at set hours, have occasion'd this disease in numbers of perfons, who otherwise might probably have escap'd it.

18. As to the cure of these fevers, some perhaps will accuse me of presumption and imprudence for undertaking to treat thereof, as having liv'd at fome distance from the town, during the greatest part of the time the late plague prevail'd, and confequently being not fufficiently furnish'd with observations relating thereto. But fince fome physicians of greater abilities, who courageously stay'd in town at the peril of their lives, whilst the plague rag'd, have yet had no inclination to publish what they have learnt by frequent obfervation, respecting its nature, 'tis hop'd every good man will excuse me for communicating my fentiments of it, founded on a few of my own observations.

Manner of plague.

19. And first the indications of cure are to be contreath the fidered; which must always be directed either (1) to affift nature in expelling the disease, 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 method from art. But here perhaps fome may maintain that the plague may also be fuccessfully enough treated by anti-pestilential alexipharmics, with forms of which the works of practical writers abound. But whether the affiftance this kind of medicines affords fhould not rather be afcrib'd to their apparent virtue of raifing copious fweats, whereby they at the same time open a passage for the morbific matter to escape, than to any occult quality given them by nature in order to expel the pestilential poison, admits of great dispute.

Dubious pharmics relieve.

20. Neither is there reason to doubt of these alone, how Alexi- 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)

maintains that mercury and farfaparilla are true alexi- Chap. 2. pharmics for the virus thereof, should produce some examples, where the former has fometimes effected a cure without raifing a falivation, or taking downwards, and the latter without occasioning fweat; which I conceive it will be difficult to find. But to me it feems probable that the peculiar remedy of the plague, and proper alexipharmic of its poison, lies yet conceal'd in the bosom of nature, and that this diftemper can only be removed

by mechanical methods.

21. To confider therefore the first intention above- First intenmentioned more at large (m), which tends to affift na-tion of cure ture in expelling the morbific matter, agreeably to her own more fully, method of procedure; it must be observ'd that in the true considered. plague, when nature of herfelf commits no error, nor is forc'd out of the way by violent measures, she finishes the cure by an abfcefs in the emunctories, whence the matter is discharged; but in a pestilential fever the cure is performed by an univerfal perspiration, thro' the whole furface of the boby. Hence we may learn that the method of cure must be diversified, agreeable to the different procedure which nature points out in both difeases. For if one was to endeavour to discharge the matter of the true plague by fweat, it would be oppofing nature, because she attempts to do it by impofthumes: and, on the contrary, to attempt to expel the matter of a peftilential fever, otherwise than by sweat, would no way fuit with the procedure and disposition of nature.

22. We are yet unacquainted with a fet of certain Sweating remedies, capable of promoting the natural expulsion of fometimes the morbific matter in the true plague, or, in other prejudicial words, of forwarding the eruption of the imposthumes, in the unless it be supposed that a strengthening diet and cor- plague. dials may help towards this end: but, in reality, I should greatly apprehend that the inflammation, already too violent, might be farther increas'd thereby. And indeed experience has convinc'd me that sweats are ineffectual in this case: for tho' I must acknowledge that when a profuse sweat has lasted for three or four hours, and afterwards fuddenly stop'd, a swelling has appear'd, yet I conceive it is not at all owing to the fweat, because there are no figns of a fwelling whilft the fweat flows

Sect. 2. most plentifully, and when this is gone off, the fwelling may arise, as it were, by accident, viz. in consequence of nature's being eas'd of a part of her load, whereby the was too much oppressed, by means of the fweat, and of the confiderable heating of the body. by cordials given to raise the sweat. But the uncertainty and danger of driving out the morbific matter by imposthumes caus'd by fweat, fufficiently appears from its having proved fatal to near a third part (to speak within compass) of fuch as underwent this treatment. Whereas, on the contrary, feveral persons, in whom the swellings appeared in the regular and natural way, even whilft they were about their bufiness, and without any perceptible diforder 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 fweat in bed; from which time they began to grow worse, and, at length, the disease increafing, gave a melancholy proof of the perniciousness of the advice by their death.

23. Moreover, that the termination, or critical folution of the plague by tumors or imposthumation is both uncertain and dangerous, is manifest from a bubo, which fometimes rifes kindly at first, and with an abatement of the fymptoms, but afterwards fuddenly disappears, and instead thereof purple spots succeed, which are certain figns of death; and the cause of its striking in should justly feem to be afcribed to the copious fweats, intended to promote its eruption, which exhal'd by the pores a great part of the matter that should have ferv'd to fill and

keep it up.

No certain method of curing it.

Not cer-

tumors.

tainly ter-

minated by

24. However it be, this at least evidently appears, that providence has graciously furnished us with a certain method of expelling the morbific cause in other diseafes; but, in this, as a scourge of our transgressions, has given us only a precarious one: and perhaps the cause of the great destructiveness of this disease may be as well ascrib'd to this source, as to its malignity; for inthe gout and other diseases, where there is little suspicion of malignity, the striking in of the morbific matter proves as certainly pernicious. And hence it clearly follows that the physician, who in the cure of other difeases ought to tread closely in nature's steps, must here pursue a diffetent method: and for want of attending more generally Chap. 2. to the truth of this maxim, the plague has prov'd much more destructive, than it would otherwise have been.

25. Since then it appears quite unfafe to follow na- Nature not ture in her method of curing this difease, we are in the to be follownext place to confider in what manner the fecond in- ed here. tention is to be answered, which confifts in attempting the cure by a different one. And this I conceive is only to be effected by bleeding, or fweating. As to the for- Bleeding, or mer, I am well aware that 'tis generally condemn'd in sweating this difease; but, setting aside vulgar prejudices, I shall most likely here briefly and equitably examine the reasons usually to relieve.

brought against it.

26. And, first, I appeal to the physicians who conti- Bleeding nued in town during the late plague for an answer to examined, this question, Whether free and repeated bleeding, before and how to a fwelling appeared, was ever observed to prove fatal to be us'd. any of the infected? But 'tis not at all to be wondered at, that bleeding in a fmall quantity, or after the appearance of a fwelling, 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 raife a tumor, without fubflituting in its flead any other fufficiently 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 difease, 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 affent to their reasonings, fill I know what answer they will make to the question above proposed.

27. I am well aware that feveral writers of great Commended character have judg'd bleeding proper in the plague; the by many eprincipal of which are Ludovicus Mercatus, Joannes minent Costaus, Nicolaus Massa, Ludovicus Septalius, Trinca- writers. vellius, Forestus, Mercurialis, Altomarus, Paschalius, Andernachus, Pereda, Zacutus Lusitanus, Fonseca, &c. But By Botallus Leonardus Botallus, a celebrated phyfician of the last cen- in a high tury, is the only one I know of who places the whole degree. of the cure in as copious bleeding as we demand.

or work have

Sect. 2. I shall transcribe his words, that I may not be judged

fingular in this practice.

28. "Briefly (fays our author) I conceive there is no " plague wherein bleeding may not prove more beneficial "than all other remedies, provided it be feafonably used, " in due quantity; and am of opinion that the reason of " its having fometimes done no fervice, proceeds either " from having had recourse to it too late, or the too sparing use thereof, or to some error in both these parti-" culars." And a little farther he fubjoins, "that if our " apprehension be so considerable as to prevent our ta-"king away enough blood, how is it possible to judge " exactly what good or mischief bleeding may do in this disease? For if a disease, in which four pounds " of blood are required to be taken away, in order to its " cure, and yet but one is taken away, deftroys the se patient, it does not therefore prove destructive bese cause bleeding was used, but because it was perform'd in an improper, and, perhaps, unfeafonable manner: 66 but malevolent and indolent men always endeavour " to fix the failure on a particular remedy, not because " it did really do mischief, but because they corruptly defire to have this remedy generally discredited. Or, "fuppoling there be no malice in their attempt, they cannot be excus'd from ignorance, and following a bad custom herein; both which are doubtless pernicious, but the former much more fo." Then proceeding to confirm his reasonings from experience, he has these words a little lower: "These particulars being attended to, no fenfible person can justly censure bleeding, 66 but must rather highly esteem and commend it as a "divine remedy, and practife it with affurance; which " indeed I have done for these fifteen years past. And in peftilential difeases, at the siege of Rochel, and four vears ago at Mons in the province of Henault, at Paris for these two years, and the preceding year at Cambray, "I found no remedy quicker and fafer in its effect in all " my patients, whose number was very considerable, than plentiful and feafonable bleeding (n)." To thefe

(n) Bleeding in the beginning of this difease should feem unfale, as it always, in some measure, flackens the course of the blood to the external parts, and confequently checks perspiration; whence the poison is detain'd in the body. Besides, the terror and apprehension the diseas'd are generally under inimediately hurries remarks the author adds fome instances of persons Chap. 2. cured by this method, which I here omit for brevity fake; but must beg leave to relate an uncommon history of a fact, no way foreign to our present subject,

which happened a few years fince in England.

29. At the same time, when, amongst the other ca- History of lamities of the civil war that feverely afflicted this nation, cures from the plague also raged in feveral places, it was brought bleeding by accident from another place to Dunftar castle in plentifully. Somerset-shire, where some of the soldiers dying suddenly with an eruption of fpots, it likewise seized several others. It happened at that time that a furgeon, who had travell'd much in foreign parts, was in the fervice there, and applied to the governor for leave to affift his fellow foldiers who were afflicted with this dreadful difeafe in the best manner he was able, which was accordingly granted. His method was, at the beginning of the difease, and before a swelling could be perceiv'd, to take away fo large a quantity of blood, that they were ready to faint and drop down; for he bled them as theystood, 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 fent 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 fingle person died; which is furprizing (o). I had this relation from Col.

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 us'd 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 fudorifics.

(0) The fuccess that attended this very fingular 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 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, diforderly

Sect. 2. Francis Windham, a gentleman of great honour and veracity, and at that time governor of the castle .--- I shall fet down what I have met with deferving notice, with respect to this subject, when I come to deliver the few observations I was enabled to make whilst the late London plague prevail'd.

Sweating preferred to bleeding.

Its Inconveniences.

30. But tho' I approve of this method in my own mind, and have formerly experienc'd its usefulness in many inftances; yet, for feveral reasons, I prefer the diffipation of the pestilential ferment by sweat to its evacuation by bleeding; because sweating does not weaken the patient fo much, nor tend to difcredit the phyfician. But this has also its inconveniencies; 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 raife one in fuch fubjects by heaping on clothes, and giving powerful fudorifics, fo much the greater danger there is of caufing a delirium, or, which is still worse, after having been deluded a while with vain expectations, pestilential spots are at length forc'd out instead of sweat.

31. (2) As the chief malignity of this difease lies in the more spirituous parts of the blood, whence the motion of its groffer particles is generally fomewhat 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 preternaturally distended. And from this dissolution of the fanguineous fibres I judge the origin of the pestilential spots or eruptions should be deriv'd; because, like the marks left by violent stripes on some muscular part of the body, they are at first of a deep red, but

fhortly afterwards become blue or black.

32. (3) Again, in fuch as are pretty apt to fweat, if the fweat be stopt too early, viz. before the morbific matter be totally expell'd, the buboes, which began to rife kindly at the decline of the fweat, by thus wasting a part

disorderly and ill-establish'd empiricism, Not to mention that fome would lose more blood than others, before they became faint, which however appears to have been the circumstances that determin'd 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 'tis manifest he acted rather by caprice and humour than found and deliberate judgment.

of the matter intended to fill them, either strike in, or Chap. 2. at least never become true abscesses, (as it usually happens in the fmall-pox when the patient has fweat copioufly in the beginning) and the matter thereof, being re-admitted into the blood, raifes 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 fhew more clearly how to prevent these and other inconveniencies, I will faithfully fet down all that I have done and observed in this difease, beginning from the first appearance of the late

plague.

34. At the beginning of May, in the year 1665, I An extraattended a lady, about one and twenty, and of a fan- ordinary, guine constitution, who, besides the burning fever, which cale. began a little earlier, had frequent vomitings, and other febrile fymptoms. 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 obferved in the beginning of this treatife, a loofeness usually comes in the declension of a fever for want of giving a vomit, when it was indicated by the retchings in the beginning (p). Visiting her next morning, I found she had a loofeness, 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 shew'd, and consequently requir'd to be treated in a different manner from that abovemention'd, which I had hitherto constantly us'd with fuccess. Upon this a fenior phyfician being join'd with me in confultation, bleeding was repeated by our joint advice, which the age, constitution of the patient, and the violent ebullition of the blood feem'd to demand; moderately cooling cordials were also given, and glysters injected every other day. At the decline of the difease we directed some of the stronger alexipharmics, because there arose very uncommon and irregular symptoms, which are generally efteem'd figns of confiderable malignity; but all these means proving of no effect, the patient died about the 14th day.

35. The fingular nature of this difease occasioned Thoughts various reflexions in my mind for fome days afterwards; occasioned

but thereby.

<sup>(</sup>p) See Seet. I. Chap. W. Par. 9:

the refult.

Sect. 2. but 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 distill'd from her nose a little before her death; (4) that her blood refembled that taken away in a pleurify; (5) that she had a cough, and dull pains in the vital parts, or breaft; and (6) that it was that feafon of the year, which includes the end of fpring and beginning of fummer, and which is lefs difpos'd to produce continued fevers; all these dividing, as it were spontaneous. ly, at this time, and either becoming intermittents, or fuddenly turning to pleurifies, and the like inflammatory disorders; and lastly (7) that pleurisies were very epidemic at the same time: Having, I say, duly confidered these particulars, I concluded that this fever, tho' it had not the pathognomonic or diffinguishing figns of a pleurify or peripneumony, was fymptomatic, and occasion'd by an inflammation, conceal'd near the vital parts, tho' it was unaccompanied with pain in the A new me- fide, or great difficulty of breathing. In short, I bethod of cure came at length of opinion, that I ought to have follow'd the fame method here, that I had frequently us'd in a pleurify with good fuccefs. And indeed it afterwards fully answer'd my expectations; for being call'd fome little time after to a man affected exactly in the same manner, I began and finished the cure by repeated bleeding, after the method described below in the pleurify. And about the end of May and beginning of June, this fever being then very epidemic, I recovered numbers by the fame means. From this time forwards that dreadful plague began to rage with great violence, which afterwards became fo fevere, that in the space of seven days it destroyed as many thousand perfons in this city only.

> 36. Whether the fever under confideration deferves to be entitled a plague, I dare not positively affirm; but this I know by experience, that all who were feiz'd with the true plague, attended with all its peculiar concomitants, at that time, and for some time afterwards, in my neighbourhood, had the fame train of fymptoms both in the beginning and course of the disease. But when there was danger from the near approach of the plague to the house wherein I lived, yielding at length to the follicitations of my friends, I accompanied the vaft

> > numbers

numbers that quitted the city, and removed my family Chap.2. some miles distant from it. But I returned to town in fo fhort a time, and whilst the plague yet raged fo violently, that on account of the scarcity of abler phylicians I could not avoid being called to affift the infected. And not long after I attended feveral persons in fevers, The pestiwhich to my great furprize I found were of the fame lential kind and nature as those I had so successfully treated be- fever cur'd fore my departure: and therefore trufting to my own bleeding. experience, as a guide to be preferred to all manner of airy notions, I scrupled not to direct bleeding, as I had formerly done in the like cases.

37. I continued this practice of plentiful bleeding, along with the use of a ptisan and a cooling diet, in numbers with wonderful fuccess; 'till at length it fail- Mischief of ed me, thro' the obstinacy of the patients friends, who not taking were fo unreasonably prejudiced against it, as not to let away enough blood be taken away, to the great detriment of blood. the difeafed, from whom, as the cure turned chiefly upon bleeding, either a fufficient quantity of blood, or none at all, was to be taken away. Finding my endeavours fo warmly oppos'd, I judged that the discovering another method of curing this disease would be of

eminent fervice for the future.

38. I shall here relate an instance of the mischief I Instance'd in once innocently did, not by bleeding, but because I was a particular hindered from taking away as much blood as I judged caje. requifite .-- I was called to a young man, of a fanguine complexion, and robust constitution, who had been feiz'd with a violent fever two days before, attended with vertiginous pains in the head, excessive vomiting, and other fymptoms of a like kind; and finding upon enquiry that there was no fign of a fwelling, I immediately directed a large quantity of blood to be taken away, the top whereof, when cold, refembled corrupt pleuritic blood; and I also prescrib'd a ptisan, and cooling julaps and broths. In the afternoon bleeding was repeated in the fame quantity, and again, in like manner, the next morning. Calling upon him in the evening I found him much better, nevertheless his friends mightily opposed farther bleeding, which yet I infifted on again, affuring them that only a fingle bleeding more was necessary, and he would then be out of danger, but that if they continued to oppose it, bleed-

Sect. 2. ing had better have been wholly omitted, and the cure undertaken by fweat, adding, in fhort, that otherwife he would certainly die. The event confirmed my prognostic; for the dispute about the operation to be perform'd lasted so long that the opportunity of doing it was loft, and the remains of the peccant matter, which ought to have been entirely carried off, (as bleeding fo frequently repeated left no room to expect an abfcefs) corrupting the whole mass of blood, and destroying the texture thereof by its extraordinary fubtility, the patient died in a few hours afterwards.

> 39. Having frequently met with fuch perplexing obstacles, I follicitously bent my thoughts to discover, if possible, as effectual, and at the same time a less exceptionable method of curing this difeafe. And after frequent and long confideration of the matter I pitch'd upon the following, which has fince proved always fer-

viceable, and every way compleat.

A Cafer method substituted in its place.

40. First, if a fwelling has not yet appear'd, I bleed moderately, according to the strength and constitution of the patient, after which a fweat is readily and expeditiously raised, which otherwise would not only be difficulty 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 fucceeding fweat makes abundant amends for the confiderable mischief the loss of blood, tho' in a small quantity, would otherwife occasion. After bleeding, which I direct to be done in bed, fo foon 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 raifing a fweat, than one would eafily imagine. Then, if the patient does not vomit, I administer these and the like sudorifics:

A sudorific

Take of Venice treacle, half a dram; the electuary of the egg, a scruple; Gascoign's powder, twelve grains; cochineal, eight grains; faffron, four grains; and the juice of kermes enough to make the whole into a bolus; to be taken every fix hours, drinking after it fix spoonfuls of the following julap.

Take of the distill'd water of carduus benedictus, and compound scordium water, of each three ounces;

A Sudorific julag.

treacle

treacle water, two ounces; fyrup of cloves, an ounce: Chap. 2. mix them together for a julap.

41. But if there be a vomiting, as it frequently hap- Sudorifics pens in the plague and pestilential fevers, I forbear fu- when to be dorifics, till, by the weight of the cloths, and throwing given. part of the sheet over the face between whiles to collect the steams, the sweat begins to flow. For it is well worth observing that, as foon as the rays of the morbific matter arrive at the circumference of the body, the loofeness and vomiting, occasion'd by their being turn'd 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 properly retain'd, and

excite fweat as well as can be wish'd.

42. I remember that when I was defired by an apothecary to vifit his brother, who lay dangerously ill of a pestilential fever, and spoke of giving a sudorific, he faid he had already given feveral strong ones without effect, the patient having thrown them up by vomit. To this I made answer, that he might prepare one of the most nauseous of those that had been exhibited, and I would eafily 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, fwallowed and kept down a large bolus of Venice treacle, which, caufing him to fweat plentifully, he recovered.

43. But to come back to my fubject : I direct the The fiveat fweat to be continued for twenty four hours, by giving to be condraughts of fage posset drink, or mace ale, between whiles; ftrictly cautioning against wiping off the sweat, and not allowing the patient's linnen to be changed, however moift or foul it be, till twenty four hours after the fweat 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 left exposed to a fresh conflict, which by a longer continuance of the fweat would have been out of danger.

44. And, in reality, I wonder much at Diemerbroeck Objections and others, when I confider upon how flight a pretext to it anthey are induced to ftop the fweat, namely to preferve fwered. the strength of the patient. For (1) that the patient

tinued 24

Sect. 2.

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 difease. (2) I shall not fcruple 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 fweat for twenty four hours, have been fo far from complaining of greater weakness from thence, that they have declar'd that in the same proportion the superfluous humour was thus carried off, they perceiv'd their strength increase. And towards the latter part of the time, I have often observ'd with furprize, that there appear'd a more natural, genuine and copious fweat than the former occasioned by the sudorific, and which gave greater relief, as if it were truly eritical, and terminated the difeafe. (3) Again, I do not fee what inconvenience would attend refreshing the patient with restorative broths and liquids, when the fweat is at the height, and then the objection of want of strength to bear long sweats, vanishes. If, therefore, a faintness be perceiv'd towards the end, I allow the patient to fup 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 fweat, fufficiently fupport the strength. But in a matter of fact fo evident, 'tis needless to use many arguments; for what clearly flews the advantages of this method is, that whilft the patient continues to fweat, he judges himself in a fair way of recovery, and in the opinion of the attendants feems in no farther danger; but as foon as the fweat ceafes, and the body begins to dry, all things change for the worse, a kind of relapfe being thereby occasioned.

What is to be done after the fweat 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 insusion of tamarinds, the leaves of sena, rhubarb, with manna and solutive syrup of roses dissolv'd in the strained liquor (q). And by this method I recovered several persons, who were seiz'd with a pestilential sever; and did

not

not lose a fingle patient after I began to use it (r). Chap. 2.

46. But where a swelling has appear'd. I have hitherto

(r) The intentions of cure in the plague, as delivered by Hoffman are, (1) to affift nature in promoting the discharge of the poison receiv'd, by the proper outlets, and chiefly by these criti-cal tumors whereby it is generally expell'd; 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 fafety. Opiates generally prove detrimental, but mild cordials do fervice. An emetic is very proper to be given, as foon as a fickness at stomach is perceiv'd along with a cardialgia; and being immediately follow'd by a sudorific, has been found to remedy the disease in the beginning. Nitre is excellent in full habits, bilious or fanguine constitutions, and where the heat is confiderable, the fever violent, and accompanied with thirst, and pain in the head. But where there is a drowliness, low pulse, coldness of the extremities, and great terror has preceded, nitrous medicines should be refrained. It is always faser 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 extremes of heat and cold are equally to be avoided in the course

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, prepar'd of sigs, the roots of white lillies, roasted onions, linseed meal, honey and saffron; or by ripening plasters applied thereto, such as diachylon with the gums, melilot, or mucilage plaister. After suppuration they are to be opened and cleansed and incarned, with balsam of Arcæus, mixt sometimes with Basilicon; allowing time for the sames to be discharg'd, and not heating 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 garlic, pigeons dung, Venice treacle, and will 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 experienc'd.

Take of restified 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.

Bleeding bow practicable wish fafety.

Sect. 2. hitherto forbore bleeding, even in fuch as had little tendency to fweat, apprehending the fudden death of the patient might prevent the intended fweat, the morbific matter returning tumultuously into the emptied vessels. Yet possibly bleeding might be used with safety, provided fweat were raifed immediately afterwards, which being continued for the space abovemention'd, may be able to disperse and waste the whole bulk of the humour by degrees, with much less danger than would attend the waiting a long time for a kindly fuppuration of the imposthume, which is extremely fallacious and precarious in so violent a disease.

47. To conclude; wherever it shall appear to the reader that I am mistaken in point of theory, I ask his pardon; but with respect to practice I declare that I have faithfully fet down all particulars, and have no where propos'd any thing which I have not thoroughly tried; and, in reality, when I come to die, I trust I shall have the fatisfaction of being inwardly affur'd that I have not only endeavour'd, 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 defire to be, if I should be feiz'd with the same distempers; but also that I have laboured, as far as I was able, that the cure of diseases might be directed with greater certainty after my decease; being of opinion that any improvement in this kind of knowledge, tho' it should teach nothing more pompous than the cure of the tooth-ach, or coms, deferves to be preferr'd to the vain oftentation of refined theory, and a

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

By way of prevention, the fafest and likeliest means to be used are, (1) to quit the infected place; (2) to avoid whatever weakens the body, checks perspiration, and generates crudities in the first paffages; as excessive bodily labour, too intense application of mind, fitting up late, warm bathing, all large evacuations, overloading the st mach, &c. (3) if the body be full of foul humours, to correct their viriated quality, by temperate balfamics mixt with acids, taken in a moderate dole, 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 esteem'd excellent against putrefaction; and lastly (5) to guard against vio-lent passions, endeavouring to preserve a constant firmness of mind, and shaking off all timorousness and dejection. - Thus far the excellent Hoffman.

knowledge of trifles, which are perhaps of as little fervice Chap. 2. to a phyfician in removing difeafes, as skill in music is

to an architect in building.

48. In the last place I shall subjoin one short note, The term lest perhaps my opinion of Nature be taken in a wrong nature, exfense, or, at least, not sufficiently understood. In the Plain'd. foregoing discourse I have frequently made use of the term nature, and ascribed various effects to her, as if I would thereby represent to myself some one self-existing thing, but every where diffus'd throughout the machine of the universe, which, being endow'd with reafon, governs and directs all bodies, fuch a one as fome philosophers feem to have conceiv'd the foul of the world to be. Now as I neither affect novelty in my fentiments nor expressions, I have made use of this ancient word in these pages, but, if I mistake not, in a guarded fense, and as it is understood and applied by found writers. For by Nature I always mean "a certain " affemblage of natural causes, which, tho' destitute of " reason and perception, are directed in the wisest manner, whilst they perform their operations, and " produce their effects." For the creator and preferver of the universe disposes all thing in such manner by his infinite wisdom, that they proceed to their appointed functions with a certain regularity and order, performing nothing in vain, and only what is best and fittest for the whole fabric of the universe, and their own peculiar nature; and so are moved like artificial engines, not by their own direction, but by that of the artist (s).

(s) The term Nature not being explained by our author in a manner quite agreeable to the usual medicinal acceptation thereof, we shall here subjoin a clearer and suller definition of § same 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 veilels, and " the rest of the solids, wherein the fluids are contain'd, by which " due motion of the folids and fluids, there is both a continual fe-" cretion made of the useful or nutrimental parts, which should " be retained for the service of the body, and an excretion of the " useless and excrementations parts, which should be discharg'd 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 fignify the structure, mechanism and con-" trivance of the body, acting with certain powers, according to " certain necessary and mechanical laws, assign'd it by its maker." Hippocrates briefly stiles it " The aggregate of all things that

" concur to perfect health;" and infinuates that it ought to be

the foundation of all reasoning in physic.

## SECT. III. CHAP. I.

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

The pro-gress of the

N the year 1667, at the approach of the vernal equinox, the small-pox, which, during the immediately Small pox preceding petitiential confituence, applications of this Con- ly, or not at all, began to shew itself, and spreading more epidemic about autumn; and more every day, became epidemic about autumn; after which, its violence being abated by degrees, upon the coming on of the winter, it decreas'd, but returned again the following spring, and prevail'd, till it was check'd, as before, by the subsequent winter. It afterwards increas'd a third time with the approaching fpring, but did not then rage fo feverely, nor fo generally, as it had done the two foregoing fummers: and in August, 1669, it totally difappear'd, and was fucceeded 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 to have been, either before or fince; and nevertheless, as it was at that time the genuine and a kindly fort, it deftroy'd few in comparison of the multitudes that were feiz'd therewith.

A good kind.

A new fethe same time.

2. At the fame time in which the fmall-pox appear'd, ver arose at 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 Imall-pox, did notwithstanding last as long; but in the winter when that abated, this prevailed, and when the fmall-pox returned again with the fpring, the fever went off, so as thus to leave the fmall-pox the predominant epidemic of this conflitution; the fever notwithstanding never manifestly ceas'd during this space, till at length it totally disappeared, together with the small-pox, in August 1669.

And a loofenefs.

3. These two epidemic diseases were accompanied by a third, especially the last fummer, wherein this consti-

tution prevailed, viz. a loofeness, the constitution of Chap. 1. the air then inclining to the subsequent dysentery. But a however this be, at least it appeared that this disease fo nearly refembled the then reigning fever, that it should feem to be only the fever turn'd inwards, and

fixing upon the bowels.

4. I shall treat of these three disorders apart, which may justly be called the sole epidemics of this constitution. I begin with the [mall-pox, of which I shall difcourse more at large, because the species that prevailed during this term of years feem'd to me to be more particularly genuine and regular than any other, inafmuch as it exhibited the like phenomena, and appeared with the fame train of fymptoms in all that were feized with it; from which therefore, as being the most perfect in its kind, both a true history of this disease, and the method of cure are to be taken.

5. For it must be observed that every particular con- Every conflitution of years has not only a proper and peculiar fe- flitution atver belonging thereto, but also a peculiar kind of fmall-tended with pox, which is of this species for this course of years, but fever and of a different one in the following years, however alike small-pox. they may feem with respect to certain phenomena which are common to all the kinds: fo differently does nature act in the production of epidemic difeases.

6. But to refume the fubject: I will first give the hiflory of this species of the small-pox, which I call the regular kind, to diftinguish it from the irregular kinds of the following years; and I will also subjoin the me-

thod of cure, which has fucceeded to my wish.

### H A P. II.

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

He small-pex in those years it proves epidemic, When the and is also mild and regular, usually begins about small-pox the vernal equinox, as did that now under confideration; begins. but in those years wherein it is not only epidemic, but likewise irregular, and of a more dangerous kind, it fometimes appears fooner, viz. in the month of fanu-

Sect. 2. ary (a); feizing whole families, and sparing none of what age foever they be, unless fuch as have already had it, not even fuffering those to escape who have been afflicted with the baftard kinds: which are indeed difeafes of a different nature (b). There are two kinds of this smallpox, as well as of that which happens in all years, the distinct and confluent; which tho' they differ not essentially, as they fay, are yet eafily distinguished by some confiderable fymptoms peculiar to each kind.

The leading the distinct kind.

2. (1) The distinct kind begins (1) with a chilness symptoms in 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 observ'd fuch a disposition in children, either before or after the eruption; (6) pain in the parts immediately below the firebiculum cordis, if they be preffed with the hand; (7) fleepiness and stupor, especially in children, and fometimes convulfions, which happening after dentition is over, I always suspect the small-pox to be just approaching, and the eruptions appearing in a few hours after generally confirm the prognoftic: fo that, for inftance, if a child be feized with a convulfive fit over night, as it usually happens, the small-pox comes out next morning; and I have frequently observ'd that the fmall-pox immediately fucceeding fuch fits throws out large eruptions, is of a mild and favourable kind, and feldom proves confluent. And these are nearly all the fymptoms that accompany this difease in the beginning, and generally precede the eruption of the puftules. But it may be proper to observe here that in fuch whose blood is of a looser texture, and easily ad-

> (a) Boerhaave observes that if the small-box arises in a place where it has not appeared for fix 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 eafily cured in the be-ginning. Hence great attention must be had here to the nature of the difease, and the particular treatment it demands, &c. so that in the fummer, when it will be of an extremely bad kind, we may be prepar'd to give such medicines as agree best with this epidemic species; tho' it then generally proves mortal. But if the finall-pox appears in May, it will be gentle, and of a favourable and healthful kind. See Prax. med. vol. v. p. 299.

> (b) 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 perfon has had the diffinet kind, he may yet have the confluent one; but if he has had this species, he will never be seized with this dis-

cafe again. Ix.

thits of a change, it fometimes happens that the course Chap. 2. of feparation is perform'd by degrees, without any confiderable fickness previous to the expulsion of the matter, and eruption of the puffules.

3. The distinct small-pox come out mostly on the Time and fourth day inclusive from the beginning of the illness, manner of and formetimes a little later, but very rarely fooner; at the eruption which time the fymptoms are usually much abated, or even go quite off, fo that the patient feems tolerably well; only grown persons are so inclined to sweat, as fearcely to be kept from it, however thinly they are cover'd; and this disposition continues till the eruptions begin to ripen, and then vanishes spontaneously. The eruption proceeds nearly in the following manner: first a kind of pale red puftules, as large as the head of a small pin, appear scattered up and down, first on the face, neck and breaft, and afterwards on the whole body. During this stage of the disease, the throat is affected with a foreness that increases proportionably as the puftules rife, which growing every day larger, and fharper at the top, diffuse a redness and inflammation over the fkin and flesh of the parts adjacent.

4. This happens about the eighth day from the be- Beginning ginning of the disease, which is a time I always take and progress particular notice of here, for then the spaces between of the supthe pustules, that appeared before of a pale white, begin puration. to grow red, and fwell in proportion to the number of puftules, and are affected with a pain from the diftemper and tearing of the parts, as it were, which, continually increasing, promotes the inflammation and swelling abovementioned, fo that in the progress of the difease the eye-lids are so fill'd and distended, as sometimes to make the patient blind, and they shine, and nearly refemble an inflated bladder. Sometimes the blindness comes on fooner, a greater number of puftules fixing on the eyes from the very beginning of the eruption; next after the face, the hands and fingers fwell in proportion to the quantity of the eruptions. The puftules on the face, that till this day were fmooth and red, now grow rough and whitish, which indeed is the first fign of a beginning fuppuration, and they likewife gradually discharge a yellow matter, in colour refembling a honey-comb. The inflammation of the hands and face being in the mean time come to its height, causes the spaces between the

G

erup-

## The regular Small-pox of the Years

Sect. 2. eruptions to look of a pretty florid colour, like that of damask roses: and in reality the more mild and genuine the fmall-pox is, fo much more the eruptions and their intermediate spaces approach this colour. As the puftules in the face appear rougher and yellower every day as they ripen, fo, on the contrary, those of the hands and other parts appear smoother and whiter.

The pustules on the 11th day.

5. On the eleventh day the fwelling and inflammation begin to dry 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, equall'd that of a largepea, dry and scale off; and in this kind of small-pox they commonly disappear on the fourteenth or fifteenth day. But the eruptions of the hands generally prove more obstinate than those of the other parts, and being yet fresh and white, remain a day or two after the rest. Those of the face and body scale off, but these burst, and fo vanish. The pustules of the face are succeeded by a fcurf, or branny scales, and these sometimes by pits, or pock-marks; for when the puftules first fall off, no uneafiness is perceiv'd in the skin, but these scales often coming on and falling off alternately, at length those pits are made that frequently continue visible long after the recovery of the patient in this disease; tho' the distinct fmall-pox very rarely leaves any marks behind it. During the last fix months of the year this fometimes happened, feldom in the first; unless the fort was confluent, as we shall hereafter remark. The patient is either quite costive, or has few stools throughout the whole course of the diffemper. And let this suffice for the distinct small-pox.

The confluent smallpox described.

6. (2) That species of the small-pox, which we call the confluent, is attended with the fame fymptoms in common as the distinct, only they prove more violent; the fever, anxiety, fickness and vomiting, &c. being more severe, and by these 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 describ'd, where the great tendency thereto generally foreshews that the small-pox, which will foon appear, will not run together. Moreover a loofeness fometimes precedes, and continues a day or two after the eruption; which I have not hitherto met with in the distinct small-pox.

7. This

7. This kind of small-pox generally comes out on the Chap. 2. third day, fometimes earlier, but scarce ever later, whereas the distinct appears on the fourth day inclusive from The pustules the beginning of the differnper, or later, but very rarely generally before, and the fooner the puffules come out before the come out on fourth day the more they run together (c). However, the 3d day. tho' this be true in general, and the confluent kind scarce ever appears fo late as the fourth day, yet fometimes the eruption is deferr'd by fome violent fymptom to the fourth or fifth day, e.g. (1) sometimes a sharp pain in the loins, refembling a fit of the stone; (2) sometimes in the fide, like a pleurify; (3) fometimes in the limbs, as in the rheumatism; or lastly, (4) in the stomach, attended with great fickness and vomiting. In these cafes, which however are not common, I have observ'd the fmall-pox to come out later than ordinary, as being retarded by the confiderable violence of the fymptoms above enumerated, which indeed being more fevere than usual, when they arise in the very beginning, manifeftly indicate the subsequent small-pox to be of the confluent kind, and not void of danger.

8. I am next to remark that tho' the fymptoms accompanying this difease in the beginning, in the difinet kind, go off, as I faid above, immediately after the eruption, it nevertheless happens much otherwise in the confluent kind; both the fever here, and other fymptoms, afflicting the patient for feveral days after the

puffules appear.

9. Sometimes this fort comes out like an eryfipelas, sometimes and fometimes like the measles; from which they can- they come not be distinguish'd, at least as to the outward appear- out like an ance, unless by a physician well acquainted with these erysipelas, difeafes. But whoever carefully attends to the different meafles time of the eruption in these diseases, and other circumftances, which from the history of each will be found to differ extremely, will readily diftinguish them. As the diftemper increases, the puftules, especially those of the face, do not rife plump, as in the distinct kind, but run together, and appear at first like a red bladder

(c) Most practitioners observe that the slower the small-pox come out, the milder theyprove, and the better they ripen. Those appearing on the first day of the illness are esteem'd the worst kind, those on the second, milder, those on the third, still more gentle, and on the fourth, the mest favourable. Boerhaave, Prax. ened. Vol. v. p. 302.

Sect. 3.

covering the whole face, and making it to fwell fooner than in the distinct fort, till at last they appear like a thin white pellicule, closely adhering to the face, and rifing little higher than the furface of the fkin.

Begin to dry after the 8th 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 fkin daily increase, till at length the pellicule falls off in large scales: but when the disease has been very severe, it usually sticks to some parts of the face till after the twentieth day. The more violent the [mall-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 are, and the fooner they scale off. When this pellicule, or scab, which covers the face first falls off, it leaves no roughnefs behind, but it is immediately fucceeded by branny fcales, of a very corrofive nature, which not only make larger pits than the distinct kind generally do, but also much disfigure the face with unfeemly fcars. And in the confluent kind, if the difease has been very violent. the fkin of the shoulders and back sometimes scales off, leaving these parts bare.

Whence the danger in

11. It must be observed that this disease is not to be efteem'd dangerous from the number of the eruptions this disease. Scattered over the rest of the body, but only from that in the face; for if they be very thick in the face, tho there are but few, and those of the distinct kind every where elfe, the patient is equally endangered, as if all the limbs were extremely full (d). But, on the contrary, tho' every part belide be very full, if there be but few in the face, the danger is lefs. What has been faid of the number of the eruptions may be affirmed of the kind, which must be judged of by those in the face.

The puffules 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 approach'd the body. And these

<sup>(</sup>d) Beerhaave observes that the danger always rifes in proportion to the number of pullules that feize 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.

are observations on the eruptions, which I thought pro- Chap. 2.

per to premise.

13. The confluent small-pox is attended with two Afalivatiother fymptoms, not less considerable than the erupti- on and a ons, the fwelling, or any one of those abovementioned, looseness viz. (1) a falivation, or spitting in grown persons, and attend this (2) a loofeness in children. The former is so constant an attendant on this difease in adults, that I never met but with one patient who was free from it; but the latter, namely the loofeness, does not so certainly affect children. Whether provident nature has therefore fubstituted these evacuations, because in this small and flat fort the morbific matter cannot be fo entirely difcharged, as by the larger and higher eruption in the distinct kind, is what I do not determine; for I only write a history, and do not undertake to folve difficulties. This however I certainly know that thefe fymptoms not only generally accompany the confluent fmall-pox, but that the evacuation made thereby is as necessary, as either the eruptions, or the swelling of the face and hands.

14. The falivation fometimes begins as foon as the when the eruptions appear, and fometimes not till a day or two falivation after. The matter is for fome time thin, eafily and begins and plentifully expectorated; and, indeed this falivation is ends? not much unlike that rais'd by mercury, only the faliva here does not fmell fo difagreeably. But towards the eleventh day, the faliva, now become more vifcous, is rais'd 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 falivation generally stops, tho' fometimes, but very rarely, after it has ceas'd entirely for a day or two, it returns again. At the fame time the fwelling of the face begins to abate, but then, instead of it, the hands commonly swell, or at least ought to do fo.

15. A looseness does not seize children so soon as a falivation does grown perfons; but whenever it begins, unless it be stop'd by art, it attends the distemper

throughout.

16. In both kinds of the small-pox the fever rages The fever most from the beginning to the time of the eruption, when highafter which it abates, and continues much more mode- eft.

The regular Small-pox of the Years 102 Sect. 2. rate till the fuppuration begins, which being finish'd, 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 (efpecially) the more dangerous fymptoms arofe, and raged most feverely.

18. Having now given an accurate history of this kind of fmall-pox, including its true and genuine phenomena, when the natural course of the distemper is not disturbed, we proceed next to treat of the irregular symptoms which happen in this disease, when it is unskilfully treated.

The 8th day in the di-Stinet most dangerous.

19. It is to be noted therefore that the irregular fymptoms happening on the eighth day, in the diffinet 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 to be thoroughly confidered; it being apparent that most of those who perish by either species, die on one of the abovementioned days in each.

The bot regimen] where improper.

20. For first in the distinct kind, since the patient fweats pretty freely, which, as we remark'd above, ufually happens in grown persons, he conceives all will go well, hoping the virus, or malignity of the difeafe will by this means be expell'd thro' the pores of the skin, and therefore diligently promotes the fweat by cordials and a hot regimen, as should feem to be proper; and he purfues this method the more willingly, both because he seem'd to have been reliev'd thereby in the beginning, and likewife that it agrees better with the ill-grounded opinion of the attendants. But those particles being at length expell'd by sweat, which should have ferved to raife the pustules, and fwell the face, on the eighth day, the face, which ought to fwell and be inflamed in the intermediate spaces, contrariwife appears flaccid, and those spaces white, or pale, whilft yet the puftules look red, and continue elevated even after the death of the patient. The fweat, which had flow'd freely to this day, now ceafes fuddenly and spontaneously, and cannot be rais'd again by the warmest cordials. In the mean time the patient is feiz'd with a delirium, great restlessness and sickness, a thence ocea- frequency of making urine in small quantities, and dies in a few hours contrary to expectation. But it must

The mortal Symptoms froned.

here be observ'd that if the eruptions be few, the dif- Chap. 2. eafe happen in the winter, and in a person in years, or if bleeding has been previously us'd, this hot regimen, of which we have just treated, does not then so certainly hinder the fwelling of the face, and confequently haften death, as where the eruptions are many, the patient be in the prime of life, and no blood has been

taken away.

21. But in the confluent kind the danger is greatest, The 11th and the greatest number die on the eleventh day; for as day most the falivation, which had hitherto preferv'd the patient, dangerous in the concommonly ceases spontaneously about this time, unless fluent kind. the fwelling 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 fmall-pox, where the eruptions are fo fmall, not only the falivation, but also the fwelling of the face and hands, is absolutely required, in order to a proper discharge of the morbific matter, and if either be wanting, or goes off too foon, the patient must perish immediately. But it happens too frequently in this hot diffemper, that the texture of the blood is fo much weaken'd and broke, and fo highly inflam'd, by an over-hot regimen, as to be no longer able to perform the expulsion of the inflammatory particles in a flow and gradual manner (not to mention now the mischiefs proceeding from forcing sweat improperly) whence either the face and hands do not fwell at all. or the fwelling vanishes with the falivation; for tho' the fwelling 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 fwelling of the hands in the mean while continuing and increasing, which is one of the most certain figns of recovery, as the contrary is of imminent danger.

22. However this be, the faliva, which till this day Whence the continued crude and thin, and was eafily expectorated, danger. is now become fo vifcid and tough, as to endanger fuffocation, and when the patient drinks, the liquor falls down the wind-pipe, whence it is thrown up thro' the noffrils with a violent cough. He is feiz'd with a hoarfness, a great super, and drowliness, and being wholly oppress'd by the violence of the disease, generally finks under these difficulties, on the abovementioned day.

G 4

23. There

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A delirium

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. how caused. For instance, a dilirium sometimes seizes the patient, occasioned by the excessive ebullition of the blood, and the heat is fo intolerable that he endeavours in a furious manner to get loofe from those that confine him in bed. Sometimes the fame cause produces a very different or contrary effect as it feems, namely a kind of coma, fo 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 loofened by the violence. of the inflammation, purple fpots appear in the fpaces between the eruptions, which are generally fore-runners of death: This happens oftener when the conftitution of the air chiefly favours this epidemic difeafe. Sometimes finall black fpots, fcarce fo large as fmall 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 fmall-pox. This is apparent to those who are acquainted with this difease, in which all the fymptoms become proportionably milder, the nearer the eruptions, when come to suppuration, resemble this colour, and vice verfa.

25. Again, the blood of young perfons, and fuch as are in the vigour of life, is fometimes fo much inflam'd in this difeate, 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 fo occasion bloody urine (e); which is one of the most dangerous

fymptoms

(e) 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 flood a while to fettle, congeal and fall to the bottom, leaving the urine clear at top.

This dangerous fymptom should seem to proceed from the acrimony of the juices, and a diffolution of the texture of the blood, the mixture and cohelion of its parts being deftroy'd by the confiderable degree of putrefaction which accompanies this difeafe. And from the same cause may proceed the bloody stools, often happening here, (but not once mention'd by our author) and every other hemorrhage.

Whente bloody urine.

fymptoms that appear throughout the course of this Chap.2.

distemper.

26. Moreover, fometimes, but not fo frequently, a A flux of flux of blood from the lungs proceeds from the fame blood from cause. But either of these hemorrhages usually hap- the lungs pen in the beginning, before the eruptions appear; or owing to if they shew themselves in some places, yet in most cause. others they lie conceal'd underneath the skin, in great abundance, and are of that kind which would prove particularly confluent, unless one of the abovemention'd symptoms should terminate the disease by destroying the patient.

27. Sometimes also, especially in young persons, When a there happens a total suppression of urine, either at the stoppage of

height, or declenfion of the distinct kind.

28. There are likewise other symptoms that some- The symtimes arise from a contrary cause to those above enu- proms from merated; namely when the patient has been injur'd cold, copieither (1) by too intense cold, (2) improper bleeding in ous bleeding, and a very large quantity, or (3) over-purging; whence the over-purgeruptions fometimes fuddenly fink, and a loofeness ing. comes on, which, in grown perfons, as we have before observed, proves highly dangerous, the variolous matter being thereby ftruck in, fo that nature is utterly unable to expell it in a proper manner by the pores. Befides, by this means the fwelling of the face and hands is check'd, which is to be efteem'd no less beneficial to the patient than the eruption of the pustules, unless they be very few.

29. But the fymptoms occasioned by taking cold are The former very rare, if compar'd with those that arise from the rare. hot regimen; for as this difease may deservedly be reckon'd amongst those of the most inflammatory kind, a mistake on this hand happens much more frequently

than on the other.

30. What it is that constitutes the effence of this The disease difease I freely own I know not, on account of a na- an inflamtural defect in the understanding, common to me and mation of all mankind; but upon a thorough confideration of the the blood abovemention'd fymptoms, it should feem to be an inflammation of the blood and juices (f), (yet of a diffe-

(f) The virulent matter, occasioning this disease, seems to be of an acrimonious and inflammatory nature, whence the pain, heat,

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Sect. 3. rent 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 expells in the form of small abscesses. Hence, in order to lay a foundation for the method of cure, it must be remarked, that this disease has two stages, the first whereof is that of the separation, and the second that of the expul-

(1) The feparation.

(2) The ex-

pullion.

31. (1) The separation is mostly accompanied with a febrile ebullition, and is ordinarily finish'd in three or four days, during which nature is employ'd in collecting the inflamed particles that difturb the blood, and expelling them to the fleshy parts, which being over, the former calm returns, the disturbance raised in the blood, whilft this was doing, being now quieted. The feparation being thus finished by means of the ebullition of the blood, (2) the expulsion succeeds next, which is perform'd, during the rest of the time the disease continues, by means of those small abscesses in the slesh. For as they differ not in their nature from other abfceffes, fo, like those, they usually run thro' the states of crudity, fuppuration, and exficcation, which, if they finish in a suitable manner, there is no danger: but if otherwise, all is disordered. And the expulsion requires a much longer time than the feparation; because this is perform'd in a thin fluid body, and, as I may fay, in the bosom of nature, whereas that is perform'd in a thick, dense substance, and at a greater distance from the fountain of life.

The indications.

32. These particulars being premised, the indications that arise are (g); (1) that such an equable ebulliti-

redncs, swelling, erosion and ulceration, and also to partake of a caustic and putrefactive nature, whence, by its subtile intestine motion, it destroys the texture and union of the parts, and corrupts them; and this more properly regards the malignaty of the distemper, and is particularly manifest in the malignant, or bad smallered.

(g) The indications of cure here, as deliver'd by Hoffman, are to affift 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 ancients, concocted, and the violent motions of the vascular and nervous system in the beginning

on of the blood be maintain'd, that it may neither Chap. 2. finish the separation too hastily, by rising too high, nor retard, or render it incomplete, by finking too low; (2) that the abicefies, or eruptions be carefully kept up, fo that, running thro' their proper states, they may at length entirely discharge the matter they contain, and vanish.

33. (1) To treat therefore briefly of the first indica- Method of tion : great caution is required, especially during the fe- answering paration, that the ebullition may not rife too high, either the first infrom heaping too many clothes on the patient, over- dication. heating 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 enrich'd by spirituous liquors, or it be the spring season, or, at least, only the beginning of fummer. Otherwife the feparation which should be carried on flowly and gradually, for the better promoting an universal despumation, will hence be hurried on too fast, and thus either there will not be a fufficient number of particles collected, or perhaps some particles may be brought to fecretion, which nature would not otherwife have fecreted, were it not that, being forc'd beyond her just limits, she is thus made to hurt herself. For when fuch particles are separated as are unfit for separation, the motion of others that have a tendency thereto, is hindered by their mixing with thefe, and thus they are rendered less fit for expulsion.

34. To me, indeed, it feems agreeable to reason, The separathat the more time nature employs in perfecting the tion not to feparation, provided the ebullition does not quite flag, be too much fo much the more certainly and univerfally it is com- promoted. pleted; upon which the fuccess of the subsequent cure must needs principally depend, as a different event must manifestly ensue from the contrary method. For as

of the illness, moderated; (2) the eruption must be promoted, by raifing or depressing the fever, as it shall be found necessary, that fo all the matter may be propell'd to the external parts; but the fecondary fever coming on at the suppuration mult be check'd, and the violent fymptoms remedied; (3) in the decleration, when the puffules dry and scale off, purgation 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 diftemper are feafonably prevented.

dure.

Sect. 3. over-early fruit does not come to perfection, fo 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 worfe fymptom, pro-Ill effects of fuse sweats arise, whereby such particles are separated as are unfit for fecretion, and not agreeable to the nature of pus, (which however is the genuine product of this fecretion) or elfe, the eruptions being driven out too much by cardiacs and a hot regimen, become of a

terrible and fatal confluent kind.

35. These and the like symptoms are ordinarily occasioned by such errors, whereas I have never observed any mischief from the other method: for nature, left to herfelf, finishes her work in her own time, first separating, and then expelling the variolous matter, in the proper way and manner, fo as not to stand in need of our help, at least not in the young and robust. Nor in reality have I ever observ'd or heard that any person perish'd because the small-pox did not come out at first, but too many have died in whom they came out well and favourably in the beginning, but afterwards went in and funk contrary, to the nature of the distemper (b).

Danger of diminishing the coullition the much.

36. But tho' 'tis improper and dangerous, by cardiacs or a hot regiment, to raise the ebullition, once begun, too high; fo contrariwise the danger is equal in

(b) Is not this observation contradicted in numerous instances when the small-pox prevails? Are not physicians frequently obliged to have recourse to warm elexipharmics to drive out the eruptions, whilft 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 difease may prove mortal, whence a stop is consequently put to the eruption, and life, in reality, endangered. For tis 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 sluids, in a manner suited to the particular exigency, of which kind are mild cordials; and befides thefe, 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.

depreffing ti, by bleeding, emetics, cathartics, glyfters, and Chap. 2. the like evacuations, the due fecretion of the feparable 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 'tis improper to move the humours from the circumference to the cen-. ter, 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 disfuade 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 diminish'd, by means of which the parts intended for despumation should have been carefully separated; but (2) the matter also is wasted, which should continually ferve as fuel to the secretion once begun, whence it frequently happens that the eruptions, which came out kindly in the beginning, and perhaps fo much the better from the previous use of the abovementioned evacuations, fink foon after, as if they were fuddenly struck in; occasioned chiefly by a want of a fresh supply of matter to succeed the former, and sinish the separation. But notwithstanding what has Bleeding & been faid, if there be the least fuspicion that the small- vom ving pox, now just upon coming out, will be of the confluent excellent in kind, it will be highly ferviceable not only to bleed, but ent fmaillikewife to give a vomit; for reasons we shall, in another pox. place, fet down at large.

an wered.

37. (2) To proceed now to the second indication, The second fuited the time of expulsion; during which the separa- indication ted matter is expelled by means of small abscesses, or how to be pustules. Here we are to endeavour to keep them up in a proper manner, fo as they may duly and regularly

reach the period affigned them.

38. As, therefore, I conceive it has been clearly shewn Danger of that 'tis highly dangerous to keep the patient over-warm over-heatduring the time of separation, whilst the fever is present, ing the paand the eruptions scarce yet appear; so likewise an error wards the of this kind is equally dangerous at any time of the dif- beginning of ease, and especially towards the beginning of the expulfion, whilst the eruptions are yet in a state of crudity. Sion. For tho' the tumultuary motion of the blood be confiderably abated upon the feparation, and translation of the

Sect. 3. matter to the fleshy parts, yet, being still weak, and having scarcely acquired a new state and texture, it is eafily affected by the immoderate heat arifing from all parts, and, upon the least occasion given, becomes inflam'd with a tendency to a new ebullition; which does not, like the former, endeavour to promote feparation, for we suppose that business over, but, instead thereof, not only produces the dangerous fymptoms before mentioned, but difturbs the eruption begun, and proves detrimental, by putting the contents of the puftules into violent motion. And by this means either the particles already fecreted, and deposited in the habit, being hurried away by the violent and rapid motion of the blood, are abforb'd thereby; or the flefhy parts, being heated beyond the degree requifite for fuppuration, do not finish it so completely; or lastly, perhaps, upon the coming of this new diforder, the texture of the blood, and the tone of the fleshy parts suffer so great an alteration, that they cannot overcome the matter expell'd, and digeft it in the usual way of abscesses.(i)

The eruption not to be check'd.

39. But 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, as this is suitable to the temper of the fleshy parts; and to exceed, or fall fhort of it, is dangerous on either hand.

of curing this difease precarious.

The method 40. From what has been delivered it feems manifest that this difease is a very dangerous one, and the method of cure difficult to be afcertained. And therefore I fcruple not to affert that the reputation of the phyfician, who is frequently employed in it, is much exposed to cenfure; for not only the vulgar are apt to attribute the cause of the patient's death to the over-officiousness

> (i) All heating medicines to drive out the finall-pox deferve to be condemn'd in general; for they put the blood and juices into violent motion, increase the heat, anxiety, convultions, and delirium where these symptoms occur, and also render the variolous matter more acrimonious and fubtile, whence a gentle small-pox is easily converted into a bad and malignant kind: and fo far are they from procuring an equal and constant eruption, that they rather expel the matter, not duly prepared, too foon, fo that it does not keep its future stage, but in a short time after strikes in, with great danger to the patient. Befides, they diffolve the blood too much, waste the mild nutritious juice, and at the same time exhaust the strength by the copious sweats they occasion.

of the physician, but even the profesiors of the same art Chap. 2. take occasion from thence to defame their brother, and haranguing before partial judges, eafily obtain the fevere fentence against him, with this view, that they may procure greater esteem to themselves, and build their rife upon the ruin of others; which is a practice utterly unbecoming men of letters, and eventhe meanestartizans, provided they have a regard for probity (k). Again, we may from hence observe, which is less surprizing, that nurses, who are generally too busy and officious, often prove unfuccessful in treating the disease: for tisa difficult matter, and which exceeds the comprehension of an old woman to afcertain the degree of heat requifite in this cafe, especially, fince 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 physi-

41. If the eruptions happen to strike in, or the fwell- Cardiacs ing of the face and hands fall, either from unfeafonable when and bleeding, or taking cold, recourse must be had to cardi- how to be acs (1), but we must be careful of giving them too freely. given. For the blood has been taken away, it may notwithstanding happen, that fearing the loss of strength from thence, and therefore giving either strong cordials, or ufing mild ones frequently to prevent it, a new ebullition

(k) 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 ferve mankind can fecure a person, who leaves the common road, from the unjust centures of the narrow-spirited, disingenuous, and prejudicedpart of the professors of the same science. Whoever makes a new discovery which tends to overthrow a fet of prevailing notions and rules, (venerated probablymore for their antiquity than justness)and establish a trulyrational theory, and more effectual methods of practice, must expect to meet with great opposition from the ignorant, envious and prepoffeffed, and be treated as rash innovators, defigning and interested persons, however conspicuous they may be for learning, prudence, and extensive humanity. Such was the usage our illustrious friar Bacon, and the sagacious Harvey met with from a number of their contemporaries: and who can hope to pass uncensur'd, when men of their eminent knowledge could

(1) These symptoms may also be occasioned by a decay of frength, fitting up too long, terror, &c. and, unless immediately remedied by some proper cordial, life is endangered. Blifters are

aminently ferviceable here.

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may be fuddenly raifed, the blood being yet weak, and eafily affected by a hot stimulus; whence frequent ebullitions are excited therein, to which the death of the patient is rather to be afcrib'd, than to the preceding bleeding. And let this fuffice with respect to such particulars as may answer the primary intentions.

The treat-

42. Now, to come nearer practice: as foon as the figns ment of this of the disease appear, I confine the patient within doors, disease par- forbid the use of wine and flesh-meats, and allow small-beer ticulariz'd. moderately warm with a toast for common drink, and fometimes fuffer it to be drank at pleasure (m): I also direct water-gruel, barley-broth, roaft-apples, and other kinds of aliment, that are neither remarkably heating, nor cooling, nor hard to digeft. Nor do I much difapprove of the common country fare, of milk with roaftapples bruifed in it, provided it be given warm, and fparingly. I immediately caution against a hotter regimen, and the use of all cardiacs, whereby some injudiciously endeavour to force out the fmall-pox before the fourth day, which is the natural and proper time for the eruption; for I certainly know that the flower the puftules come out, the more general the feparation 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 foon, the matter, being yet crude and indigested, is precipitated, and deceives our expectation, like over-early fruit.

> 43. Again, by this over-hafty procedure, there is great danger, especially in hot and florid constitutions, whose active principles more than fufficiently supply the place of cardiacs, left nature, being too much irritated and hurried, should overspread the body with the fmall-pox, and fo render that the confluent kind, which, without this precipitancy, would have been a favourable distinct one. So that the small-pox must not therefore be expell'd upon the first suspicion of this disease, because the patient is generally very sick and restless before the eruption; for not a fingle inflance can be produced of its having prov'd mortal, however ill the patient has been, either because the pustules did not come out at all,

(m) It should be observ'd that if there be actually a loosness, or a disposition thereto, small-beer must be refrained; all malt-liquors being peculiarly apt to encourage this discharge. I this case barleywater, harts-hern drink, and the like are much more proper liquors.

Mischief of forcing out the pustules before the fourth day. or because nature was deficient in expelling them soon- Chap. 2. er or later, unless where she was prevented by an hot regimen, and an over-early use of cardiacs (n). And I have more than once observ'd in the young and fanguine, that the use of a hot regimen, and cardiacs given with defign to expell the puffules before the due time, have fo little promoted their eruption, that, on the contrary, they have prov'd a check thereto. For the blood being heated by this means, and put into a more violent motion than is requifite for performing the feparation in a proper manner, only fome certain figns of the difeafe discover themselves, the eruptions in the mean time lying concealed under the fkin, and not rifing 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 fmall beer, and taking away part of the clothes whereby the heat was confiderably increased, I have commodioufly made way for the eruption of the puftules, and by this means removed the danger.

44. And, in my opinion, they have as little reason on Ill effects of their fide, who so obstinately confine the patient in bed, confining provided he keeps his room, as those who give cordials the patient in fo hasty and improper manner: for bloody urine, pur- in bed beple spots, and other mortal symptoms above specified, fourth day. happen only from a too early confinement in bed, especially in young persons. But on the fourth day I direct the patient to be put to bed, at which time, if the eruption does not come kindly forward, 'tis proper to give fome gentle cardiac, at least for once, to drive out the pustules. And amongst the medicines that produce this Opiates best effect, those called paregorics, or opiates, fuch as liquid to promote laudanum, diascordium, &c. given in a small quantity, thecruption. mixed with some proper cordial water, are the best for this purpose; for as they abate the ebullition of the blood, nature expells the morbific matter with greater eafe and convenience (e). But I would not advise the giving a

(n) See above, Par. 35.

<sup>(</sup>o) Opiates here are reckon'd amongst the cardiacs, as they promote the eruption, which, however, they should feem to do only inalmuch as they diminish the tention of the solids, and so check the circulation, by which means the separation and expulsion are confiderably promoted, especially where the lever is high, and the blood and juices confequently mov'd with great velocity.

Not to be given before the fourth day.

cardiac before this juncture, even tho'there be a loofness, and that should seem to indicate such a remedy. For tho, as we observ'd above, a loofness may sometimes precede the eruption of the confluent small-pox, occasion'd by inflammatory effluvia, or humours discharg'd 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 loofness 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.

Bleeding when requifite.

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 (p): but if this be opposed, on account of the prevailing prejudice of the vulgar, at least I judge it incumbent on me to propose it. For by the instammation of the blood, caused by the heat of the spirituous liquors, together with the intense heat that naturally accompanies this disease, the motion thereof is render'd 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

(p) A full and strong pulse, a redness of the face, a pain and heaviness in the head and loins, a swelling of the veins, youthful-ness, a sprightly disposition, a custom of bleeding, and the suppresfion of a critical evacuation, indicate bleeding the first or 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 fuch 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 fmall, the vessels less turgid, the strength languid, the constitution phlegmatic, the patient a child, or a youth, the body corpulent, a vomiting, cough and loofness happen in the beginning of the illness, the patient subject to faint upon bleeding, a vein must not be opened, lest by taking a way too much blood, the matter should be detained in the body and the eruption prolonged for several days, not without danger. Hoffman. Med. ration. System. tom. 1v. p. 154, 155

destroy the patient .--- And let these rules suffice with re- Chap. 2.

fpect to what is to be done before the eruption.

46. As foon as the puttules appear, I examine carefully What is to whether they are of the distinct or confluent kind; as they be some in differ extremely from each other, tho' both have some the diffinct fymptoms in common. If therefore from the largeness, kind. paucity, and flow eruption of the puffules, the ceafing of the fickness, and other dangerous symptoms, which in the confluent species continue after the eruption, they appear to be of the distinct kind, I take care the patient be refreshed with small beer, water-gruel, barley-water, &c. in the manner above directed. And if it be fummer, the weather exceeding hot, and the puftules few, I fee no reason why the patient should be confin'd in bed; but rather that he may rife and fit up a few hours every day, provided the injuries arifing 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 fits up between whiles, the dif- Advantatemper finishes its course with greater ease, and also ges of keepmore expeditiously, than if he had been constantly kept bed. in bed, which not only prolongs the illness, but likewise promotes the febrile heat, and occasions a painful inflammation upon the rifing of the puftules. 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 clothes 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 feafon. Nei- promoting ther do I require he should lie always in the same place sweat bad. in bed, left a fweat be raifed, which I absolutely maintain, supported both by the reasons above alledged, and by experience, cannot be promoted without very great danger.

47. In the declenfion of the illness, when the free Canarytobe exhalation of the effluvia proceeding from the matter, given in the now changed into pus, is prevented by the hardness and declension. dryness of the pustules, it will be proper to give five or fix fpoonfuls of canary, or fome other mild cardiac, lest these putrid effluvia return again into the blood (q).

(a) To prevent the contents of the puffules in a fate of suppuration from entering into the veffels, Boerhaave also observes that there is not a nobler remedy than Canary wine, drank moderately, e.g. to

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And in reality at this time, and not before, cardiacs and a warmer and more cordial diet may be allowed; as fugar-fops, oatmeal caudle, &c. Nor will any thing further be needful in the kindly distinct species, 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 quite contrary treatment, yet it must also be acknowledged (and is deservedly to be lamented, if it be confidered 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 faved by the cold feafon in which the difease happens, or by bleeding not long before, which is otherwise unnecessary and useless. For this reason therefore, if either thro' the obstinacy of the friends, or the diffidence of the patient, the preceding regiment be opposed, I esteem it safest to bleed, which indeed, tho' it is in its own nature prejudicial in this kind of fmall pox, inafmuch as it diffurbs the separation, and lessens the supplies intended to keep up the eruptions and fwelling, yet it makes fome little amends for the injuries of the fubfequent hot regimen, and therefore renders this method, which I would not use, unless compell'd thereto, less dangerous.

Bleeding Sometimes necessary.

Why more

rich per ons

die than

poor.

49. From what has been faid, it will be eafy to folve the common difficulty; viz. whence it happens that so few of the poorer fort die in this disease, in comparison of the rich that are destroyed thereby; for which indeed 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 difease has prov'd fatal to abundance more of the common people, fince they knew the manner of using mithridate,

dia-

the quantity of an ounce, three or four times a day. Opium may be give i 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.

diascordium, harts-horn drink, &c. than it usually did in Chap. 2. the less learned, but more prudent ages: for at prefent there is fcarce an house without some illiterate, prefuming woman, who, to the destruction of mankind, practifes an art she never learnt .-- And let this suffice with respect to the cure of the distinct small-pox.

50. But in the confluent small-pox there is great dan- Difference ger; for I judge this kind differs as much from the other, between the as the plague does from this, tho' the vulgar, who admit confluent names and words for things, hold the cure of both to be finall pox. the fame. In this kind of difease, which proceeds from a greater inflammation of the blood, more caution is required not to heat the patient; as we observed above, in treating of the former species. But tho' this kind naturally demands greater cooling than the other, yet in order to promote the fwelling of the face and hands (without which death must ensue) and the elevation and Necessity of increase of the eruptions, and likewise because the pa- keeping in tient, on account of the painful ulcerations, cannot fit bed in the up, 'tis proper he should keep his body, and even his kind. 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 species (r). And in the declenfion of the diftemper, 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 fweat, by which the foft humour is discharged, wherewith the small-pox should be diluted to render them mild.

51. Since therefore, as we remarked above (s), a falivation constantly accompanies this kind of finall-pox, which as it is one of nature's principal evacuations, and is here substituted instead of that which should have been made by pustules, (for the evacuation by pustules does not go on fo well in this low and flat fort, as in the other) we must diligently endeavour to keep it at its The falivaheight, and prevent its stopping too foon, either from tion here to the use of heating remedies, or by forbidding the free use of small-beer, or some such liquor. Now as the fpitting, in its natural order, is to begin as foon as the

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be kept up.

<sup>(</sup>r) See above, Pnr. 47. (s) See above, Par. 13.

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 fwelling of the face, whereby fome 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 poifon; and there being no way left for it to pass off, the danger is imminent, unless perhaps, as it sometimes happens, the fwelling of the hands, (which as it comes on later than that of the face, fo it goes away more flowly) be so considerable, as to fnatch the patient from How promo- impending death. The falivation, which is fo very advantageous and neceffary here, may be much promoted by drinking freely of fmall-beer, or fome other liquor that neither heats, nor excites fweat.

ted.

cellent for this purpose.

52. But besides these, in order to check the violent ebullition of the blood, in which this fort of fmall-pox greatly exceeds the distinct kind, and to keep up the Opiates ex- spitting (the necessary evacuation in this disease) opiates are more proper than any other remedies; and tho' by their incraffating quality they may feem in fome meafure to hinder the expectoration, yet I have long flaken off that prejudice, and given them in this difease with great fuccess, provided the patient was above fourteen. For as the blood of infants and children, who generally fleep tolerably well throughout the course of this disease, f erments more gently, it ftands less in need of such a e heck; and moreover, by the use of this kind of remegies, the loofenefs, which nature appoints to be an evacuation for children in this kind of difease, is stopt to the detriment of the patient.

Good effects of them in grown per-10725.

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 fwelling of the face and hands in a better manner, which is a very confiderable natural evacuation in this difease; (3) they keep up and prolong the fwelling to its proper natural period; which greatly contributes to the patient's fafety, as the fwelling 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

furface

furface of the body, according to the nature of the dif- Chap. 2. ease; (4) they promote the fallivation, which tho' it may be stopt in some subjects for a few hours, by means of fo powerful an incraffating medicine, yet the ftrength 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 fometimes earlier, to the great detriment of the patient, by giving opiates a few times has been raifed anew, and not ceafed before the fourteenth day, and fometimes later. I usually give about fourteen drops of liquid laudanum, or an ounce of fyrup of white poppies, in a little couflip-flower water or fome fuch diffilled water; and if either of these medicines be given to grown persons every night after the eruption is over, to the end of the difease, not only no inconvenience, but great fervice will thence accrue to them, as I have frequently experienc'd. But I judge When best it proper to exhibit an opiate a little earlier than is o- given. therwife usually done; for it is easy to be observ'd in the worst kind of small-pox, that a hot fit, attended with reftleffnefs, anxiety, and other fymptoms, generally comes on in the evening, which may in fome meafure be prevented by administering an opiate at fix or seven at night.

54. In the next place, fince a loofeness as certainly accompanies the confluent small-pox in children, as a salivation does the fame in grown persons: nature, as we observed above, constantly providing one of these evacuations to expel the morbific matter; I take care by no means to check this loofeness, no more than the falivation, both being alike improper. And the unfea- Danger of fonable endeavours of fome imprudent women to stop checking the loofeness has prov'd fatal to abundance of infants, the loofness whilst they falsely concluded it to be equally dangerous here in chilwhilst they falfely concluded it to be equally dangerous dren. in this as in the diffinct kind; not knowing that it is only detrimental in that kind where the evacuation is made by puftules, but is here the work of nature fearching a passage for the disease to escape (t). Disregard-

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(t) A looshess 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 know it run thro' the whole course of the distemper, without danger. And as petechial malignant fevers are frequently terminated eritically by a loofness, so likewise experience thewa

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Sect. 3. ing therefore the loofeness, and assisting nature, as Hippocrates directs, I go on as I begun, advising them sometimes to keep the children in the cradle, and fometimes to take them up, and if they be weaned I allow them the same diet as I before directed for grown persons.

The face to be anointed with oil of Sweet almends in

55. In the declenfion of the difease, when the face is fliff, occasioned by the eruptions becoming crusty, hard and dry, I anoint it frequently with oil of fweet almonds, as well to eafe the pain thence arifing, as to the decline. promote a freer exhalation of the hot effluvia. I use no endeavours to prevent the pitting of the face, inafmuch as oils, liniments, &c. only cause the whole scurf to scale off more flowly (u), which falling off, and coming on again alternately, after the patient has quitted his bed, and is pretty well recovered, is gradually fucceed. ed by unfeemly fcars. 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.

56. Now, tho' this method, provided it be carefully and prudently fuited to particular circumstances, will prevent the abovementioned preternatural and dangerous fymptoms, and render the difease 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 overcome and remove them, from what cause soever they arise

before I am called.

The face, how made to fwell, in the diftinct kind.

A different method

lometimes.

meceffary.

57. First, therefore, if in the aislinet kind, by means of an over-hot regimen, and continual fweats, the face does not fwell on the eighth day, but is flaccid, and the spaces between the cruptions look pale, whilft thefe 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 immediate-

that the same happens in the small-pox. Elsewhere he says, that in a dry fummer, the finall pox is particularly inflammatory, and readily accompanied with a loofness, which is absolutely not to be stop'd, but only moderated by proper remedies; observing to avoid the heating regimen and warm medicines, and likewife cooling the body, and refrigerating medicines. Neither, adds he, is a toofness detrimental, when the small pox, by reas n of the irregularity of the seasons, is complicated with petechiæ, but it is rather a wholesome remedy, and admirably purges off the malignant and excrementions humours.

(a) Unctuous and oily applications block the pores, hinder perspi-

ration, and make the pits much more vilible.

ly direct an opiate to be given, which by gently procuring Chap.2. fleep, (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 difease demands.

58. But if the mischief hence arising has proceeded fo far, that the fweat, which had hitherto flowed plentifully, ceases spontaneously, the patient is seized with a delirium, complains of great fickness, and makes urine often in a small quantity; in this case, the danger of death being imminent, I conceive he can only be relie- Opiates or ved, either by giving opiates freely, or taking away a bleeding, large quantity of blood, and exposing his body to the when requiopenair. Nor indeed will what I have now proposed seem fo 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 confidered that, in this dangerous extremity, death does not enfue 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 fame reasons.

59. But I would not have this understood as if I would Further exadvise bleeding immediately in every delirium happening plained in the fmall-pox, fince no fymptom oftener occurs in this with respect disease; but (1) in that only which happens because the to bleeding. face does not fwell, that is, in the distinct kind, the eruptions at the fame time being pretty numerous; or (2) where the motion of the blood is become fo violent and immoderate by means of a very 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 fre- Sitting up a quently feem'd fufficient to me, for the patient to rife, while reand fit up a while in his raving fit, by which expedient in a deli-I have faved feveral from death. And befides those I rium.

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have feen, there are numberless instances of persons who by this means have been fnatched 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-time, and others again, either fecretly, unawares, or by intreaty have procured cold water to drink, and thus by a happy mistake saved their lives, when despaired of.

The case of the like

treatment.

60. I shall here fet down the history of a case, which a person re- I had from the person concerned. He told me that when he was a young man, he went to Briftol, and was there feiz'd with the fmail-pex about midfummer, followed foon after by a delirium. His nurse, going into the city, left him in the mean while to the care of some other perfons, intending to be back foon; but making a pretty long flay, the patient in the interim died, as the attendants thought; who confidering the heat of the feafon, and his corpulency, that the body might not fmell, took it out of bed, and laid it naked on a table, throwing a fheet over it. The nurse at length returning, and hearing the ill news, enter'd the room to behold the fad fpectacle, and immediately throwing by the fheet and looking on his face, fhe imagined fhe faw fome fmall figns of life, and therefore put him to bed again directly, and ufing fome means or other fhe brought him to himfelf, and he recovered in a few days.

Agargarifm to be used when the faliya wijcid.

61. But to refume our fubject: if the faliva, in the confluent small-pox, be so hard and viscid by the preceding heat as to endanger fuffocation, which, as we obis hard and ferv'd above, commonly happens on the eleventh day; a gargarism must absolutely be used, and great charge given to fyringe the throat with it night and day. Small-beer or barley-water, mixed with honey of roses may be employed for this purpose, or the following.

The gargarijm.

Take of bark of elm, fix drams; liquorife root, half an ounce; twenty flor'd raifins; red roses, two pugils; boil them together in enough water to leave a pint and half; in which, when firain'd off, diffolve, simple oxymel and honey of roses, of each two ounces: mix the whole for a gargarism.

But if the patient has been treated in a proper manner,

the falivation, even tho' it has begun to abate will fo Chap. 2. effectually answer its end, as to render this remedy needlefs. And in reality when the patient is every moment in danger of fuffocation, oppressed with a stupor, and breathes with the utmost difficulty, 'tis not fafe to trust to this remedy. In this case I have sometimes A vomit feafonably and fuccessfully given a vomit of the infu-sometimes fion of crocus metallorum, in a larger dose than ordinary, Juccessful in viz. to an ounce and half; because the stupor is so considerable that a fmaller quantity will not operate, but by diffurbing those humours which it cannot eject, greatly endangers the life of the patient. Neither can we wholly truft 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 fymptom, which alone destroys most of those who die on the eleventh day in this kind of small-pox.

62. As the other symptoms happening in this diftem- Advantaper are prevented, so likewise most of them are relieved ges of a by a temperate regimen. For instance as the delirium temperate abovementioned, proceding from the too great heat of regimen. the brain, is removed by fome way cooling the blood, Acoma fo by the fame means a coma is eafily remedied, which cured by feems to be a quite different fymptom from the former, cooling the and arises from an obstruction of the cortical part of the and arises from an obstruction of the cortical part of the brain, whilst hot effluvia, proceeding from the blood attenuated by a hot regimen and heating medicines, are

violently driven thither in great abundance.

63. By cooling the blood in this manner I have feen And purple purple fpots removed; but have not yet been able by foots alfo. 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 prognosticate certain death.

64. In a suppression of urine, which sometimes happens in A suppression the young and vigorous from the great confusion and dif- fion of urine order of the spirits, subservient to this excretion, by rea- how caused fon of the immoderate heat and agitation of the blood died. and juices, I have had recourse to all the kinds of diuretics, but nothing has fucceeded fo well with me as takind the patient out of bed, who after walking twice or thrice cross the room, held up by the attendants, has immediately voided urine pretty plentifully to his great relief. To confirm my affertion, I might here appeal

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to some physicians of my acquaintance, who by my advice have directed the fame expedient to be used, and found it answer the end.

Cardiacs cularly to be given in the diftinct fmall-pox.

65. But the fymptoms proceeding from the striking when parti- in of the variolous matter, by intense cold, or unseasonable evacuations, must be remedied by cardiacs, and a fuitable regimen; which, however, must not be continued longer than these symptoms last. The principal of these are, a depression, or finking of the pustules, and a looseness, both in the distinct kind. For in the confluent kind neither the finking of the puffules threatens danger, this being the nature of the diteafe, nor a loofeness in children because it promotes their recovery. In either case tis 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 fymptoms, but at any time of the difease, if the patient complains of a pain at the heart and fickness. 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 fo much prevailed, of the frequent striking in of the eruptions, to proceed from hence, that fuch as have observed the depression of them in the confluent kind, esteem'd it to be a striking in of the variolous matter from taking cold, whereas here, 'tis only the nature of the difease; and they suspect the same in the distinct kind, because they look for the eruption and increase of the pustules before the due time; not having fufficiently attended to the time wherein nature usually finishes the suppuration of thisfort of smallpox.

When and where bleed. ing should be ujed.

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 requifite to bleed in the arm, if the difease has been violent: for the inflammation communicated to the blood by the smallpox, 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 fevere fmall-pox, which exactly refembles that of pleuritics, and likewife from the great inflammations that fall on the eyes after it is gone off, and other pernicious effects, arifing from the

blood over-heated and vitiated thereby. Hence also it Chap. 2. follows that fuch as enjoyed a good state before the attack, are afterwards afflicted with a defluxion of sharp hot humours upon the lungs, or fome other part for the remainder of life. But if the puftules were few, bleed. ing is unnecessary: after bleeding I purge three or four

67. to these observations let me add, that after the The swelling patient has been long recovered from the confluent small- of the legs pox, and rifes every day, there fometimes happens a troublesome swelling of the legs, which either goes off fpontaneously 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 fuffice for the history and cure of the fmall-pox, that prevailed for these two years, which I chose to call legitimate or regular in order to diffinguish them from the other kinds that fucceeded them.

## CHAP. TIT.

The continued Fever of the Years 1667,1668, and part of 1669.

1. I proceed now to treat of the fever that prevailed The fever of during this variolous constitution, beginning and this Constiending with the fmail-pox. It had the following fym- fcribed. ptoms. (1) A pain below the pit of the stomach, with an extreme foreness of the part, so that it could not bear the touch, which fymptom I do not remember to have observed in any other disease besides this sever and this kind of small-pox; (2) a pain in the head, a heat of the whole body and petechiæ; (3) little thirst, (4) the tongue like that of a healthy person, unless that it was fometimes white, but very rarely dry, and never black; (5) profuse frontaneous sweats in the beginning, which afforded no relief, and, being promoted by a hot regimen and hot medicines, foon endangered a delirium, augmented the number of the petechia, and rendered all the other fymptoms more violent; (6) a laudable feparation in the urine from the beginning of the illness,

Sect. 2.

that afforded hopes of recovery, but did not relieve the patient more than the abovementioned fweats; (7) this difeafe, by wrong management, generally proved very obstinate, niether terminating by way of crisis, nor spontaneously in the manner of other fevers; but continued for 6 or 8 weeks, accompanied with violent fymptoms unless death interposed, and put a stop to it sooner; (8) when no confiderable evacuation had preceded, and cooling julaps had been used, a pretty plentiful falivation fome times arose towards the decline, whereby the difeafe was carried off beyond expectation, provided this discharge was not checked by evacuations, or heating medicines.

Nearly resembled the Small-pox.

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 fame nature therewith, except in those symptoms which necessarily depended on the eruption. For they both attacked in the fame manner, and were attended with the like pain and foreness of the parts below the pit of the stomach, there was the same colour of the tongue, and confiftence of the urine, &c. The fame profuse fweat arose in the beginning, and the same tendency to a falivation when the inflammation was violent, as accompanied the finall-pox, when it prov'd of the confluent kind. Since therefore this fever did also prevail chiefly at the time the fmall-pox was more epidemic than I had evee known it here, no one can doubt their being of the fame tribe. This I certainly know that all the practical indications were manifestly the same in both difeases, those excepted, which the eruption of the fmall-pox, and the fymptoms 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 fuch as had either of these difeafes. For these reasons I must be allowed to call this called a va- a variolous fever (a), not because I affect the giving new

Therefore ver.

> (a) In 1729 in the month of July, the small pox prevailed much at Plymouth; and during this month a flow putrid fever, which remitted towards the end, and at length intermitted, became very epidemic there. It chiefly affected the stomach and loins, as if the fmall-pox was coming on, and was attended with an oppression of the breaft, fighing, and great faintness. Such a disease it was per

names, to things, for no one can diflike that more than Chap. 3. I do, but in order to diffinguish it from other fevers t and on account of the great fimilitude which it bears to this species of the small-pox.

3. But how nearly foever that fever refembled the Required a fmall-pox, no judicious person will conclude that it different ought to be treated in the fame manner; because in the from the fmall-pox the inflamed particles are thrown out upon small-pox. the skin, by means of little abscesses, whereas in the present fever they are discharged by falivation. For the profuse sweats at the beginning were symptomatical, not critical, nature feeming to have intended no other evacuation in this difease than a spitting: which yet she generally checks, either (1) by a loofnefs, which frequently proceeds from inflammatory rays, (b) conveyed

haps that Sydenham entitled a variolous fever. It chiefly attack'd children, women, young, or weak persons. The blood taken away was feldom viscid; the urine mostly crude, thin, and frequent-ly let fall a cineritious, slimy and imperfect fediment, refembling flower, called by Hippocrates a bramy sediment: the more per-fect 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 loofness, or sometimes a dysentery, especially if a vomit had been omitted in the beginning, became very immooerate, and even proved fatal to fome.

Bleeding, unless in the beginning, seldom did service; vomits were highly necessary, and afterwards frequent blifters, gradually applied, gentle cardiacs, cinnabar, opiates, Jack-whey, and diluting subacid liquers, drank plentifully, proved very beneficial. As foon as the figns of coction appeared, namely a fediment in the urine, and a remission of the fever, the bark admirably assisted the cure. If a coma or a delirium happened in the state of the disease, there was occasion to fet cupping glasses on the neck and shoulders, to bleed, and immediately apply blifters, especially behind each ear, and to the head, and forthwith inject a laxative glyfter.

In the declention, lenient purges, especially of rhuberb, advan-tageoufly carried off the putrid remains of the disease; but strong purgatives, or aloetics had very dangerous effects; for by the unfeasonable use of these we have known the blood impoverished, and dreadful gripings occasioned: moreover, after a purgative, tho' it was very gentle, a paregoric draught was altogether necessary.

Numbers were feized with this diftemper, but few died of it.

Hunham de aere et morb. epid. p. 33, 34.

(b) The expression the author here uses of inflammatory rays, conveys no cleer idea of the cause of a loofness; these rays not being sufficiently understood, nor their existence in the blood clearly proved. They are too fubtile one would think to occasion an irritation of the bowels, and too immaterial to furnish supplies for Sect. 3.

thro' the mefenteric arteries into the intestines, and irritating them to discharge their contents, (as is usual also in pleurisies, and other inflammatory severs, 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 sever and the small-pox; and these sweats being symptomatical, the salivation, that would otherwise have prov'd 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 severs.

4. But to proceed a little farther: in order to come at a better knowledge of the nature of this fever, and eftablish the curative indications on a folid foundation, it must be carefully noted that in the fever that prevailed during the epidemic constitution which gave rife to intermittents, the matter to be feparated from the blood was fo thick, that it could not be feparated without previous digestion, fitting it for a proper evacuation, at an appointed time, either by means of a plentiful perspiration, or a critical loofeness; so that the physician had nothing more to do than to fuit the treatment in fuch manner to the nature of the difeafe, as on the one hand to prevent its rifing too high, and on the other, its finking too low, fo as to be unable to expel the noxious matter; a fever being the instrument of nature to perform this fecretion.

The matter in the plague very fubtile.

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 stop'd in a gland, or some external part, where, being entangled, it occasions an inflammation, and afterwards an impostume. Now an impostume is the instrument of nature whereby she expells whatever injures the fleshy parts, as a fever is her instrument to carry off whatever is prejudicial to the blood. In this case

therefore

the discharge. The looseness therefore should rather seem to proceed from sharp humours strained thro' the inesenteric arteries into the intestines, and irritating them to frequent ejectlons; whence both the irritation and the discharge may be easily accounted for.

therefore 'tis the bufiness of the physician to affist na- Chap. 3. ture in a proper matter in her endeavours to discharge the pestilential matter by these imposthumes; unless perhaps it should feem more advisable to substitute some other evacuation in its stead, which he might be able to regulate with greater eafe and certainty than that of nature. In the fame manner does nature proceed in expelling the variolous matter, which is a groffer species The smallof inflammation, and discharged by means of numerous pox a groseruptions, instead of carbuncles and buboes, &c. fo that inflammain this case also the curative indications are to be so tion. directed, as to promote the evacuation by the eruptions

in a regular manner.

6. But as in this kind of inflammatory fever we No fuch meet with no fuch gross matter requiring previous gross matdigestion before it can be expell'd, as in the intermitting fever. 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 wee fee in peftilential fevers and the [mall-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. in view, I attempted the cure of this fever by the following method, to which it readily yielded.

7. Being call'd to a patient, I immediately directed bleeding in the arm, if great weakness, or especially old Its cure. age did not contra-indicate, and ordered the operation to be repeated every other day, for twice, unless the figns of recovery render'd 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 fame kind, to be frequently used

throughout the course of the disease.

Take of distilled waters of pursain, lettice, and couslip The cooling flowers, of each four ounces; fyrup of lemons, an ounce julap. and half; fyrup 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.

Sect. 2. I allowed whey, barley-water, and fuch liquors for common drink, and for diet, barley-broth, water-gruel, panada, roaft apples, &c. but I forbad chicken broth, or

any kind of broth made of flesh.

The danger of keeping the bid in this fever.

8. I chiefly recommended that the patient should not keep his bed constantly, but rise every day, and fit up a good part of the day, having observed in this fever, as in the pleurify, rheumatifm, and all other inflammatory diforders, wherein bleeding and the cooling regimen are the principal remedies, that neither the most cooling medicines, nor frequent bleeding can do fervice, whilft the patient lies perpetually in bed, and is inflam'd by the heat thereof, especially in the summer season. And upon this account the fweat which flow'd at times did not deter me from this method of cooling, both by giving refrigerating medicines, and forbidding a constant confinement in bed. For the one might reasonably expect great advantages in pursuing an indication taken from what generally proves ferviceable, yet I have found, by confrant experience, that the patient not only finds no relief, but contrariwife is more heated thereby; fo that frequently a delirium, petechiæ, and other very dangerous fymptoms immediately fucceed fuch fweats, which feem to arife more from wrong management than from the malignity of the difeafe.

The method of care vindicased.

9. If it be here objected that this method of curing fevers runs directly counter to the theory of authors, who unanimously maintain that a fever is most properly and naturally cured by fweat; besides the testimony of a never failing experience, which is always on my fide, 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 lodg'd in the blood, in preparing and moulding of which, that it might be discharged by sweat, nature has employ'd some certain fixt time. But here the case is quite otherwise, for profuse sweats arise in the beginning of the difease, and alone make a considerable part thereof; and, if we may judge from all the phenomena, this difeafe feems to proceed rather from the fole heat of the blood, than from fome humour concealed therein, to be expell'd, after due concoction, by fweat. But granting there is fuch an humour to be found in

this fever, as requires to be ripened by digeftion, which Chap. 3. is the case in many other fevers; yet to what purpose is it to comply with nature (whose violent efforts 'tis our business to moderate) by promoting these sweats with cardiacs, or a hot regimen, when the exerts herfelf too much already, fince the trite axiom of Hippocrates, namely, that concocted and not crude matters are to be evacuated (c), relates to fweating as much as to purging?

10. Whilst this constitution prevailed I was called Exemplified to Dr. Morice, who then practifed in London, and now in a cafe. in Petworth. He had this fever, attended with profuse fweats, and numerous petechiæ. By the confent of fome other phyficians, our joint friends, he-was blooded, and rose from his bed, his body being first wip'd dry. He found immediate relief from the use of a cooling diet and medicines, the dangerous fymptoms foon going off, and by continuing this method recovered'in a few days.

11. But to refume our subject: neither did the looseness, which often accompanied this fever, hinder my medicines proceeding closely in the abovementioned method; ha- best to stop ving experienc'd that nothing proved fo effectual in the loofnejs. stopping this discharge, as bleeding, and cooling the blood by barley-water, whey, and other things above enumerated; inafmuch as this loofeness proceeded from inflammatory vapours, feparated from the blood thro' the mefenteric arteries into the intestines, and vellicating these parts.

12. In reality this method fucceeded admirably with The bot reme in the cure of this disease, and seem'd better adapt- gimen much. ed to it than any other. I have however fometimes gerous. feen 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 petechia, which were otherwise very few, became exceeding numerous, the thirst, that was generally inconfiderable, was extremely increased, and the tongue, that was otherwise moift, and not much unlike that of healthy persons, except, as we said above, that it was whitish, appeared dry and crifp, and frequently turn'd black. Lastly, even the sweats, which

they endeavoured to force by means of cardiacs, were,

Bleeding

<sup>(</sup>c) Cocea, non cruda, sunt medicanda.

Sect. 2.

at length, entirely ftopt thereby. For too large 2 quantity of ferum being drained off by the cutaneous ducts, the blood became unable to furnish more of it, and the fluid being quite wafted, wherewith it should have been diluted, a dryness of the skin, and a stoppage of the pores enfued, (contrary to the ordinary course nature uf to observe in this fever) till at length the blood, being again replenished by the moisture received from the aliment taken in, expels this ferum together with the fever, partly by medicine, and partly by the force of the fever itself. But in reality this criss was too forced, and too dangerous, and, which is ftill worfe, it feldom happened.

This fewer Jalivation.

13. But fince, as we observ'd above, the solution of often termi- this fever, and of the small-pox likewise, which so nated by a nearly refembles it, was frequently effected by a falivation, which always prov'd beneficial, fo that when it flow'd copioufly, I have known both the purple spots and fever vanish; so upon this account, when the falivation begins, no evacuation must be made, either by bleeding or glyfters, fince by the use of either the humour may be carried another way. But whey and other cooling things promote the necessary business of falivation; as, on the contrary, cardiacs, and all heating things, by thickening the matter, check its · discharge.

The rise of the epidemic loofneis.

14. Before this fever went quite off, and particularly in the year 1668, a loofeness became epidemic, without any manifest fign of a fever, for the constitution at this time inclin'd to the dysentery, which prevail'd in the following year, whereof we shall treat in the next fection. Nevertheless, I judg'd this loofeness to be the fame fever with the then reigning variolous fever, and that it only differed in form, and appear'd under another fymptom. For having observ'd that a chilness and shaking did likewise ordinarily precede this loofeness, and further, that it generally arose from the same cause with the then reigning sever, it seem'd probable to me that this fever, with the loofeness, proceeded from inflammatory rays turned inwards upon the intestines, and irritating them to this discharge; whilft the blood, in the mean time, by this revulfion, was freed from the ill effects these rays would otherwife have eccasion'd, without any visible external fign of a fever. To this we may add, that the parts below Chap.4. the pit of the flomach were fo tender as not to abide U the touch, which symptom, as we mention'd above (d) happen'd in the fmall-pox and fever of this conftitution; and the fame pain and tenderness of the flesh often reach'd to the epigastrium, and sometimes there was an inflammation, which ended in an imposthume, and destroy'd the patient: all which apparently shew'd this loofeness to be of the very same nature and essence with Bleeding the then reigning fever: and this opinion of mine was ing regimen further confirm'd from the good fuccefs, which bleed- fuccefsful in ing and the use of a cooling regimen always had in stopping it. stopping this loofeness, for it readily yielded to this method, which is the fame we use in the cure of the variolous fever, as we have frequently mention'd above. But when it was treated in a contrary manner, either (1) by giving rhubarb, and other lenient purgatives, to Lenientpurcarry off the acrimonious humours, supposed to irritate gatives and the intestines to these discharges; or (2) by administer- assignments ing aftringents; this difease, tho' naturally gentle, extremely frequently provid mortal as the bills of mortality of frequently prov'd mortal, as the bills of mortality of the current year fufficiently testified. --- And let this fuffice for the epidemic difeases that depended on this constitution.

## SECT. IV. CHAP. I.

The epidemic constitution of part of the year 1669, and of the years 1670, 1671, 1672, at London.

IN the beginning of August, 1669, the cholera morbus, The diseases the dry gripes, and likewise a dysentery that rarely ap- that appear'd during the ten preceding years, began to rage. peared in But the cholera morbus prov'd more epidemic than I August had ever known it before, yet neverthelefs it terminated this year in August, as it always does, and scarce reach'd the first weeks of September. But the dry gripes continued to the end of autumn, and accompanied the dyfentery, and prevailed more generally than that diftem-

(d) See Sect. III. Chap. II. Par. 2. and above, Par. 1.

Sect. 4. per. But upon the coming in of winter, they like wife vanish'd, and appear'd no more throughout the fubfequent years wherein this conftitution prevail'd, whereas the dysentery became more epidemic. Now I judge the cause of this to have been, that the then reigning conftitution had not yet fo perfect a tendency to a dyfentery as to be able to produce all those fymptoms in every fubject, which affect fuch as are feiz'd with this difease: for in the following autumn, when the gripes return'd, the true dysentery foon appear'd, accompanied with every pathognomonic fymptom.

The rife of ric fever.

2. Between these gripes and the abovemention'd dythedysente- sentery, which rag'd very universally, a new kind of fever arose, and attended both diseases, and not only attack'd fuch as had been afflicted with either of the former, but even those who had hitherto escap'd them, unless that sometimes, tho' very seldom, it was accompany'd with flight gripings, fometimes with flools, and at others without. Now as this fever in some measure resembled that which frequently attended the abovemention'd diseases, it may be distinguish'd from others, by the title of the dysenteric fever; especially fince, as we shall afterwards shew, it only differ'd from the genius and nature of the dysentery in this particular, that it had not those discharges which always accompany the dyfentery, nor the other effects necessarily occasion'd by this evacuation. Upon the approach of winter the dysentery vanish'd for a time, but the dysenteric fever rag'd more violently; and a mild fmall-pox also appeared in some places.

The meafles January, 1670.

3. In the beginning of the following year, namely, appear'd in in fanuary, the meafles succeeded, and increasing every day till the vernal equinox, fuffered few families, and particularly no children, to escape. But from this time they abated nearly in the fame degree they had increafed, and appeared no more throughout all those years wherein this conftitution prevailed, excepting only the following year, in which they feized a few at the fame time they arose in the preceding year.

And intronomalous amall-pox.

4. This species of the measles introduc'd a kind of duced an a- small-pox, which I was hitherto unacquainted with, so that to diffinguish 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 un-

common fymptoms, which differed confiderably from Chap. 1. those of the small-pox of the foregoing constitution; as will appear hereafter, when we come to give the hiflory thereof. This small-pox, tho' not near fo com- The course mon as the measles, attack'd several persons, till the of the disbeginning of July, when the dysenteric sever prevail'd, eases of 1970. and became epidemic. But upon the approach of autumn, namely, in August, the dysentery return'd, and made a greater devastation than in the preceding year, but it was check'd by the winter's cold, as before: and thefe being conquered, the dyfenteric fever and fmallpox rag'd the winter throughout.

5. Towards the beginning of February in the follow- Intermiting year, intermittent tertians arose, whence both dif- tent tertieases became less frequent. And tho' these tertians ans arose in were not very epidemic, yet they prevailed more generally than any I had ever feen at any other time fince the close of that constitution, which, as we before obferved, had so remarkable a tendency to produce them (a). But these, according to the manner of verna! intermittents, went off immediately after the fummer folftice. In the beginning of July the dysenteric lever Theorder in again refum'd the station it held in the preceding years; which the and towards the decline of autumn, the dyfentery re- epidemic turned a third time, but did not rage fo much as in the proceeded immediately foregoing year, wherein it feem'd to have during 1671. 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.

6. We observed above, that at the beginning of the 1672. two preceding years two remarkably epidemic difeafes rag'd, (e.g. the measles at the beginning of 1670, and intermittent tertians at the beginning of 1671, and prevailed fo confiderably as to over-power the small-pox, and prevent its fpreading much in the beginning of these years. But in the beginning of 1672, when those obstacles to its progress were removed, and this diftemper reign'd alone, it, of course, proved very epidemic till July, when the dysenteric fever again prevail'd, but foon gave place to the dyfentery, which returned a fourth time in August, and was then not only less frequent but attended with milder fymptoms than in the former years. Moreover the fmall-pox likewife attack'd a few, fo that it was not

14 (a) Sec Sect. I. Chap. III. Par. 1.5.

Sect. 2. easy to distinguish which of the two diseases prevailed. I conceive indeed that the conftitution of the air, having a less tendency to produce the dysentery, render'd the fmall-pox powerful enough to equal it, otherwise than it happened in those years wherein the dysentery proved extremely mortal in August. The winter, as ufual, put a stop to the dysentery, but the fever and fmall-pox remained, and the latter, according to its nature, became the chief difease, and continued all winter, and attack'd a few in the following fpring, and likewise in the beginning of summer; but it was confiderably milder than this kind had been before.

7. But when I affirm that one epidemic difease is expell'd by another, I do not mean that the yielding difease becomes quite extinct, but only less frequent; for during this conftitution each difeafe appeared even in that feafon which conspir'd less therewith. For instance, the dyfentery, tho' it be a difease particularly belonging to autumn, did perhaps attack a few in the

fpring, but very rarely.

How the eeeded each other during this

8. We have therefore fufficiently prov'd that, during diseases suc- the course of this constitution, the dysenteric fever prevailed in the beginning of July, in which month autumnal fevers as certainly arife, as vernal ones do in constitution. February. But upon the approach of autumn the dyfentery fucceeded it, which, strictly speaking, is an autumnal difease; and this being overcome by the winter, the dyfenteric fever and the fmall-pox prevailed, which last distemper continued all that winter, the next fpring, and enfuing fummer, till the return of July, when it was expelled by the epidemic dyfenteric fever .--- And these were the revolutions that happened whilft this conftitution lafted.

Every gonepeculiar periods.

9. It must further be observed, that as each epideral constitu- mic disease is attended with its periods of increase, tion has its height, and decline, in every fubject, so likewise every general constitution of years that has a tendency to produce fome particular epidemic, has its periods, according to the time it prefides; 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 then with respect to the fymptoms, they are most violent in the beginning of the constitution, after which they gradually abate, and in the close thereof, are as mild as the nature of the dif- Chap. r. eafe, 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 difeases of this constitution, according to the order in which they proceeded.

### H A P.

# Of the Cholera Morbus of the Tear 1669.

I. HIS disease, as we before said, was more epi- When the demic in the year 1669, than I ever remember cholera to have known it in any other. It comes almost as morbus aconstantly at the close of fummer, and towards the be- rifes. ginning of autumn, as fwallows in the beginning of spring, and cuckows towards midjummer. There is also an indifpolition caused by a furfeit, which happens at any time of the year, which with respect to its symptoms refembles the cholera morbus, and yields to the fame treatment, and yet it is of a different kind. The cholera morbus (a) is eafily known by the following figns:

(a) This distemper is defined, " a preternatural inversion of the " peristaltic motion, or a convulsive contraction of the stomach and bowels, occasioned by an acrimonious and caustic matter of " different kinds therein contained, and accompanied with an " immoderate discharge of bilious matters both upwards and downwards."

It is feated 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 circumvelutions and windings, and partly, from the slowing 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 difcharged. It differs from a bilious loofeness in being constantly attended with vomitings, and a greater degree of danger.

This diftemper may proceed from (1) poison, (2) ftrong 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 fometimes, but very rarely, the feventh day, beyond which it never lasts, unless it turns to some other disease.

For the most part it proves mortal, no diftemper, except perhaps the plague and peftilential fevers, being fo fuddenly destructive as the cholera, especially when it attacks children, aged persons,

Its fymptoms.

The dry

tremely

rare.

Sect. 4. (1) immoderate vomiting, and a discharge of vitiated humours by stool, with great difficulty and pain; (2) violent pain and diftension of the abdomen and intestines; (3) heart-burn, thirst, quick pulse, heat and anxiety, and frequently a fmall 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 deftroy the patient in twenty four hours. There is likewise a dry cholera ex- cholera (b), occasioned by a flatus, which passes upwards and downwards, without retchings or stools; but I remember to have feen only a fingle instance of it, at the beginning of the prefent autumn, whereas the former species was very common.

Purgatives in the cholera morbus.

2. Much confideration and experience have taught and aftrin- me that to endeavour on the one hand to expel the gents bad fharp humours which feed this difease by purgatives, would be like attempting to extinguish fire with oil, as the most lenient cathartics would increase the diffurbance, and raife new tumults. And, on the other hand, to check the first effort of the humour in the very beginning, by opiates and other astringents, whilft 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 pent up in the bowels (c).

> or those who have been debilitated by a long illness. The more corrofive the matter discharg'd is, and the more violent the thirst and heat, fo much the greater is the danger; and if black bile mixt 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 extreminion cold forces. ties, cold fweats, a fmall intermitting pulse, and the continuance of the other fymptoms after the loofeness and vomiting cease, are esteem'd 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 prolong'd beyond the seventh day.
>
> (b) 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 inflance of & may be found in Act. Med. Berolin. dec. II. Vol. III. p. 73.

(c) The general indications of cure in this disease are, (1) to correct and fosten the acrimonious peccant matter, and fit it for expulsion, and, if there be occasion, to expel it by art; (2) to check the violent motions in a proper manner; and (3) to ffrengthen the weaken'd nervous parts.

When

3. Let a chicken be boiled in about three gallons of Chap. 2. fpring-water, fo that the liquor may fcarce tafte of the flesh. Several large draughts of this are to be drank How to be warm, or, for want of it, of posset-drink. At the same treated. time I order a large quantity of the fame to be given at feveral times, fuccessively, by way of glyster, till the whole be taken in and discharged by vomiting and stool. An ounce of the syrup of lettice, violets, pursain, or water-lilly, may be added to the draughts and glyfters; but the liquor will answer the end pretty well alone. The flomach in this manner being often loaded with a large quantity of liquor, and its motion, as it were, inverted thereby, and glyfters being frequently thrown in, the sharp humours are either evacuated, or, their acrimony being blunted, restored to their due temper and mixture.

4. When

When it is occasion'd by (1) a corrosive posson, 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, bar-ley-water, and likewise milk, which is render'd more effectual, if it be mixt with absorbent powders. (2) When by strong emetics and purgatives, warm opiates, fuch as mithridate, VENICE or LONDON treacle, and the like, fomenting the stomach and abdomen with spirituous and strengthening fomentations, and afterwards embrocating these parts with liniments made of exprest'd 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 small chicken broth, recommended by our author, and the like; and afterwards give strengthening medicines to compleat the cure. (4) When from a violent sit of anger, emetics and cathartics must by no means be exhibited, nor cold water, fmall beer, or the like, drank immediately after, for fear of caufing an inflammation of the ftomach; but the acrimony and heat of the bile must be corrected by proper absorbents, mixed with nitre, drinking water-gruel, barley-water, a decoction of the shavings of hartshorn, &cc. after which the disorder may be carried off by mild vomits, such as the Ioccacuanha root, or lenient purgatives, as an infusion of rhubarb, with manna dissolv'd in it.

Cold water is effecm'd an excellent remedy in a cholera, and is faid to be so much the more effectual, the warmer the climate, feafon, and constitution of the patient be. It mitigates and takes off the violent heat, which avifes in this difease from the vehement intestine attrition and motion of the sulphurcous 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 folid parts, confiderably weakened by the violence of the

diftemper.

Sect. 4. An opiate when to be given.

4. When this bufiness 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.

An anodyne draught.

Take of couslip-flower water, an ounce; Aqua mirabilis, two drams; liquid laudanum, fixteen drops: mix them together.

This method Safer and quicker than the

5. This method of diluting the humours is abundantly fafer and quicker than the ordinary one of treating this dangerous disease, either by evacuants, or astringents; for common one. evacuants increase the disturbance and commotions, and attringents detain the enemy in the bowels, fo that, not to mention the trouble occasion'd by prolonging the disease, there is danger lest the vitiated humours get into the blood, and cause a fever of a bad kind.

When laube immediately given.

6. But it must be carefully noted that if the physicidanum is to an be not call'd till the patient is exhausted by the vomiting and loofeness having continued, for instance, ten or twelve hours, and the extremities are become cold, he must then, omitting all other remedies, have immediate recourse to laudanum, the last resuge in this disease, which is not only to be given during the urgency of the fymptoms, but repeated every morning and night after the vomiting and loofeness are gone off, till the patient recovers his former ftrength and health.

7. Tho' this disease be epidemic, as we remark'd above, yet it very rarely lasts longer than the month of August, wherein it began; whence one may take occafion to confider the elegant and fubtile contrivance nature uses in producing epidemic diseases. For the' the fame causes entirely remain, which may occasion this diffemper in feveral persons towards the end of September as well as in August, namely, a furseit of fruit, yet we find the same effect does not follow (d). 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 fame fymptoms, totally differs from that just men-

A Surfeit totally different from the true cholera morbus.

> (d) 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.

tion'd; as if there lay conceal'd fome peculiar dif- Chap. 2. position in the air of this particular month, which is able to impregnate the blood, or ferment of the stomach, with a kind of specific alteration, adapted only to this disease.

#### CHAP. III.

### Of the Dysentery of part of the year 1669, and of the years 1670, 1671, 1672.

I. IN the beginning of August, 1699, as before observ'd, The rise and the dry gripes appeared, and during the course of the dry that autumn equall'd, or rather exceeded the dyfentery gripes. which arose with them, in respect to the numbers they attacked. Sometimes a fever accompanied them, and fometimes not; but they exactly refembled the gripes which attended the dyfentery that prevailed at the fame time; for they were extremely violent, and attack'd at intervals, but no natural or mucous stools succeeded. They prevailed equally with the dyfentery throughout this autumn, but appeared no more epidemically in the following years of this conflitution. As these dry gripes To be treatdiffer little either in their nature, or the method where- ed as the by they are removed, from the dysentery, I proceed to dysentery.

treat of this last distemper.

2. It has been already remarked that the dysentery ge- The dysennerally comes, as the prefent one did, in the beginning tery usually of autumn, and goes off for a time upon the approach of beginning of winter; but when a number of years tend much to pro- autumn. duce it epidemically, it may feize a few at any other time, and abundance at the beginning of fpring, or perhaps earlier, if warm weather immediately fucceeds a fevere frost, that went off fuddenly. And tho' very few may be attacked with it, yet as this happens at fo unufual a time, I am well convinc'd that the constitution eminently favours this difeafe. And thus it happened in those years wherein the dysentery proved very epidemic; for fometimes, as we observed above, it seiz'd a few towards the end of winter, or beginning of fpring (a).

(a) The dysentery is defined, " a convultive motion of the in-" teltines, caus'd by a caustic, ulcerating humour, lodg'd in their coats, occasioning a frequent inclination to go to stool, and a

Sect. 4. Its fymptoms.

3. It fometimes begins (1) with a chilness and shaking, immediately succeeded (2) by a heat of the whole body, as is usual in fevers, and soon after (3) gripes and stools

" frequent discharge of mucous, bilious matters, ting'd more or " less with blood, with vehement gripings, and a feverish " commotion."

It is generally epidemic, rarely sporadic, and appears with various degrees of malignity. It spares neither age nor fex, but attacks women as well as men, children and youth, as well as adults and aged perfons, and fuffers not even fucking 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 liv'd irregularly in point of diet, and eat large quantities especially

of unripe and eafily fermentable fruit.

It differs from a loofeness (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 loofeness 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 carching, and attended with a more painful tenefinus. 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 feldom pure, but mix'd with purulent, frothy, fetid matter, whence fevere 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 flax, where what is voided looks like the water wherein raw flesh has been wash'd, and comes away without pain, by the very different appearance of the discharges, the violent gripings attending them, the presence of a sever, 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 feizes almost all foreigners, by being much more malignant, and likewife catching, accompanied with a fever, and occationing 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 fymptoms, as an ill-condition'd fever, great loss of strength, extreme thirst, &c. It is further divided into a red and white kind: in the former the stools are ting'd 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 feat, 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 fet down.

Its feat may be determined with eafe by attending to the part chiesly pained. If therefore (1) a violent pain be perceiv'd near the navel, and a stool succeeds slowly thereupon, 'tis certain that the finall guts are affected. (2) When the gripings affect the e-

follow: it is indeed, frequently, not preceded by a fever, Chap. 3. but the gripes attack first, and stools soon succeed; (4)

pigastric region where the colon is situated, or the hypogastric region and hypochondria, and the faces are immediately discharged, its 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

feems 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 caus'd (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 fweats occasioned by the preceding long continued heat and dryness of the air, the fost and fluid parts of the juices are thus diffipated, the remainder rendered acrid, impure and fulphureous, and the body debilitated: whence it follows that if perfons, whose juices are thus depray'd and vitiated, happen to be confiderably exposed to the cold air in the evening, by being too thinly cloth'd, fitting long, or fleeping on the ground, &c. it causes a stoppage of the pores, and prevents the further exhalation of the yet fine fulphureous 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 dyfentery, of a more or less malignant kind. Such vapours are generated either (1) in the air itself, from some malignant effluvia, exhal'd 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 fruit, covered either with a poisonous coat, or the malignant eggs of insects, that float in great abundance in the air, at this time, and fo mixed with the blood and juices. And 'tis worth notice that in fuch 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 dyfenteric bodies by infenfible 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 other insects. Lastly (3) this disease may proceed from eating fruit very freely, especially if it be unripe, or drinking sermentable liquors upon it, particularly, new wine, beer, cyder and the like. The most noxious fruits are fweet cherries, peaches and plumbs, especially the large yellow plumb.

Sect. 4. however intolerable gripings, and a painful defcent, as it were, of all the bowels always accompany the ftools, which are very frequent; and (5) all mucous, not excrementitious, unless that sometimes an excrementitious one intervenes without any confiderable pain; (6) the mucous stools are generally streak'd with blood, but fometimes 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 diffemper may as juftly be entitled a dysentery, as if blood was discharged a-Abot regi- long with them (b). (7) Further if the patient men and be in the vigour of life, or has been heated by carcardiacs de- diacs, 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, lowness of fpirits, and all the figns of an ill-condition'd fever are joined with it. (8) This disease occasions extreme pain and fickness, 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 expell'd the blood, a coldness of the extremities enfues, and there is danger of death even within the periods of acute difeases. But if the patient escapes for this time, feveral fymptoms of a different kind fucceed; for instance, sometimes in the progress of the disease, inflead of those sanguineous filaments which are usually mix'dwith the stools in the beginning, a large quantity of pure blood, unmix'd 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 fharp matter to the affected parts (c). (10) Moreover, at the decline of

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Sect. 4.

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# The Dysentery of part of 1669,

Sect. 4.

There may perhaps be various kinds of dysenteries.

5. What similitude there is between the dysenters here describ'd, 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 species 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, fince 'tis 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 furpass our comprehension. So that whoever has undertaken to fathom these matters, and search after the multifarious operations of nature, will find himfelf difappointed in his expectation, and not succeed in the attempt; and besides, if he be a judicious person, he will expect to be cenfured for making the most useful discoveries, for no other reason but because he was the first inventor. 6. It must be further observ'd that all epidemics at

All epidemics most subtile and spirituous at their rise.

Exemplifi.

ed in the

plague,

their first appearance, as far as can be judg'd from their phenomena, feem 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 mix'd with the air, are esteem'd to produce an epidemic constitution, 'tis reafonable to conclude that they are possessed of a greater power of acting at their first appearance, than when their force is weakened. Thus in the infancy of the plague scarce a day passed, but some of those who were seized with it died fuddenly in the ftreets, without having had any previous fickness; whereas after it had continued for fome time, it destroy'd none, unless a fever and . other fymptoms had preceded; whence it clearly follows that this disease, tho' it then took off fewer persons, was more violent and acute in the beginning than after-

and this dyfentery.

7. In the like manner in the dyfentery under confideration, all the fymptoms were most severe in the beginning, tho', with respect to the numbers affected thereby, it increased daily till it came to its height, when conse-

wards, when its influence was more extensive.

quently

quently more persons died than in the beginning : yet the Chap 3. lymptoms were more violent then, than in the height, and much more fo 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 feem'd to be; for instance, the first autumn it attack'd, feveral had no stools at all : but with respect to the severeness of the gripings, the violence of the fever, fudden decay of strength, and other symptoms, it much exceeded the dyfenteries of the following years. And further, the dysentery accompanied with stools, which appeared first, seem'd to be of a more spirituous and fubtile nature than those that succeeded; for in the first dysentery the provocation 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 difease proceeded on its course, the gripings abated, and the stools became more natural, and, at length, the epidemic constitution declining, the gripes were fcarce felt, and the excrementitious or natural stools exceeded the mucous ones in number.

8. To proceed at length to the curative indications: The curaafter having attentively confidered the various fym-tive valicaptoms attending this difease, I discovered it to be a fever of tions. its own kind, turned inwards upon the intestines; by means of which the hot and sharp humours, that were contained in, and agitated by the blood, were thrown off by the meferaic 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 infide is naturally covered, is cast out more or less copioufly at every stool. The indications of cure therefore feem to offer themselves plainly; nor indeed have I judged that I had any thing more to do than (1) to make an immediate revultion of these sharp humours by bleeding, and afterwards to cool the remainder; and (2) to evacuate them by purgatives  $(\epsilon)$ .

(e) There is scarce a disease which requires more skill in order to its rational cure than the dyfentery. In general, the indications

## The Dysentery of part of 1669,

Sect. 4.
The method of cure.

9. I therefore used the following method: upon being call'd in I immediately directed bleeding in the arm (f) gave an opiate the same evening, and the next morning this gentle purging potion, which I frequently use.

A purging draught.

Take of tamarinds, half an ounce; the leaves of sena, two drams; rhubarb, one dram and half; boil them together in enough 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 in the morning early.

indications of cure are; (1) to correct the noxious, aerid, peccant matter, of what kind foever it be, and expel it by the proper emunctories; (2) to cafe the gripings, and quiet the convultive motions of the inteftines; and lastly (3) to exhibit proper remedies to heal the inteftines, 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 glyfter, gentle emetics repeated as there is occasion, especially of Incacuanha 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 Incacuanha, it should be observed that it proves most serviceable in robust and moss constitutions, where the first passages and bowels abound with foul humours, or the insection 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 it 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 injur'd, or any of the viscera affected to an inflammation, sirrebus, or cancer. With respect to laxatives, such as are sweet and apt to ferment are improper; as a decostion of prunes, a solution of manna, an insusting of sena, and all laxative syrups. Violent purgatives and mercurials are sound to exaginerate the symptoms. (2) The second intention requires opiates and subaffringents, and the application of anodyne fomentations and liniments to the stomach and abdomen. (3) The third demands either detergents and balsanics, or strengthening remedies, according to the nature of the case.

(f) 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 sever. For 'tis a groundless apprehension that bleeding lessens the strength, since, not only, many in this disease die of an inflammation of the intestines, but also that plethoric persons, if attacked with continued severs, only perish from an overfuiness of blood, which readily occasions obstructions, a mortification and gangrene; whence bleeding must certainly be the pro-

pereft remedy to prevent thefe dangerous fymptoms.

I commonly prefer this draught to an electuary made with Chap. 3. a fmall 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 dyfentery. And because it is certain that the gentlest cathartics fometimes 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 feems to have done working; and this I do in order to quiet the disturbance I have raised. I repeat the cathartic twice more, interpofing a day between each, 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 fymptoms, 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 fixteen or eighteen drops in any cordial water for a dofe.

10. After bleeding and purging once I allowed some Cardiacs mild cardiac to be taken between whiles, throughout when to be the course of the disease, as plague water, compound scor- allowed. dium water, and the like. e. g.

Take of distilled waters of black cherries and strawber- Acordial ries, of each, three ounces; plague water, compound julap. foordium water, and small cinnamon water, of each an ounce; prepared pearl, one dram and half; fine sugar enough to sweeten it, and balf a dram of damask rose water 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 depressed in this disease by the violence of the stools. Their drink was milk boiled with thrice its quanstools. Their drink was mik voiced with thrice its quantity of water, or the white decoction, as it is called, made of diet and burnt hartshorn, and the crumb of white bread, of each two liquors. ounces, boil'd in three pints of water to two, and afterwards sweetened with a sufficient quantity of fine sugar; and

Sect. 4. fometimes posset drink, or, where the loss of spirits required it, they drank cold for their common drink a liquor made by boiling balf a pint of canary, and a quart of spring-water together. Their diet was sometimes panada, and fometimes broth made of lean mutton (g). I kept the aged more in bed, and allowed them a freer ufe of any cordial water they had been accustomed to, than was proper for children, or young perfons. This method exceeded all those I had hitherto experienced in conquering this disease, which for the most part yielded to the third purge.

How to be treated when it does not yield to thefe means.

11. But if it proved so obstinate as not to yield to these means, 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 (h). 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 in effect an admirable remedy in all kinds of loofenesses. Nor. indeed have I hitherto found the leaft inconvenience happen from fo frequent a repetition of opiates, (whatever mischief the unexperienced imagine will follow from hence) tho' I have known feveral who have taken them every day for fome weeks when the difease prov'd The cure of inveterate. But it must be noted here, that when the flux amounts only to a loofeness, 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 fufficient quantity of diafcordium, adding to it two drops of oil

a loojenes.

(g) Beer is prejudicial here; every thing should be drank warm, and, towards the conclusion of the ditease, a glass of wine by itself, or mix'd with water, as the stomach will bear it, is proper both to raife the spirits, and strengthen the stomach and bowels. Veal or chicken broth, rice, and yolks of eggs are cfteem'd ufeful by way of dier.

(b) When the strength is much exhausted in a dysentery, or loofeness, by the frequent discharges accompanying these distempers, the patient is cachectic and consumptive, a hectic heat, fuffocation, grief, and wandering pains in the limbs fucceed, the evacuation is to be check'd, strengthening glisters often injected, strengthening topics applied to the stomach and abdomen, and proper internals exhibited at the same time to strengthen all the pa:Is.

of cinnamon; and exhibiting an opiate the following Chap. 3. evening, e.g.

Take of small cinnamon water, one ounce; liquid lauda- Aparegoric num fourteen drops : mix them together.

draught

In the mean time use the diet above specified in the cure of the dysentery, and inject the glyster there commended every day, if there is occasion, --- But this by way of digreffion.

12. Now to evince the excellence of the method here An instance delivered by a fingle instance, for I will not trouble the of the dyreader unnecessarily with many; The rev'd Mr. Belke, fentery chaplain to the earl of St. Alban's, being feized with a this meviolent dysentery, during this constitution, fent for me thed. to attend him, and he was recovered by this method.

13. Children affected with this difeafe are to be treat- Children ed in the same manner, but the quantity of blood to be how to be taken away, and the doses both of the purgative and treated in opiate must be diminished in proportion to their age, ease. so that, for instance, two drops of liquid laudanum is a fufficient dose for a child of a year old.

14. The liquid laudanum, which I constantly use, as our auabove intimated, is prepared in the following fimple ther's limanner.

quid laudanum de-

Take of Spanish wine, one pint ; opium, two ounces ; scrib'd. faffron, 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 tineture becomes of a due confistence, and after straining it off, fet it by for use.

I do not indeed judge that this preparation is to be pre-ferr'd to the folid laudanum of the shops on account of ufefulness. its virtues, but I give it the preference for its more convenient form, and the greater certainty of dofing it, as it may be dropt into wine, a diftill'd 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 difeases, or to eradicate them effectually. And notwithstanding there are persons who endeavour to perfuade the credulous, that almost all the virtues of opiates in general, and of opium in particular, chiefly

Opium as effectual as any of its preparati-

Sect. 4. 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 cautioufly 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 artift. Moreover, this medicine is fo 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 things than might reasonably be expected from the use of any fingle medicine. For it must certainly argue unskilfulness, and a very flender knowledge of its virtues, to understand only to apply it in order to procure fleep, eafe pain, and check a loofeness, since it may be suited to several other purpofes, and is indeed a most excellent cardiac, not to fay the only one hitherto discovered.

An excellent cordial.

The ay fentery in the beginning of this conflitution, how best treated.

15. The dysentery was in general to be treated in this manner. But it must be observed that as this dyfentery was of a more spirituous and subtile nature the first year it arose, than in the subsequent years, it 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 fuccess for both, till colder weather fucceeded, when I found it less effectual, even in the fame year; and in the following years, when the difeafe had lost much of its subtilty, and prov'd more humoural, it availed not at all.

The method Specified.

16. I proceeded in this manner: if the patient was young, 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 practifed in the cholera morbus, except that here, instead of chicken-broth, or poffet-drink, I fubstituted whey to be drank cold in the fame quantity as in that difease, but ordered the glysters to be injected warm, without an admixture of fugar, or any other ingredient. I always found the gripes and bloody stools go off upon the discharge of the fourth glyfter. This business being over, and all the whey evacuated.

evacuated, which if the patient be expeditious takes up Chap. 3. only two or three hours, he was immediately put to bed, where he foon 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 provok'd by medicine; allowing him nothing more than warm milk during this time, which he likewife used only for three or four days after he left his bed, If a relapfe happens, either from rifing too foon, or leaving off the milk diet too foon, the fame 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.

17. That a fever, attended with fuch fymptoms, as we Cured by have enumerated above, happens in those countries, and the same at those times, wherein the dysentery prevails epidemi- Method in Atrica. cally, 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 embaffador from his Britannic majesty to the emperor of Morocco, in Africa. This gentleman affured me that the dyfentery rag'd at that time epidemically in that kingdom, as it always does; and that the fever accompanying it refembled the fever above described, which he treated according to our method with constant fuccess, both at Tangiers and other places, whether the patients were Moors or Englishmen. Now neither of us was oblig'd to the other for this method, but being at fo vast a distance we both casually fell upon the same. And he also informed me that the method of diluting plentifully in the dyfentery fucceeded 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.

18. In the first autumn wherein this constitution pre- An instance vailed, Dr. Cox being feized with a very acute dyfen- of its ufejultery, by my advice, followed the abovementioned me- ness. thod, whereby he was fafely 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 feveral by the fame me-

thod

Sect. 4.

How to be treated when it proves lasting.

thod at the close of autumn; but the following year,

making trial of it again, he found it fail him.

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 ftool, whereby only a mucus ting'd with blood is discharged. 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 aftringent glysters, which are ordinarily injected according to the different states of the supposed ulcer; or (3) by fomentations, baths, fumigations, and suppositories, fuited to the same purposes. For 'tis apparent that this diforder 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 ftool wherewith the infide 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 fuch medicines as strengthen the body in general; for not to be ap- the application of any kind of topic to the part affected, being incommodious, will rather debilitate than strength-The difease therefore must be borne till the en it (1). ftrength can be recovered by a reftorative diet, and the free use of some particularly grateful cordial liquor; for the tenefmus will go off spontaneously in the same degree as the ftrength returns.

It somenues for severalyears.

Topies why

20. It fometimes happens, tho' very feldom, that a times conti- dysentery ill treated in the beginning afflicts a particular person for several years, the whole mass of blood having obtained a dyfenteric disposition, whence the intestines are continually supplied with hot and acrimonious humours, whilft the patient in the mean time continues pretty capable of following his bufiness.

> (i) The tenefinus is an exceeding troublesome and painful symprom, but may be greatly relieved by fomenting the anus with a decoction of flowers of elder and camomile in milk, applying the mucilage of flea bane feed or quince feed, 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 feed, &cc. in milk.

an instance of this lately in a woman, who was perpe- Chap. 3. tually afflicted with this disease, during the three last t years of this constitution; and as she had abundance of medicines before applying to me, omitting other remedies, I only directed bleeding, and was encouraged to repeat it frequently, at confiderable intervals, as well from nate one the colour of the blood, which resembled that of pleu · cured by reritics, as from the great relief the patient obtained by peared every bleeding; by which means she at length reco- bleeding. vered her former health.

21. Before I finish, this particular is to be remarked, When not viz. that tho' in those years, wherein the dysentery rag'd epidemic fo epidemically, the abovementioned evacuations were yields to absolutely necessary to be made, previous to the use of laudanum laudanum, yet in any constitution, which has a less tendency to this difease, 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 fuffice for the dysentery.

#### C H A P. IV.

Of the continued Fever of part of the Year 1669, and the Years 1670, 1671, 1672.

A T the fame time the dysentery raged, a fever a- origin of rose, which much resembled, and often ac- the fever of companied this difease. It not only attack'd such as this constiwere afflicted with the dyfentery, but those likewise who remain'd wholly free from it, unless that fometimes, tho' very rarely, the patient had flight gripings, fometimes with, and at others without a loofeness, for it always had the fame 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 ftool in the dyfentery, and the fymptoms thereon necessarily depending, this fever fhould feem to be wholly of the fame nature with that And from henceforward, through the course of this conflitution, it underwent the fame change of fymptoms, with respect to its increase, state, and declenfion, as generally happen'd in the dyfentery. I call it, therefore, the dysenteric fever. 2. This

Sect. 4.

Its Sym-Pt07725.

Epidemics

nifest qua-

lities of the

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2. This fever, as we have faid, fometimes 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 fweats, which as. we observed above were very copious in the fever of the preceding conftitution, 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 moift as in the other fevers, was covered belide with a thick fur; (5) this fever feldom went off by a spitting, as the other usually did; (6) it was more subject to generate Aphthæ in the declenfion, than either the former, or any other fever I had hitherto met with: for both this and the fever that fucceeded the dyfentery, in the decline, generally deposited a vitiated and acrid matter in the mouth and throat, whence this fymptom arose in fuch as had been much exhaufted by the inveteracy of the disease, and further debilitated by an over-hot regimen. In the same manner also were those Aphtha generated, which happen'd at any time in stubborn dyfenteries, joined with a fever; especially if, besides ufing an hot regimen, the difcharge by ftools had been stop'd by astringents, before the cause of the disease was expelled the veins by bleeding and purging.

3. These were the most certain signs of this fever, for the other fymptoms 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 dyfentery. But that thefe particulars may be better understood, fince by this contrivance especially nature manifests her superior power in the production of epidemic difeases, we shall make a closer scrutiny into this matter. It should therefore be observed that, tho' the how affected manifest qualities of the air may not make so strong an by the ma- 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 conftitution remains precifely the fame, whether these promote, or in some measure retard it.

4. Hence

4. Hence also it is that when various epidemics hap- Chap.4. pen in the fame constitution, some particular disease .fhews itself chiefly in the season assign'd it by the fensible qualities of the air; and at length yields to some other epidemic, which the different qualities of the fubfequent feafon 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 perfons at once, but upon the approach of autumn it abates confiderably, and yields to the then reigning grand epidemic, which gives its name to the year, as every year fufficiently shews. For the body being heated by the preceding fummer, the fevers, which are peculiar to the general conflitution, eafily attack at that time, but upon the coming in of autumn the grand epidemic again prevails, and these go off entirely.

5. But as the fevers arifing in this month should be referred to the fenfible qualities of the air, fo also the various symptoms, which are quite foreign to their nature, in as much as they depend upon fuch a general constitution, are derived from the manifest qualities of the air happening in the fame month. Hence it is, that in those years wherein these severs arise in great numbers in this month, they are attended with a variety of new fymptoms, befides 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 esteem'd 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 fymptoms appear, which accompany them as flationary fevers of fuch a particular conftitution.

6. This clearly appeared in other fevers, but chiefly Inflanc'din in the dysenteric fever of July, 1671, and 1672; the the dysenformer of which at the decline was constantly attended teric fever with extreme fickness, a vomiting of green choler, and a great tendency to a loofeness; and the latter with a pain in the mufcular parts of the body, especially in the limbs, refembling a rheumatifm, and also an inflammation of the throat, but milder than in a quinfey: yet both these met in the same fever, and were removed by the fame procedure, for they differed only

The species of a fever how best di scovera-

Sect. 4. with respect to the sensible qualities of the air that prevailed at the time when these symptoms arose. But the fudden and unexpected rife of thefe fevers about the beginning of this month, and the new appearance of their peculiar fymptoms for a time, tho' they neither 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 univerfally to afcertain the species of a fever from its concomitant figns; tho' it may be fufficiently known by carefully attending to other diseases arising in the fame year, and also to the peculiar symptoms of the fever, fo far as they depend upon a particular evacuation. A confideration likewise of the method or medicines to which it readily yields, greatly conduces towards discovering the species of the fever.

7. As to the other differences of the concomitant fymptoms of stationary fevers, they only regard the different times of the constitution, and upon this account are either violent or moderate as the fymptoms of other epidemics, to which they belong, are either increased or

mitigated.

8. But to refume our subject: this fever, which, as we have already observed, begun with the dysentery, prevail'd 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 conflitution, fometimes attacking more, and at others fewer per-

The cure of this constitution.

9. With respect to the cure of this fever; having the fever of observed, as we said before, that the symptoms of that fever which affected abundance of those who had the dyfentery, were manifestly the same with those which accompanied the folitary fevers of the current year, I judg'd it proper to attempt the cure by imitateing in fome measure the evacuation, which nature commonly uses in order to expel the sharp and corrofive matter, occasioning both the dysentery and the fever fucceeding thereupon. And therefore I attempted to cure this fever by the fame method, both as to bleeding and repeated purgation, which we have deduc'd more at large in treating of the cute of the dyfentery; only I found that opiates, exhibited on the intermediate days, not only did no fervice, but prov'd

detri-

detrimental, by detaining the matter which ought to Chap.4. have been cast out by purging, which happen'd otherwife in the dysentery. On the first days of the illness the patient supped water-gruel, barley-broth, panada and the like for diet, and drank warm fmall-beer for his common drink; 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 allow'd if a different one be practis'd. The third purge, interpofing a day between each, generally terminated the difease, but fometimes further purging was requir'd. When the patient continued weak after the fever was gone off, and recovered flowly, which often happen'd in hysteric women, I endeavour'd to invigorate them, and repair the loss of spirits by giving laudanum in a small dose; but I feldom repeated this medicine, and never prefcrib'd it till two or three days after the last purge. But nothing prov'd fo effectual to recover the strength, and chear the spirits, as the free use of the air immediately after the fever vanish'd.

10. I received the first hint of this method of prac- Whence detice from the following cafe. In the beginning of this rived. constitution, whilst I was follicitously endeavouring to discover the nature of this new fever, I was called to a young woman who had it, join'd with a very violent pain in the fore-part of the head, and the other fymptoms, which, as we faid, accompanied the dyfenteric fever. Upon enquiring in what manner the fever first feized her, and how long it had continued, she told me that she had had the epidemic dysentery a fortnight before, which prevail'd very generally at that time, and that as foon as it went off, either fpontaneously, or by the use of medicine, this fever with the pain in the head fucceeded. Hence I conceived it would be proper, for both, to subflitute another similar evacuation in place of the dyfentery, upon the stoppage of which the fever arole; 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 fuccess alone is not a sufficient proof of the excellency of a method of cure in acute difeafes; fince fome are recovered by the imprudent procedure of unskilful women, but that there was further requir'd, that

11. In 1672, at the beginning of June, I was fent 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 caused.

12. In young persons, and sometimes in those who were a little more advanced in years, this sever at times seiz'd the head, so that they became delirious, yet without raving, as those who grow light-headed in other severs do, but were affected with a kind of super, nearly resembling a carus. This symptom chiefly happen'd 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 attack'd with this symptom, tho' I lest no method untried, and had recourse to all the medicines hitherto noted for this purpose (b).---And let these particulars suffice for the sever of this constitution.

#### CHAP.

(a) General fuccess in the cure of a particular distemper is furely the best proof of the judgment of the practitioner, and the excellency 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 'tis likely to prove.

(b) It were to be wish'd our author had particularly specified the method and medicines, which were unsuccessfully us'd to conquer this symptom; the sailure 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 establish'd, and it appears from the forms of medicines directed by our author, that he rarely administer'd those of the warm and volatile kind, it is highly probable that both these helps were either entirely omitted, or not us'd so freely as the ease should seem to require. In the present practice very ill-condition'd fupors are frequently remov'd 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 species of diambra, camphire, saffron, Virginian snake-root, spirit of lavender, sal volatile oleosum, &c.

## Chap.5.

### CHAP. V.

## Of the Measles of 1670.

1. TN the beginning of January 1671, the measles ap- Therise and peared as is usual, and increased daily till the ap- progress of proach of the vernal equinox, when it came to its the meales height; after which it abated in the same gradual man- of this conner, and went quite off in July following. I intend to firstion. deliver an accurate history of this species, so far as I was then enabled to observe it, because it seem'd to be the most perfect in its kind of all those I have hitherto met with.

2. This difease arises and terminates at the times above specified. It chiefly attacks children, especially Its symthose who live under the same roof with one that has proms enuit. (1) It comes on with a chilness and shivering, and merated. an inequality of heat and cold, which fucceed alternately, during the first day; (2) the second day these terminate in a perfect fever, attended with (3) vehement fickness, (4) thirst, (5) loss of appetite, (6) the tongue white, but not dry, (7) a flight cough, (8) heaviness of the head and eyes, with continual drousiness; (9) an humour also generally distills from the nose and eyes, and this effusion of tears is a certain fign of the approach of the meafles; whereto must be added, as not lefs certain, (10) that tho' this difeafe mostly shews itself in the face by a kind of eruptions, yet, instead of these, large red spots, not rising above the furface of the skin rather appear in the breast; (11) the patient fneezes 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 loofeness, attended with greenish stools: but this happens chiefly in children, during dentition, who are also more fretful in this diftemper than ordinary. The fymptoms usual- They grow ly grow more violent till the fourth day, at which time more viogenerally little red fpots, like flea-bites, begin to appear lent till the in the forehead and other parts of the face, which, be. 4th day. ing increased in number and bigness, run together, and form large red fpots in the face, of different figures; but fometimes the eruption is deferr'd till the fifth day. These red spots are composed of small red pimples,

feated

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feated near each other, and rifing a little higher than the furface of the fkin, fo that they may be felt upon prefling them lightly with the finger, tho' they can fcarce be feen. 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.

And do not abate upon the eruption.

3. The fymptoms 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 violent, the difficulty of breathing, the weakness of, and defluxion upon the eyes, constant droufiness, and loss of appetite, perfifting in their former state. On the fixth day, or thereabouts, the eruptions begin to dry, and the fkin feparates, whence the forehead and face grow rough; but in the other parts of the body the spots appear very large and red. About the eighth day those in the face vanish, and very few appear in the rest of the body; but on the ninth day they disappear entirely, and the face, limbs, and fometimes the whole body feem as if they were fprinkled over with bran, the particles of the divided skin being rais'd up a little and fcarce cohering, fo that as the difease is going off, they fall from all parts in scales.

The disease usually terminates on the 8th day. 4. The measles therefore generally disappears on the eighth day (a), when the vulgar, deceiv'd 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 assign'd them by nature, and they suspect that the symptoms which succeed upon their going off, are occasioned by their striking in too soon. For 'tis observable that the sever and difficulty of breathing increase at this time, and the cough becomes more troublesome, so that the patient can get no rest in the

(a) 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 affertions; 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 suffocation. The dangerous symptoms in this distemper are great loss of strength, coldness of the extremities, restlesses, violent vomiting, a continual cough and looseness, difficult deglutition, a delirium, convulsions, and prosuse sweats, especially in persons advancing in years.

day, and very little in the night. Children are subject Chap. 5. to these evils, which come on at the declension of the difease, especially if an heating regimen, or hot medicines have been us'd to promote the eruption; whence arifes a peripnemony, which deftroys greater numbers then the fmall-pox or any of its concomitant fymptoms; yet notwithstanding, if this difease be skilfully treated, it is not at all dangerous. These bad symptoms are likewise often followed by a looseness, which either immediately fucceeds the difeafe, or continues feveral weeks after the disease and all its symptoms are gone off, with great danger to the patient, on account of the continual waste of spirits hence arising. fometimes 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 reliev'd by bleeding and a cooler regi-

5. As the measles in its nature nearly resembles the Requires fmall-pox, fo does it likewise agree pretty much there- nearly the with in the method of cure which it requires: hot me- same medicines and a hot regimen are very dangerous; tho' they with the are frequently used by unskilful nurses to drive the dif- small-pox. The following method fucceeded The method eafe from the heart. best with me. I confin'd the patient to his bed for only describ'd. 2 or three days after the eruption, that the blood might gently breathe out the inflam'd and noxious particles, that are eafily feparable, through the pores, in a manner fuitable to the nature of the difease; and allowed no more clothes, nor a larger fire, than he accustomed himself to I forbad all flesh meats, and permitted when in health. water-gruel, barley-broth, and the like, and fometimes 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 difease, I ordered a draught of some pectoral decoction to be taken between whiles, with a proper linetus. But I chiefly observed to give diacodium every night, the distemper throughout. e.g.

Take of the pectoral decoction, a pint and half; fyrup of Apectoral violets and maiden-hair, each an ounce and half; mix apozem. them together for an apozem, to be taken in the quan-

Of the Measles of 1670. 164 tity of three or four ounces, three or four times Sect. 4.

a day.

A pectoral

lance.

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 linetus, to be taken often in a small quantity, especially when the cough is troublesome.

Take of black-cherry water, three ounces; fyrup of white A quieting draught. poppies, an ounce; mix them together for a draught, to be taken every night.

> In children the dose of the pectorals and opiate must be diminished in proportion to their age (b).

6. This method feldom fails of curing, befides being Its excelpreventive of every other fymptom, which is not the neceffary

(b) With respect to the method of cure, it may not be amiss

to give a few further directions, taken from Hoffman.

If the first passages be overcharg'd 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-condition'd and fubtile, 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 dif-ficulty of breathing, a contraction of the asophagus, 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 romedy the spasms, as glyiters made of carminatives and anodynes, mild diaphoretics, mixt with a small proportion of castor and nitre; and sometimes bleeding is to be us'd.

The cough, which is the most troublesome symptom, is best reliev'd 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 loofeness is neither to be much encourag'd, nor hastily check'd; as it often proves rather beneficial than detrimental, by terminating the difeafe, and carrying off abundance of impurities: smoothing glysters to fosten the acrimonious humours lodg'd in the intestines, are safest here.

In hæmorrhages happening in this difease powerful astringents and opiates are bad. The following mixture hath been often us'd with fuccess.

Take of black cherry water, fix 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.

necessary and unavoidable attendant of the disease: the Chap. 5. 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 two, it may be eafily cured by the use of the open air, along with proper pectorals; and indeed it generally abates by degrees

fpontaneously, and at length ceases (c).

7. But if, by using cardiacs and too hot a regimen af- The milter the departure of the disease, the patient's life be en- chief ensudangered (which is a very common case) by the violent ing from a fever, difficulty of breathing, and other fymptoms that hot regimen and carufually afflict fuch as have a peripneumony, I have with diacs after great fuccess ordered even the tenderest infants to be the disease blooded in the arm, in fuch quantity as their age and is gone off, ftrength indicated. And fometimes also, when the dif- medied. eafe has been urgent, I have not fear'd to repeat the operation. And in reality, by bleeding, I have fnatch'd abundance of children from imminent death. These fymptoms arife in children upon the departure of the meafles, and prove fo fatal, that they may justly be esteemed the principal ministers of death, destroying greater numbers than the fmall-pox: nor have I hitherto discovered any other certain method of conquering them. Bleeding also cures the loofeness, which, as we said, succeeds the measles (d); for as it arises from the effluvia of the inflam'd blood, flowing into the intestines, (as is likewise usual in the pleurify, peripneumony, and other diseases caus'd by inflammation) and irritating them to discharge their contents, this remedy alone will relieve, as it makes a revultion of those sharp humours, and likewife reduces the blood to a due temper (e).

8. Nor need any one be furprized at my bleeding Bleeding as young children, fince, as far as I have hitherto been able fafe in chilto observe, it may be as safely performed in them as in dren as in

grown adults.

(c) Here is no mention made of purging after the difease is gone off, the omifion whereof notwithstanding has been frequently found to occasion very dangerous and stubborn disorders; as internal abscesses, malignant ulcers, caries of the bones, a con-fumption, dropsy, blindness, &c. Let it be remember'd therefore that purging is almost equally necessary after this distemper, as after the fmall-pox. (d) See above, Par. 4.

(e) Gentle purging with rhubarb should feem advisable here; and join'd with moderate exercise, and the use of the open air, will probably effect a cure. Bleeding may occasionally be proper, but cannot be faid to make a revultion of tharp humours, which

in this case purging seems best adapted to remove.

Its use in convulsions. tition.

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lated, wherein it

Sect. 4. grown persons. And indeed it is so necessary in the fever abovementioned, and in fome other diforders which children are fubject to, that there is no curing them without it. For instance, how are children to be relieved without bleeding during dentition, in the convulfions happening to them in the ninth or tenth month, during den- accompanied with a fwelling and pain in the gums, whence the nerves are compressed and irritated, and the fits also proceed? In this case bleeding alone is to be preferred to all the celebrated specifics yet known; some of which prove detrimental by their adventitious heat, and whilft they are supposed to cure the disorder, increase it by their manifest heat, and destroy the patient. Not to mention at prefent the great relief which bleeding affords in the hooping-cough in children, in which it far exceeds all kinds of pectorals whatever.

9. What has been faid of the cure of those symptoms fucceeding the measles after its disappearance, may fometimes also hold good when the difease is at the height, provided the fymptoms be occasioned by an artificial heat; if the expression may be allowed me. In 1670 I attended a maid-fervant of Lady Ann Barington, who had the measles, joined with a fever, difficulty of breathing, purple fpots over the whole body, and many other dangerous fymptoms, all which I afcribed to the hot regimen and medicines which had been too freely used. I directed bleeding in the arm, and prescribed a cooling pectoral ptifan to be taken often, by means of which, and a more cooling regimen, the purple spots and

all the other fymptoms went off by degrees.

10. This difease, as abovementioned(f), began in Jamuary, and increased daily till the approach of the vernal equinox, after which it decreased gradually, and totally difappeared in the following July, without returning again during the course of years wherein this constitution prevailed, except that in the following fpring it appeared in a very few places .-- And let this fuffice for the meafles .---

CHAP.

(f) See above, Par. 1.

# Chap.6.

#### CHAP.

Of the anomalous or irregular Small-pox of the Years 1670, 1671, and 1672.

1. He measles, as we said before (a), introduced a dif- The rise and ferent species of small-pox from that of the prece- progress of ding constitution. It arose much about the same time a new kind as the measles did, namely in the beginning of January, pox. 1670; And tho' it was not so epidemic, it notwithstanding 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 rag'd in autumn, this feafon being peculiarly difposed to favour it. But in the winter this kind of smallpox returned again, the dyfentery being overcome by the cold. In this order did these distempers succeed each other thro' the whole terms of years of this conftitution, except that in the last autumn it prevailed, name ly in 1672, the constitution being then in its decline. and flowly promoting the dyfentery, 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 dyfentery, that it was not eafy to afcertain which of the two difeases attacked greater numbers, but, as far as I could conjecture, the dyfentery should feem to have been chiefly prevalent. Moreover, this fmall-pox alfo, 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 fymptoms, and the numbers attack'd thereby.

2. But to fet down its particular figns. I was much furpriz'd upon the rife of this fmall-pox, when I found that it differed in feveral confiderable fymptoms from the kind produced by the preceding conftitution, 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 fort of small-pox so

fully described in the foregoing sheets.

(a) See above, Chap. I. Par. 4.

3. The

the distinct

kind.

## Of the anomalous Small-pox

3. The diffinct kind of this fmall-pox differed from the common distinct one of the preceding constitution, The figns of only in the following fymptoms. (1). The eruptions generally came out on the third day, which indeed is ufual in the confluent fort, whereas in the diffinct kind of the former constitution they appeared not before the fourth day; (2) they did not grow fo big in the course of the difease, as those of that kind, but (3) were more inflamed, and in the declenfion, after their suppuration, frequently look'd black; (4) formetimes, but very rarely, a spitting happened, as in the confluent kind, tho' the eruptions were very few: whence it appears that the finall-pox of this conftitution greatly refembled the confluent kind, and was attended with a more violent inflammation than is usual in the distinct.

The figns of the confluent zind.

4. But the confluent species of this constitution differed from those I had observed in other years in several particulars, which I shall here enumerate. (1). The eruptions fometimes appeared on the fecond day, at others on the third in form of an equal reddish fwelling, covering the whole face, and thicker than an erysipelas, nor could any spaces easily be perceiv'd between the eruptions; (2) the rest of the body appeared to be overspread with an almost infinite number of red, inflam'd puftules, 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 ferum, which flowed out plentifully, upon the burfting of the fkin, the flesh underneath appearing black, and as if it were gangren'd. But this dreadful fymptom happened very rarely, and only in the first month wherein this species prevailed.

5. Amongst the rest who were thus grievously affected at this time I was fent for, in the beginning of January 1670, by Mr. Collins a brewer in St. Giles's parish, to his fon, an infant, who had bladders on his thighs as large as a walnut, and full of a transparent ferum, which afterwards bursting, the flesh underneath appeared as it were quite mortified, and he died foon after; as did all those I had seen attack'd with this dreadful symptom.

6. (4) About the eleventh day a white shining pellicle extended itself over the reddish humour in several parts of the face, and by degrees over the whole; (5) foon after this pellicle discharged a shining crusty matter, not indeed of a yellow or brown colour, both which were ob-

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ferved in the other kind of small-pox, but of a deep red, Chap. 6. ike congealed blood, which as the puftules ripened grew every day blacker, till at length the whole face appeared as black as foot: (6) and whereas in the other kind of confluent fmall-pox the patient was in most danger on the eleventh day, which put an end to the lives of the greatest part of those that died; in this fort, unlessan extreme hot regimen destroyed him in a shorter time, he generally liv'd till the fourteenth, and fometimes to the feventeenth 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 fome in the first month wherein this kind arose, as above related, died in few

days after the eruption.

7. (8) The fever, and all other fymptoms, which either preceded or accompanied this species of the smallpox, were more violent than in the foregoing kind, and it had manifest figns of greater inflammation; (9) the patient was more subject to a spitting; (10) the pustules were confiderably more inflamed, and much fmaller, fo 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 fymptoms, above enumerated in the history of this disease; (11) the scales remained a long time after the eruptions vanished, and left more unseemly fcars behind them. 'Tis well worth noting, that throughout the whole course of years which this constitution lasted, wherein the dysentery rag'd so epidemically, the fmall-pox, when exasperated by an immoderate hot regimen, fometimes terminated in a dyfen-

8. But 'tis proper to observe that this small-pox was This smallnot attended with fuch fatal fymptoms during the whole pox became time of its continuance, for, after having prevailed two more gentle years, it began to grow milder in the third year, namely in the 3d in 1672, and the eruptions, having lost their blackness, year. grew by degrees yellow, like a honey-comb, which is peculiar to the regular fmall-pox, during the fuppuration of the puftules, fo that in the last year of this conflitution it prov'd very mild and gentle, confidering its kind. Nevertheless it is manifestly to be referr'd to a quite different species, on account (1) of the remarkable

Sect. 4. smallness of the eruptions, (2) the tendency to a faliva-

tion, and (3) other concomitant fymptoms.

9. Tho' our ignorance of the causes of every specific difference be fuch as makes it impossible for us to com. prehend wherein this fmall-pox differs from those produced by the other constitution; yet, to me, it plainly appears, from its feveral concomitants, that this species was attended with greater inflammation than the other, and therefore that the whole of the cure confifts in giving a greater check to the violent ebullition of the The method 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, but will rather immediately abate the violent heat wherewith this disease is attended, especially during the time of the suppuration of the pustules. The white decostion, made of bread and a small quantity of burnt bartshorn, boiled in a large proportion of water, and sweetened with fugar, is beneficial here; but mith boiled with thrice its quantity of water is generally a more grateful liquor, and better answers the end of cooling: nor is abundance of liquor only proper to diminish the extreme heat, which chiefly prevails during the fecondary fever, but it also promotes the falivation, 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 fucceeded fo well, that by the use thereof the small-pox, which appeared at the beginning with the worst figns of the confluent kind, hath in the course of the disease been rendered distinct; and the eruptions, which as they ripened, would otherwife have first discharg'd a red, and soon after a black matter, have look'd very yellow, and, instead of being instamed and very finall, proved of a mild and good kind.

10. Nor does the menstrual discharge, which frequently happens to women in this difease, at all forbid, but rather encourage the free use of these liquors, especially if it comes at an unufual time. For women are endangered here from no other cause but from the blood's being too much attenuated, fo that it escapes where it can find a passage, agreeably to the course of nature; especially when unskilful nurses add oil to the flame, by using a hot regimen, and a decoction of hartsborn, with flowers of marigold, &c. Now whatever

greatly

of cure.

Advantages of arinking cooling liquerselen. tijully.

greatly dilutes and cools the blood, inafmuch as it Chap.6. checks this flux, does necessarily, tho' not immediately, tend to preferve the eruptions, and the fwelling of the face and hands in their due state, whereas contrariwife heating remedies, notwithstanding they may feem better fuited 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 perifhed by the miftake of fuch as had care of them, who apprehending the finking of the eruptions from this difcharge, have endeavoured to prevent it by a hot regimen and cardiacs, by which means the patient hath been certainly destroy'd, tho' at the same time they folicitously endeavour'd to stop the hæmorrhage, and keep the eruptions and fwelling at the proper height, by mixing different aftringents with the cardiacs.

II. I lately attended a lady, who had this dangerous Exemplified black small-pox, and tho' I forbid every thing at the be- in a case ginning that might agitate the blood, yet as fhe was of where the a very fanguin complexion, in the flower of her age, and menstrual of a lively disposition, and the weather at the same time happened very warm, the was fuddenly feized, on the 3d day after during the the eruption, with fo copious a menstrual discharge, at [mail pox, an unufual time, that the women about her fufpected the had miscarried. Tho' this symptom was very urgent for feveral days, yet I did not therefore judge that the use of the milk and water was to be discontinued, but rather esteem'd it more necessary, and to be drank plentifully now, and likewife thro' the whole course of the difease, particularly upon the coming on of the suppuratory fever. At this time Dr. Millington, formerly my fellow-collegiate, and at prefent my intimate friend, was joined with me, who observing that every thing went on very well, according to the nature of the difease, readily consented that our patient should persist in drinking freely of the liquor above-mention'd, which she often declared was particularly grateful to her, promoted the spitting, and both cool'd and refreshed her. But when the face began to harden, and to be crufted over, we apprehended our patient would be injur'd by the putrid vapours proceeding from the purulent matter of the eruptions, which had a very fetid fmell in this worst kind of fmall-pox, and therefore directed a few spoonfuls of mulled fack, to be taken once a day, or as often as

Sect. 4. The perceived any fickness at her stomach. And by the use of these few things, along with a quieting draught every night, fhe recovered, without having been attacked with a delirium, or any other very dangerous fymptom, except the hæmorrhage abovemention'd. The face and hands fwelled fufficiently, the eruptions were as large as this fort of small-pox would permit, and the falivation was easy and copious to the end; and, lastly, tho' the eruptions in the face feem'd blackish whilst they ripened, yet they were yellow in most other parts.

Where unmecessary.

12. But how much foever the kind of fmall-pox, peculiar to this conftitution, exceeded those of other conflitutions 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 abovementioned liquors. But it fuffic'd if the patient drank fmall-beer, as the thirst required, and supp'd water-gruel, and panada, and fometimes eat a roaft apple, and, if he exceeded fourteen, took a dose of syrup of white poppies, when fick, or delirious for want of reft; and I did nothing more when the puffules were few, except keeping the patient in bed. By this method alone my fon Witliam was recovered in this distinct fort of small-pox, in December, 1670.

13. I shall add nothing more relating to the smallpox of this conflitution, as having treated of the other fpecies at large, from which the prefent 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 fo certainly threaten'd deftruction to the patient.

#### CHAP. VII.

Of the bilious Colic of the Years 1670, 1671, and 1672.

The bilions colic, why treated of

Uring all the years of this constitution the blood was fignally difpos'd to deposite hot and choleric humours in the intestines, whence the bilious colic prevail'd more than ordinary; which difeafe, tho' it should be reckon'd amongst those of the chronic kind, and confequently foreign to my purpose, yet as it depended

on the same indisposition of the blood at that time, Chap. 7. from which most of the then prevailing epidemics arose, it should for this reason be treated of here; but especially because I perceiv'd that the same sebrile symptoms preceded it, which usually preceded the reigning dyfentery of those times. And fometimes also this distemper, as above remark'd, fucceeded the dysentery, when it had continued a long time, and feem'd to be going off. But when it did not succeed an inveterate dyfentery, it generally arose from a fever, which afflicted the patient only for a few hours, and ordinarily terminated in this difeafe.

2. It chiefly attack'd young persons of a warm and Its symbilious constitution, especially in the summer season. proms. (1) A violent and intolerable pain of the bowels attends it, which fometimes feem to be tied together, and at others closely purs'd up, and bor'd through, as it were, with a sharp-pointed instrument: the pain abates between whiles, and immediately the fit comes on again. (2) In the beginning the pain is not fo certainly fixt in one place, as in the progress of the disorder, (3) and the vomiting is less frequent, and the belly more easily mov'd by purgatives; (4) but as the pain increases, it becomes more obstinately fixt in one place, (5) frequent vomitings fucceed, and the belly is less foluble, till at length (6) the unavoidable violence of the fymptoms occasions a total inversion of the peristaltic motion of the guts, (unless the patient be reliev'd fooner) and confequently an iliac passion, in which diffemper all cathartics immediately become emetic, and glyfters likewise, together with the faces, are forc'd up the intestinal tube, and ejected by vomit. If the matter thus ejected be quite pure, it is fometimes green, fometimes yellow, and fometimes of an uncommon colour (a).

(a) 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 pallion, 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 diforder is occasioned by too free an use of spirituous and hot liquors .- Its principal symptoms are (1) a hoarsnels, (2) cardialgia, (3) continual loathing of food, (4) vomiting of green bile, (5) an hiccup, (6) a

Sect. 4:

tions of care.

3. As all the figns of this difease clearly shew it to , arise from some sharp humour, or vapour, thrown off The indica- from the blood into the intestines; I judge the primary indication of cure, (1) to confift in evacuating both the antecedent humour in the veins, and that contained in the intestines; and the next, (2) in checking the great tendency of the humours to the parts affected, and eafing the intolerable pain, by exhibiting opiates (b).

The method of an-Swering them.

How to be cured if it proceeds from a surfeit.

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 fome lenient purgative, and order it to be repeated a fecond time, at a day's interval, and fometimes a third time according as the remains of the humour feem 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 digeftion, 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 cleansed by drinking poffet-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 (c).

5. But

(6) a hot and feverish indisposition, (7) restlessness, (8) great thirst, (9) a bitter taste in the mouth, to which (11) there sometimes fucceeds 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 mortifi-

(b) 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 insusions and decoctions, a sweating regimen, and very hot bathing forborn; the bilious humour being exasperated by this means, and made to penetrate more intimate-ly into the nervous parts. And indeed we learn from practical obfervations that the drinking of cold water only, which Galen us'd in this diforder, is highly beneficial, and curative thereof. This advice is worth attending to, more particularly if it be occasion'd 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 confequences may enfue.

(c) I do not perceive, fays the ingenious Huxham, what fervice bleeding can do now, unless the immoderate quantity, velocity, or heat of the blood requires it, previous to all other helps; and

belides

5. But when the violence of the pain, and the Chap. 7. vomiting, whence the intestines are in a manner inverted,

befides in plethoric habits 'tis dangerous to exhibit a vomit, unless bleeding has been first perform'd.

He goes on. I use the following emetic.

Take of the root of Ipecacuanha, a dram, or a dram and half; falt of wormwood, half a scruple; boil in four ounces of spring water to two; strain off the liquor; to which add of the compound distill a water of camonile slowers, 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 gentleft of all those I have yet teied, is a sufficiently powerful cleanser, and the most certain in its effects; for it will work speedily, and not occasion gripings by continuing long in the stomach; which Ipecacuanha, taken in powder, often does. When I would have it stronger, I add two or three grains of emetic tartar, or a spoonful or two of the in-

fusion of CROCUS METALLORUM thereto.

Huxham de morb. col. Damnoniorum, p. 25.-27. When the colic proves very fevere, opiates should be joined with purgatives, in order to ease the pain, relax the intestines, and render the periffaltic motion conffant and regular. - All pain acts as a stimulus, or the stimulus, more properly, causes the sensation of pain; every flimulus 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 faces nor flatus can be discharg'd by the anus; for which reason a vehement colic is mostly accompanied with great costiveness. In this case, therefore, opiates are conveniently mix'd with purgatives .-- c. g.

Take of the leffer 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.

Take of the powder of jalap, a scruple, or half a dram; species diambra, eight grains; calomel, half a scruple; sprup of buckthorn, enough to make them into a bolus. - But pills are best retained.

Two or three hours after exhibiting either of thefe, 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-oilve, 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, re-lax 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 abdances to be sometimes. the body continues bound, I order the abdomen to be formented with an emollient fomentation, especially when it is much distended and hardened, or confiderably contracted by spasins. The mild vapour hereof penetrates the coats of the abdomen, foftens

Sect. 4. The purgato be made Aronger.

ted, do not yield to purgatives, they must be made ftronger, for it avails not to exhibit a gentle cathartic, unless perhaps the patient be easy to work upon, which tives when should be carefully enquir'd into, because such a medicine, being too weak to make its way thro' the inteftinal 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, fena, and rhubarb, in which manna and fyrup of roses may be diffolv'd, is to be preferr'd to other purges, because it disturbs and agitates the juices less. But if this cannot be retained in the flomach, either (1) begiven before cause the patient has an aversion to a liquid medicine, or (2) on account of the vomiting, recourse must neceffarily be had to pills, amongst which I esteem pil. cochiae most, because it operates best in this and most other cases. But where either (1) thro' the weakness of the ftomach, or (2) the vomiting, pills cannot be retained, I first prescribe an opiate, and in a few hours after a purgative, at fuch a proper interval, for instance, that the latter may not be overcome, and render'd ineffectual, but continue long enough in the stomach to communicate its purging quality thereto, fo that it may at length operate immediately after the virtue of

mben to be a purgative.

An opiate

and supples the intestines, and relaxes the too tense and rigid fibres. I have often found wonderful effects follow upon the application of fuch 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 fervice may be expected from using it by way of

femicupiam. 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 ftone in the kidneys, and attended with suppression of urine, costiveness, orc. in all which cases the warm bath is eminently ferviceable. It must however be observed, in the convulsive colic proceeding from a stagnation of the blood, if the body is full or overcharged with juices, warm bathing becomes unfafe; except fome blood be first taken away. But in such colics as proceed from hardness of the excrements, a bath prepared with emollient ingredients is highly ferviceable, along with proper laxative medicines, such as oil of sweet almonds, manna, Epsom salt, cream of tartar, &cc. See New experiments and observations upon mineral waters, &c. translated by Dr Shaw, p. 192, 193.

the opiate is gone off. However, if the cafe will admit, Chap. 7. 'tis 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.

6. But because a purge always increases the pain in One to be this and most other diseases where opiates are indicated, exhibited at least when the operation is over, the patient some- when the times finding relief whilft it works, I generally give an done workopiate immediately after it has done operating, and ing. order it to be repeated daily morning and evening, on the intermediate days, that I may more certainly eafe the pain, till purging has been fufficiently perform'd.

7. When the affair of purging is over, I endeavour To be given to check the violent motion of the humours, which is morning all that now remains to be done, by exhibiting an opiate and night every morning and evening, which must formetimes be after the repeated oftner: nor have I ever been able to ease very purging is violent pains, without administering a larger dose than over. ordinary, and repeating it. For what might be fufficient to overcome another disease proves ineffectual in this, the violence of the pain destroying the force of the medicine. Opiates may be fafely repeated whilft 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 confiderably; observing however to administer it at such convenient intervals, that I may know what effect is to be hop'd 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 evening. The opiate I commonly use is the laudanum above described (d); of which I give fixteen drops at a time, in fome distilled cordial water; or the dofe may be augmented occasionally, in proportion to the violence of the pain.

8. This plain method, whereby(1) the peccant humour is Carmina. discharg'd by bleeding and purging, and then (2) ease tive glyprocured by means of opiates, has always fucceeded better fiers bad. with me than any other I ever knew: whereas carminative glyfters, injected in order to expel the fharp humours, prolong the difease 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

When the cure is to be begun with opiates.

Sect. 4. necessarily precede this quieting method, yet sometimes, when the case demands it, omitting both, the cure is to be begun with opiates. For inftance, when, by reafon of fome preceding illness, large evacuations have been used not long before the colic began; for frequently fuch as have recovered lately from some other disease, are fuddenly attacked with this, from a weakness of the bowels, especially if a greater degree of heat be occafioned by too free an use of wine, or any spirituous liquor: Now in this case I esteem it not only unnecessary but detrimental to raife fresh commotions, by giving more purges. Not to mention that the patient, in this difease, has generally cleansed his bowels sufficiently, by the frequent use of glysters, before applying to a physician; fo that partly upon this account, and partly on account of the long continuance of the difeafe, it should feem that only opiates ought to be exhibited.

Exemplified in a cafe.

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 exquifite pain, and frequent vomiting. He had tried all kinds of glyfters, 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

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 fometimes happens, I have hitherto difcover'd nothing that will so certainly promote the cure, as taking long journeys on horfeback, 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 refresh'd by this way of roufing the natural heat (e). Nor do I think it beneath

Riding on borfeback excellent to promote the cure.

> (e) 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

beneath me to own that I have frequently cured this Chap 7. difease by this exercise, when all other means had fail'd me. But this must not be attempted, unless sufficient evacuations have been previously made, and is to be per-fisted in several days afterwards.

11. During these years one of my poor neighbours, Inflanc'd in vet living, was feized with a most violent bilious colic, a case. which he had long endeavoured ineffectually to relieve by cathartics, glyfters, and fwallowing leaden bullets. I had recourse here to the frequent use of opiates, nor did they prove unfuccessful, for he remained tolerably easy whilft he was taking them. But perceiving they only palliated and did not eradicate the diforder, for it returned immediately after the effect of the opiate was gone off, I had compaffion on the man, labouring under low circumstances, and a violent disease, and lent him a horse to ride to a confiderable diffance as above directed; and after riding a few days, his bowels became fo ftrong as to be able to expel the remains of the difease, and he recovered perfectly by this means without the affiftance of opiates.

12. And, to fpeak 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 fizy humour fixt there; and (which is still more mate-

M 2 rial)

the parts of the lower belly, and by this means drives out all vifcidities contain'd in the bowels and blood-veffels, and eminently promotes the circulation of the blood thro' the mesenteric vessels and the ramifications of the vena porta, where it circulates flowest. Hence it disfolves the blood, which is in a manner congealed, partly by the violence of the difease, and partly by its long continuance in those parts, and consequently opens the obstructions of the glands of the liver, pancreas, melentery and intestines, and likewife greatly affifts the action of the fp'een, which fends the blood to the liver. Moreover it appears by numerous experiments, that perspiration is much increas'd by riding; whence it proves ferviceable not only in 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 cur'd where tedious courses of medicine have fail'd; when therefore the patient can sit a horse, let him ride every day. See Huxham de morb. colic. Dammon. p. 38.

Sect. 4.

rial) fo strengthened, by this powerful rousing of the natural heat, as to be able to perform the function of purifying the blood, affign'd them by nature, in a proper manner.

The regidisease.

13. In young persons of a hot constitution I direct a men in this cooling and incraffating diet, viz. barley-cream, panada, &c. and a finall chicken, or a boiled whiting every third day, if the appetite continues craving. I allow only fmall-beer, or milk boil'd with thrice the quantity of water, for drink: and I indulge nothing further, unless riding, which is necessary to compleat the cure, requires a more nourishing diet, and the use of some generous liquor, to recruit the loss of spirits occasioned by exercife (f).

. Cordials to be given when it proves inweterate.

14. Moreover 'tis manifest from observation that when this difeafe thro' wrong management proves of long standing, fo that the bowels become weak, and the patient is extremely emaciated and debilitated, the free use of plague water, AQUA MIRABILIS, or some other cordial that was most grateful to him when in health, relieves at this time beyond expectation. For by this means the fmall remains of the natural heat are roused, and the preternatural ferment lodged in the bowels, which occasions fresh fits between whiles, render'd inactive.

A Render diet to be continued for some time after the cure.

15. The flender diet abovementioned must be continued, not only thro' the course of the cure, but for fome 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 there-

(f) To restore the due mixture of the blood, and strengthen the vifcera, chalybeates and flomachies are very proper. I use the following intufion.

Take of the roots of gentian and galangal, each half an ounce; CALAMUS AROMATICUS, and dried SEVIL orange-peel, each two ounces and half; cloves, two drams; steel prepar'd with tartar, three ounces; pour upon them of mountain wine, three pints and half; compound wormwood water, a pint and haif: let them stand in infusion for at least twelve days in a glass vessel, observing to shake it often. When the viscora 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.

fore all aliment of difficult digeftion must be carefully Chap. 7. avoided, both in this and all other diforders of the bowels, and food of easy digestion used very sparingly.

16. Some women are afflicted with an hysteric dif- The hysteric order, fo nearly refembling the bilious colic in (1) the colic defharpness of the pain, (2) its seat, and (3) the yellow scribed. and green colour of the matter discharged by vomit, that I will treat of it by the way, left it be erroneously taken

for the difease just mentioned.

17. Females (1) of a lax and gross habit of body are what wochiefly fubject to it, as are (2) likewise such as have for- men most merly had some hysteric indisposition, or (3) which fre- subject to it. quently happens) those who have just recovered of a difficult labour, occasioned by the largeness of the infant, whereby the mother's ftrength and spirits were nearly (1) It attacks the region of the Its symexhaufted. ftomach, and fometimes the parts just below it, with as proms. violent a pain as accompanies the colic, or iliac passion; which (2) is fucceeded by exorbitant vomitings, fometimes of green, and fometimes of yellow matter; (3) and with these symptoms, as I have frequently observed, there is joined a greater lowners of fpirits and defpondency than occur in any other difeafe. 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. 'Tis fometimes attended with a remarkable jaundice, which vanishes spontaneously in a few days. When the fymptoms are all gone off, and the Arelapse patient feems pretty well recovered, the leaft diftur- how occabance of mind, whether proceeding from anger or grief, fioned. to both which women are extremely subject in this case, is apt to occasion a relapse. Walking also, or any other exercife used too foon will do the same; such causes being productive of vapours in lax and weak conftitutions. I use the term vapours with the vulgar, but whether they be vapours, or convulsions of particular parts, the phenomena may be equally accounted for.

18. When these vapours, or convulsions, attack any Vapours particular part of the body, they produce such symptoms artfully reas are natural to the part affected; whence, tho' they femble most every where conflitute the fame individual diftemper, dijeaferyet they artfully refemble most diseases incident to mankind; as plainly appears from the difease under conside-

M 3

Sect. 4. ration, which exactly counterfeits the bilious colic, when it attacks the parts adjacent to the colon. And this is equally manifestalso in many other parts of the body affected with this difeafe. For inftance, it fometimes attacks one of the kidneys with a violent pain, occasioning excestive vomiting; and being frequently conveyed thro' the ureters, 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 fame violence for a long time, and fometimes destroys the patient, contrary to its nature, as being of itself not dangerous (g). I have also known it occasion a train of fymptoms exactly like those of the stone in the bladder. I was called up lately in the night to a countefs in the neighbourhood, who was feized, on a fudden, with a very fevere pain in the region of the bladder, along with a stoppage of urine; and having learnt that the was fubject to various hysteric complaints, I conjectur'd that the diforder was miftaken, and therefore forbid the injecting a glyfter, which her maid had got in readiness, as apprehending it might be augmented thereby, and instead of this and the emollients brought by the apothecary, fuch as the fyrup of marshmallows, &c. I administered an opiate, which soon removed the disorder. In reality, no part of the body, either external or internal, is quite free from the attacks of this diffemper, as the jaws, hips and legs, in all which it causes intolerable pain, and when it goes off leaves fuch 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 digreffion, deliver'd fome par-

(g) I have myfelf met with an instance of this kind of pain in a lady, who had taken laxatives, carminatives, and oleous medicines by the mouth and glytterwife with no effect. Upon enquiry therefore finding that the was much fubject to hysteric complaints, I directed the following draught to be taken immediately, and ordered it to be repeated every fix or eight hours, according to the urgency of the fymptoms, and the pain was entirely remov'd thereby in twenty four hours. And the lady being fome months after affected again in the fame manner, had recourse to the fame medicine with equal foccess.

Take of the distill a waters of pennyroyal and rue, each fix drams; compound bryony, and compound camomile water, each three drams; tineture of cafter, and of amber, and liquid landanum, each fifteen drops; fyrap of white peoples, two drams: mix them together.

A cafe wherein they counterfeited the Stone in the bladder.

ticulars belonging to the history of the hysteric colic, to Chap. 7. prevent its being taken for the bilious colic; I will briefly treat of fome other particulars relating to the cure of the symptom of pain attending it: for the radical cure of the difeafe itself, which is effected by removing the cause, is a quite different subject, and to be considered in

another place.

20. Bleeding and repeated purgation, which are fo The pain in manifestly indicated in the bilious colic, at the beginning, the hysteric should be omitted here, except in the case hereafter to colic genebe mention'd. For experience shews that the pain and relly inother fymptoms are increas'd by the diffurbance caused bleeding by these evacuations, and I have often observed that and purgthe repetition of the gentlest glysters hath occasioned a ing. continued train of fymptoms. For if we take a view of the caufes whence this difeafe generally proceeds, both reason and experience teach that it is rather owing to an irregular motion of the fpirits, 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, fuch medicines as increase the hurry of the spirits are improper, and opiates are to be exhibited in their flead, tho' the green and ill colour of the matter ejected by vomit should seem to contraindicate. For the confideration of colours is of too fubtile and refin'd a nature to authorize fuch evacuations as experience proves to be detrimental. And I doubt not but this difease, which, tho' it be very painful, does no way endanger life, hath prov'd fatal to abundance of persons, thro' mistakes of this kind. To this may be added, that tho' a very powerful emetic be given to day, in order to expel the supposed cause of the disease, yet the patient will the next day vomit a matter, equally green, or of fome other bad colour, like the former.

21. But it must be observed that sometimes there is Yet somefuch a fulness of blood and juices, as relists the operation times they of opiates fo powerfully, that how often foever they be are necesrepeated, they avail not to quiet the diffurbance, unless ary, and bleeding or purging precede: I have remark'd this in where. women of a very fanguin 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, another dose whereof will then pro-

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duce

Sect. 4. duce the effect for which it is given; whereas before bleeding or purging the largest avails not. But this is an uncommon case, and these remedies are not then to be repeated. These particulars being premis'd, 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: 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.

It often ends in a jaundice.

22. But as this distemper, both in hypochondriac and hysteric subjects, (for the reason is the same in both, as we shall show in another place) often terminates in a jaundice, which increases proportionally as the original diforder goes off, it must be remark'd that in curing this fpecies of the jaundice all purgatives are either wholly to be refrained, or none exhibited except rhubarb, or fome other gentle lenitive; for 'tis to be apprehended that a new commotion may be occasion'd by purging, and confequently a return of the fymptoms. In this case therefore 'tis more expedient to give no medicines at all, as the jaundice arising from this cause abates by degrees fpontaneously, and totally vanishes in a short time. But if it continues long, and feems to go off flowly, we must have recourse to medicines. I direct the following.

The cure of

An aberient apozem.

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 leffer centaury, each an handful; boil them in equal quantities of Rhenish wine, and spring water, to a quart; to which, when strain'd off, add two ounces of the fyrup 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 (h).

23. But

(b) This apozem might as well be prepar'd with water only, fince long builing will totally exhale the spirit of the rhenish wine and leave it nothing better than meer water.

The following is much better contriv'd, and more likely to an-

fwer the end propos'd.

Take of the roots, together with the leaves of the greater celandine,

23. But where the jaundice is the original diforder, Chap. 7. besides the alteratives just set down, it is convenient to exhibit fuch medicines once or twice, as evacuate the The cure of bile by ftool, before taking the apozem above prefcribed, an original and once a week afterwards, while it is continued in jaundice. and once a week afterwards, whilst it is continued (i)

dine, the roots of turmeric, and madder, of each an ounce; foring water, three pints: boil them together till there re-mains a quart of the strain'd liquor; to which, when cold, add the juice of two hundred millepedes; and two ownces of the

A decoction to well adapted, Dr Shaw observes, cannot but be of great fervice in the cure of the jaundice, when used freely by the patient as ordinary drink. See the Edinburg dispensatory, trans-

lyrup of the five opening roots; and mix them together.

lated by Dr Shaw, p. 101.

(i) The cure of the jaundice here is very superficially delivered by our author; no mention being made of the volatile, favonaceous, attenuant, deterfive, and chalpbeate kinds of medicines, which, if judiciously suited to the case, will often prove effectual where this timple method must needs fail.

To supply in some measure its apparent desects, we shall sub-

join in a furnmary manner the general method of curing the se-veral species 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 hamorrhage; 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 decoclion of hempsed in milk, or an emultion made with smeet almonds and white poppy feed, often does great fervice, after moderate bleeding, and proper

purging.

There is also another, and a very different species of the jaundice, which proceeds from a fluggish 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 difease. In this case emetics are first requir'd, and then aloetic and mercurial purgatives; and afterwards attenuants, Japonaceous, tartarous, and volatile medicines are necessary. But care must be had not to give chalybs too foon, namely before having thinn'd the juices, otherwise instead of relieving the disorder, an incurable sehirrhus of the liver may perhaps be occasioned. And here I cannot forbear extolling regenerated tartar, or the terra foliata fartari, as it is call'd, as an admirable diffolvent or attenuant, not only in this, but likewise in several other distempers; for it powerfully diffolves groß and fizy' humours, and opens obstructions of the veffels; and tho' it possesses such excellent virtues, it has fearce any acrimony, and, what perhaps will feem farprizing. it may be given as fafely in pleuritic and droplical diforders. In reality fuch medicines, as are able by their weight and fubtility to

A purging

Take of the electuary of the juice of roses, two drams; rhubarb finely pulveriz'd, balf a dram; cream of tartar, a scruple; syrup of succory with rhubarb, enough to make them into a balus, to be taken betimes in the morning, drinking after it a glass of Rhenish wine.

sostinate a course of mineral be used.

If it proves But if, notwithflanding the long continuance of thefe medicines, the difease still remain obstinate, the patient should go to some place where there is a chalybeate waters must mineral ipring, for instance Tunbridge, and drink the water every morning at the well-head till he recovers (k). --- And let this fuffice for the difeases of this conftitution.

> divide thick and viscid humours, are of very confiderable use; but their efficacy may be much improved by an admixture of fome deterfive foap, which diffolves and thins all unctuous and tenacious humours.

> It must be remembered that steel and heating medicines prove extremely prejudicial, if the diffemper be inflammatory : and that emetics are improper, if it arifes from calculous concretions in the gall-bladder, which may be conjectur'd to be the case, if it re-

turns frequently.

(k) Our author in advising a course of mineral waters, which is indeed of great efficacy in a flubborn jaundice, hath taken no notice of the proper featon for drinking them, which is the beginning of fummer: neither hath he inculcated that they may be drunk with advantage at a distance from the well-head, when the patient cannot conveniently go to the fpring. 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 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 fet of rules that that be applicable to fuch an exceeding diversity of circum-

as forced any action, and, what periods will found forced and allogous that the price and allogous as the price will be produced as a produced as a constant of the price will be produced as a constant of the price will be produced as a constant of the price will be produced as a constant of the price will be produced as a constant of the price will be produced as a constant of the price will be produced as a constant of the price will be produced as a constant of the price will be produced as a constant of the price will be produced as a constant of the price will be produced as a constant of the price will be produced as a constant of the price will be produced as a constant of the price will be produced as a constant of the price will be produced as a constant of the price will be produced as a constant of the price will be produced as a constant of the price will be price will be produced as a constant of the price will be price will be produced as a constant of the price will be produced as a constant of the price will be priced with the priced will be

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## SECT. V. CHAP. I.

The epidemic Confirmation

Of the epidemic Constitution of part of the Tear 1673, and of the Tears 1674, 1675.

1. A BOUT the beginning of July in 1673 there The rife of arose another kind of fever, which did not s new kind prove very epidemic; because the constitution of fever, was not yet so entirely dispos'd to favour it, as wholly to exclude the difeases of the preceding constitution. For that fort of fmall-pox which began in 1670 was not yet extinct, tho' it appeared less frequently, and the fymptoms were milder; fo that these two difeafes prevail'd almost equally, but neither very severely, the former constitution being not so totally gone off, as to leave none of the difeafes belonging thereto (for the dysentery continued to attack a few) and the then reigning constitution not being so persectly establish'd as to produce fuch as might exterminate all other diftempers.

2. The small-pox and this fever continued equally prevalent during this autumn and the following winter, but neither of them rag'd with great violence; and the dysentery was in a manner extinct. But in November following, a sharp frost of some days being unexpectedly fucceeded by warmer weather than I ever remember to have observed at this season, some few persons were feized with the dyfentery a little before and about Christmas; but it seemed then to be going off, and in a short time after this species of it at least quite vanished.

3. The next year the measles appeared very early, When the namely in January, and proved as epidemic, as that meafles bekind which broke out about the fame time in 1670, gan in this For it suffered few families to escape, and attack'd constitution. 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

Sect. 5. the vernal equinox, after which it abated proportionally, and at length went off foon after the Summer folftice.

4. As the epidemic measles of 1670 introduced the black small-pox above described, so the present species, which appeared in the beginning of the current year 1673 being equally epidemic, was accompanied with a fimilar kind of fmall-pox. For whereas the fmallpox of the preceding conftitution, as hath been already observed, after the first two years, gradually abated of their blackness, and also increased proportionally in fize, till towards the end of the year 1673, when, confidering the kind, it was mild and favourable, it now repowreturns, turned with its former violence, and attended with very dangerous fymptoms. This kind of fmall-pox prevailed during the following autumn, and continued longer than usual in winter, which, on account of its uncommon warmth, favoured this difease; but when colder weather came in, it abated, and foon gave place to the prefent epidemic fever.

The fever assumes a

different

shape.

The Small-

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 fometimes with the fymptoms of a dysentery, and at others with those of a diarrhoea; tho' fometimes it was free from both, and rather feiz'd the head, and eaufed a kind of stuper. In the mean while the small-pox, which attack'd 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 difease 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 fometimes occasioned a dysentery, but more frequently a diarrhoea; fo 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 afcrib'd to the fever, for fuch as attended the fick during this autumn knew how much the fever prevailed; so that both the dysentery and the diarrhoea ought rather to be accounted symptoms, than effential and original difeases.

6. This fever proceeded in this manner during the autumn, fometimes feizing the head, at others the bowels, every where raging under the appearance of fym:

Undergoes another change.

ptoms

ptoms peculiar to those parts, till the end of October; Chap. 1. when the weather, which till now had continued in a manner as warm as fummer, chang'd fuddenly to cold and moift(a), whence catarrhs and coughs became more frequent than I remember to have known them in any other feafon. But it is of most moment to observe, that the stationary fever of this constitution usually fucceeded upon these coughs, and hence became more epidemic, and likewife varied fome of its fymptoms. For whereas fome little time before, as abovementioned, it attacked the head and bowels, now it chiefly feiz'd the lungs and pleura, whence arose peripneumonic and pleuritic fymptoms; tho' it was still precisely the fame fever that began in July 1673, and continued without any alteration of its symptoms till the rise of thefe catarrhs.

7. These catarrhs and coughs continued to the end Tet still reof November, after which time they fuddenly abated. mains ef-But the fever still remained the fame as it was before fentially the the catarrhs appeared; tho' it was neither quite fo epidemic, nor accompanied with the fame fymptoms, both these depending accidentally upon the catarrhs. Moreover upon their going off a fmall-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 fymptoms were less violent than in the beginning.

I am not able to conjecture how long this constitution will prevail, but this I certainly know, that it has hitherto been very anomalous and irregular, as have likewife all the difeases occasioned thereby. I proceed now to treat of the epidemics of this conftitution in the order where-

in they fucceeded each other. CHAP.

(a) A cold and moift air, continuing for a time, or fuddenly succeeding a dry and warm state thereof, is extremely prejudicial to the body; for it relaxes the folids, whence of course the fluids circulate with less velocity, and have their intestine motion diminished, so that they become thick and tenacious, and confequently cannot be protruded to the extremely fine perspiratory veffels, to 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 likewife lofe their foft, balfamic nature, and become acrimonious and irritating, fo that if they are not feafonably discharged by some other evacuation, spontaneoully arising, or procured by art, swellings of the throat, coughs, quinfies, catarrhal fevers, &c. are generated thereby.

#### CHAP. II.

Of the continued Fever of the Tears 1673, 1674, 1675.

This fever most inflammatory in the beginning. I. THIS fever, like other epidemics, was attended with fuch fymptoms foon after its rife, as clearly shewed that the inflammation was then more violent and spirituous, than in its progress (a). For the first year of its appearance, and the following spring, pleuritic symptoms succeeded upon the sever, 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.

Its distinguishing symptoms.

2. Befides the fymptoms which all fevers have in common, this fever had the following. (1) A violent pain in the head and back, (2) a stuper, (3) and tenfive pain of the limbs, joints, and whole body, but fomewhat milder than in a rheumatifm: (4) heat and cold fucceeded alternately in the infancy of the difeafe, (5) and fometimes also a great tendency to sweat accompanied it; (6) when the fever was fuffered 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 fymptoms, it went off on the fourteenth day, if skilfully treated; but when it proved very inveterate, it continued till the one and twentieth day.

3. Amongst

<sup>(</sup>a) 'Tis not at all improbable that the contents of the air, productive of an epidemic difease, are posses'd of a much greater degree, both of virulency 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 declention thereof.

3. Amongst the fymptoms attending this fever the Chap. 2. principal one was a kind of coma, which rendered the patient stupid and delirious, so that he would doze The princisometimes for several weeks, and could not be awaken- pal one a ed without loud noises, and then he only opened his kind of coma. eyes, and directly after taking either a medicine, or a draught of fome liquid he was us'd to, fell into a fleep again, which fometimes prov'd fo profound, as to end

in an entire loss of speech.

4. When this fymptom vanish'd, the patient grew The first better on the twenty eighth, or the thirtieth day, the sign of refirst ligh whereof was the defiring or longing for some covery. odd and uncommon kind of liquid or folid aliment. But the head continued weak for forme days, and nodded fometimes on this and fometimes on that fide; and there were other figns, which manifested it to have been greatly difordered: but in proportion as the ftrength

returned, this symptom went off.

5. Sometimes the patient did not fleep, but was ra- Sometimes ther filently delirious, tho' at times he talked wildly as a filent deif in a passion; but the fury never rose to so great a livium have height, as is common in a phrenzy in the small-pox and pened. other fevers; from which it also differed in this particular, that he flept confusedly at intervals, and likewise fnored more foundly. Neither was this fymptom fo 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 fweating promoted, the difeafe foon flew up to the head, and occasioned this fymptom.

6. But where this fymptom neither came fpontaneoufly, nor was forced by medicine, the difeafe generally ended in fourteen, and fometimes in three or four

days, as I have occasionally observed

7. In Autumn, 1675, as we intimated above, this fever endeavour'd to go off by a dysentery, and sometimes by a loofeness; but the latter especially happened very frequently, whilft the flupor still continued: however, as far as I could learn from diligent observation, both these were only symptoms of this sever.

8. To proceed to the cure: when this fever arose, This fever viz. in July 1673, I immediately perceived it was of of a peculiar quite another kind, both from the various figns where- kind. in it differed from those which accompanied the severs

Sect. 5. of the preceding constitution, and from its not yielding to purging, by which I fuccefsfully cured all those fevers-Upon this account I employed more time than ordinary in fearching 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 difcover fomewhat of the nature of this; for the fmall-pox, which accompanied it, as I have before faid, feem'd to be the remains of the black finall-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 difease as it stood alone, and to use my best endeavours to find out a fuitable method of cure, by always attending diligently to the juvantia & lædentia. i. e. to what made the patient better or worfe.

Attended with great inflamma. £1072.

o. The violent pain in the head, and the tendency there was to a pain in the fide, together with the refemblance of the blood to that of pleuritics, foon shewed that this fever was accompanied with a confiderable inflammation, notwithstanding which it would not admit of fuch large evacuations as are proper in a pleurify; for after the first or second bleeding the blood entirely lost its fizy furface, and repeated bleeding did not at all relieve, unless perhaps the disease changed to a true pleurify, which fometimes 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 fun, it feem'd to tend to a kind of peripneumony, the difease being then in its infancy, and more spirituous than afterwards. Being deterred from repeated bleeding, by the ill fuccess which attended it in many inftances, notwithftanding 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. Besides the symptoms that so apparently discovered an inflammation, the flupor, which happened oftner in this than in any other fever, indicated the frequent injection of glyfters, in order to make a revultion of the febrile matter from the head, which it was very apt to attack in this diffemper; and they were substituted instead of

Repeated bleeding bad.

Glyflers,

repeated bleeding, which it could not conveniently bear, Chap. 2. and fupplied the want thereof by gradually and gently cooling the blood, and expelling the morbific cause.

10. Moreover I judg'd that large blifter-plaisters ap- Andblifterplied between the shoulders must needs do more service ing services in this than in other fevers, where the febrile matter able. 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 flie up to the head, is deriv'd thereto. By the use of these remedies, along with a cooling regimen, the difease at length yielded, as it were, naturally and fpontaneously, how feverely foever it rag'd, when treated by a different method; as plainly appeared to me from numerous instances.

11. I proceeded therefore in the following manner: The method I first took away such a quantity of blood from the arm, of cure paras the strength, age, and other circumstances required, ticularized. and then applied a large epispastic to the neck. next day I ordered a laxative glyfter to be thrown up early in the afternoon, viz. about two or three o'clock, that the difturbance thereby occasioned might be quieted before the evening, and it was repeated every day till the difease abated, when I judg'd that glyfters were to be omitted, and even fooner, if the fever continued after the 14th day; having found that they availed not at this time, even tho' the fever had not been conquered by those which had already been injected. For the violence of the difeafe, and the fymptoms thereon depending, being now abated by the preceding ebullition, and the danger over, I judg'd it best to leave the disease to itself, to go off by degrees fpontaneously. And this method always succeeded better with me, than the attempting fome confiderable evacuation at this time. In the mean while I forbad the use of flesh, but allowed small-beer to be drank at pleafure.

12. In treating of the regimen of this diffemper I The patient must not omit to observe here, that the patient should should rife fit up at least some hours every day, much experience every day, having shewn that this is of singular service. But if it and why. be contraindicated by great weakness, the patient should however put on his cloaths, and lie down on the bed with his head raifed high. For having confidered how violently

Sect. 5. violently the fever was carried up to the head, and also the inflammatory state of the blood, I conceived he might find fome 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 confequently heats and agitates the animal spirits, whence the heart beats quicker, and the fever is augmented.

But not sit up too long.

12. But how serviceable soever it be in all severs, attended with great inflammation, not to confine the patient continually in bed; yet it must be observed, that the fitting up too long at a time, particularly in the declenfion of the difease, disposes to flying pains, that may end in a rheumatifin; and fometimes a jaundice is hereby occasioned. In these cases lying in bed is necessary, which opens the pores, fo that the particles occasioning either of these disorders may be conveniently carried off thereby. But the patient is to be kept only a day, or two, in bed, without exciting fweat. These accidents however happen rarely, and never but in the decline of the fever, when the difease being abated, it is much fafer to let the patient lie conftantly 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 inflam'd by an earlier confinement in bed.

The method of cure vindioated.

14. But if it should be objected here, that this method, tho' it be proper enough to divert the course of the blood from the head, and cool the patient, is neverthelefs differviceable, because it checks the evacuation by fweat, whereby the febrile matter, now concocted, should be wholly expell'd; I reply, that the objection is of no force, unless arguments be first produc'd to demonstrate that this kind of evacuation is necessary in every fever, which will be difficult to do. For experience, not reafon, points out which species of fevers is to be cured by fweat, and which by purging, &c. Moreover'tis no improbable fupposition that there are certain species of fevers, which nature cures by a peculiar method of her own, without any visible evacuation, viz. by assimilating the morbific matter to the blood. And upon this foundation I have often cured this and other species of fevers (provided they were not intermittent) in the beginning. before the whole mass of blood was vitiated, only by directing

tecting small-beer to be drank at pleasure, forbidding Chap 2. broths, and every other kind of aliment, allowing the patient the use of his ordinary exercise, and the open air, and refraining wholly from evacuations. 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 fanguine constitution.

15. But if it should be granted, that nature can con- What kind quer the difease no otherwise than by sweat, ought it of sweat is not to be understood of the fweat that appears in the noted in fee decline of the disease, in consequence of the pre- vers. vious digestion of the peccant matter, and not of that which is forced in the beginning, and proceeds from nature's being disturbed in her method of procedure? I conceive that fuch a fweat is not to be promoted, but contrariwise that the disturbance whence it proceeds is rather to be quieted. This kind of fweat usually accompanies most, tho' not every, species of fevers. 'But I am well aware that fome kinds of fevers naturally require the critical fweat at their declension. Such are the particular fits of intermittents, and likewife the great and most frequent fever of nature, arising from that constitution which eminently 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 fweat, the difeafe will be augmented thereby: fo that no evacuations must be used here, unless inasmuch as they moderate the violence of the diseafe in the beginning, and so prevent the death of the patient during the course of the cure. Moreover the cause of a pestilential sever, as it is of a fine and subtile nature, may be carried off by fweat on the first days of the illness, as experience univerfally shews.

16. But in those fevers, wherein we never find, by In what fethe common course of the symptoms, and when the dif- vers sweattemper is fuffered to proceed according to its own genius, that nature is used to discharge the morbific matter, now prepared, in a limited time, it would probably be very imprudent to endeavour the cure only by promoting sweat, fince, as Hippocrates observes, one must not oppose the tendency of nature. And I conceive this ought to take place in the fever under confideration, which frequent experience hath taught me may be cu-

Sect. 5. red without a fweat, and likewise that, whilst we endeavour to force it unfeafonably, we often unnecessarily hazard the patient's life by translating the morbific matter to the head. But however no prudent phyfician will reckon it a trifling advantage, either in this or any other fever, not excepting fuch as are not usually terminated by a critical sweat, if such a kind of fweat fhould by accident fucceed fpontaneously upon the abatement of the difease, fince by the remission of all the fymptoms this fweat may be esteem'd to proceed from a due concoction of the febrile matter. But when it does not appear fpontaneously, what affurance have we that the patient will not be deftroy'd, whilft we endeavour by a hot regimen, and heating cardiacs, to dispose the humours to be expelled by fweat? 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, 'tis apparent to me, that the fever alone is attended with a fufficient degree of heat to prepare the febrile matter for concoction, and needs no additional hear from without, by means of a hot regimen in order thereto.

Bleeding and gly-Aters Succesful, but diaphoretics bad in this fever.

17. I have found the abovementioned method of bleeding, and injecting glysters, very successful in the cure of this fever; whereas contrariwife fudorifics not only occasioned anomalous symptoms of a bad kind, but likewife render'd the cure uncertain. The capital fymptom in this fever was the filent delirium, which did not manifest itself so much by talking wildly, as by a stupor refembling a coma, which, as we faid above, often happen'd in this fever. I have fometimes known it come fpontaneously, but 'tis generally occasioned by the illtimed officiousness of the nurse in raising sweat, whereby the morbific matter (which in this kind of fever does not admit of expulsion by sweat) is put into a violent motion, and at length flies up to the head, to the endangering the patient.

18. I have already remark'd, 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 afsected children, and fuch as were under fourteen years of

age; but that was neither fo confiderable, nor fo epide- Chap. 2. mic, as the flupor which accompanied the prefent fever. Yet I could not conquer the first, and much less the last, in The Stupor the beginning of the fever, tho' I used all possible en- yielded to deavours by repeated bleeding both in the arms, neck and nothing in feet, applying epispastics, cupping, glysters, sudorifics of the begin-ning. all kinds, and the like. So that at length I determined, after bleeding in the arm, to apply a velicatory to the neck, and throw up two or three glyfters of milk and fugar in the infancy of the difease, without doing any thing more than forbidding the use of slesh and spirituous liquors: in the mean time I attended closely to the procedure of nature, hoping that by following her steps I should at length learn how to conquer this symptom, when I found that the disease went off safely, tho' flowly, without using more means. Upon this account I judged it necessary to purfue this method in all the fevers I have fince treated; and look upon it as a thing of great importance, if the greatness of the symptom, and the conftant fuccess attending it, be considered.

19. And in reality I have fometimes thought that Hafte in cu we do not proceed flowly enough, and ought to use less ring difexpedition in removing diftempers, and that more is fre- times perquently to be left to nature than is usual in the present nicious. practice. For 'tis a grand mistake to conclude that nature always wants the assistance of art; for if that were the case, fhe would have made less provision for the safety of mankind than the prefervation 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 greatest pitch, and most cultivated. What may be effected in other diseases I am not able to say; but I am convinced, from diligent observation, that in the fever under confideration this fymptom, after using the general evacuations, viz. bleeding and glyfters, was fuccesffully conquered by time alone.

20. It has been already observed that the figns of re- Improper covery did not usually appear till the thirteenth day, diet when when the stupor was confiderable, and attended with a to be indu loss of speech; and then the patient earnestly longed for fome odd kind of liquid or folid aliment, the ferment of the stomach being greatly depraved by the long continuance of the fever. Now in this case, tho' he was so

N 3

weak

Sect. 5. weak as to stand in need of a restorative diet, yet I willingly allowed fuch things as were less proper, provided they were more grateful to the palate.

History of a cure.

21. In September, 1674, I attended the fon of Mr. Not, bookfeller, a youth of nine years of age, who was afflicted with this fever, accompanied with the abovementioned fymptom. After bleeding in the arm, and injecting glyfters every day in the beginning of the illness, the mother importuned me to hasten the cure more than I judg'd confistent with the safety of her child, and therefore 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 fon, who about the thirteenth day began to amend, when he earnestly desir'd several odd kinds of eatables, a part whereof was indulged him upon this account, tho' they ought not otherwise to have been allowed; and by this means he at length recovered.

Sometimes a delirium mith watchfulness, Oc. bappened in this fever.

22. But the this comatous super more frequently accompanied this fever than the other fymptoms, yet fometimes, tho' rarely, a delirium happened without a stupor, in which the patient slept not night or day, and was ungovernable, and was feiz'd with other fymptoms, refembling those which affect delirious perfons either in the small pox, or in other fevers. This fymptom would not admit of palliation, like the coma 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 prov'd more ferviceable than any other remedy, fo that, after bleeding, and injecting one or two glysters, 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 fymptoms, reftor'd him to health, which indeed I was not able to effect by any other method. And this was manifest to me by much experience.

23. In Autumn, 1675, dysenteric stools, and sometimes a loofeness succeeded this fever, which I prefently perceived were symptomatic, and not original diforders, 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 affiftance of two dofes of an opiate afterwards,

prov'd fufficient to overcome this symptom.

24. In

Spirit of vitrio! moft effectual in removing thefa Symptoms.

24. In September, 1675, I was called to lady Coning by, Chap. 2. who was feiz'd with this fever, which was fuddenly followed with gripings, and these by bloody and mucous The dysenejections. Tho' her strength was much exhausted by ing this fee the long continuance of the difeafe, and especially by the ver how frequent stools which had greatly fatigued her the pre- conquered. ceding night, I directed bleeding in the arm immediately, and foon 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 procedure the foon recovered.

25. As to the diarrhoea, which frequently happened The loofeness in this fever, about this time of the year, it occasioned succeeding little inconvenience; and as it neither prov'd ferviceable, red. nor prejudicial, as far as I could perceive, whether there was a flupor, or not, fo it furnished me with no indication, provided it was not fo violent as to endanger the life of the patient, in which cafe an opiate was clearly indicated; and in this only the use of anodynes is to be approved throughout the course of this disease, for the extraordinary tendency to a stupor in this fever was increafed by medicines of this kind, and confequently they

were not to be given without an absolute necessity. 26. It must be observed that it often happens that Nightpersons recovering after this and other severs, especially sweats fuch as have been much exhausted by the long continu- how cured. ance thereof, and have required large and tedious evacuations to compleat their cure (particularly if they be 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 frength flowly; and fome likewise fall into a confumption. As I conceived that this fymptom only arose from the blood's having been fo impoverish'd and weaken'd by the inveteracy of the preceding illness, as not to be able to affimilate the juices lately taken in, but to endeavour to expel them by fweat; I ordered that the patient should take five or fix spoonfuls of malaga sack, morning and evening, whereby the strength increased daily, and the fweats vanished (b).--- And thus we have finish'd

N 4 (b) A restorative diet, proper exercise, and the use of a light insussion of the bark in red wine will seldom sail of producing the desired effect in this case. Elixir of Vitriol is also esteem'd an excellent medicine for the fame purpofe.

Sect. g. our discourse of the continued sever of this constitution. which we chuse to call the comatous fever, on accountof the great supor which generally accomanied it.

#### A P. H III.

## Of the Measles of 1674.

of the meafles.

The rife of a I. IN fanuary, 1674, there arose a different species new species of the measses from that which began in the same month, in 1670, and yet it prov'd as epidemic, but was not equally regular, nor so constantly kept its train of fymptoms: for fometimes the eruptions came out earlier, and fometimes 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 shew'd themfelves in the face, and by degrees spread over the rest of the body. In this species likewise I rarely 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 sever. Moreover this fort prov'd more destructive, when unskilfully treated, than the former: for the fever and difficulty of breathing, which us'd to fucceed 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, it nevertheless answer'd in general to the description of that of 1670; 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 vanish'd, at the approach of, or foon after, the fummer folftice.

The method of cure whence to be taken.

2. As the method of cure differs little from that which is amply delivered above in the history of the measles, it is thence to be taken; and I will only give a fingle inftance hereof in this place, according to my

Exemplified in some children.

3. In February, 1674, the counters of Salifbury fent for me to attend one of her children in the meafles, which the rest, to the number of five or fix, afterwards catch'd,

catch'd, and I treated them all in the same manner. Chap. 3. 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 were eafily separable from it. But I indulged no more clothes, nor a larger fire, than they were accuftom'd to when in health. I forbad the use of flesh. and permitted them to fup water-gruel, and barleybroth, and between whiles to eat a roafted apple, and I gave them fmall-beer, or milk boiled with thrice its quantity of water, for drink. I also prescribed a pectoral ptisan, to be drank occasionally, as the cough prov'd troublesome. By this means they recovered in the fhort time wherein this difease ordinarily finishes its courfe, neither were they feiz'd with any uncommon fymptom throughout the course, or after the departure

4. During the first two months, in which this species The origin of the measles prevailed, a kind of morbillous fever at- of a mortack'd a few subjects, attended with some eruptions in billous fethe body, but especially in the neck and shoulders, re- ver. fembling the meafles, from which they only differed in being confin'd to the parts abovemention'd, and not feizing the whole body. The fever also, tho' apparently of the fame kind, was more violent, and lafted fourteen days, and fometimes longer. It admitted neither Bleeding bleeding nor glyfters, being exasperated by both; but it and glyfters readily yielded to the method adapted above to the bad therein. measles. --- And let this suffice for the measles.

### A P. IV.

## Of the anomalous Small-pox of 1674, 1675.

1. A S the epidemic measles, which appeared in the be- The return In ginning of the year 1670, introduced the black of the black fmall-pox there described; so that kind which arose in small-pox. the beginning of 1674, and prov'd equally epidemic, introduced a species of the small-pox, so very like the former, that it feemed to be the fame revived, and not a new kind. For as we have before observed of that fpecies of small-pox, that after the first two years of its prevalence the puftules became daily less black, and

Sect. 5

grew larger by degrees, till the end of the year 1673, when the difease was mild and gentle, confidering the kind, it now returned with its former violence, and attended with a train of destructive symptoms. For in the flux kind the pustules appear'd of a sooty blackness, unless the disease prov'd fatal before they came to suppuration; for whilft they ripened, they were only of a brown colour. Moreover, when the puftules were numerous, they were very small, (for where very few appeared, they were of the fame fize as in other kinds of the fmall-pox, and very rarely black) and nearly refembled that kind above described which prevailed in 1670, differing only in a few particulars, which shewed that this fort was attended with a greater degree of putrefaction, and of a groffer and more indigeftible nature: for when the eruptions came to maturity, they were much more fetid than in the other kind, infomuch that I could fearce bear to approach fuch as were very full, the flench was so offensive. They also ran thro' their stages flower than any other species I had hitherto seen.

The milder the kind, the fooner the pustules supporte.

Ed FROTE IL

2. 'Tis worth observing, that the milder the kind is, the fooner the eruptions come to suppuration, and the difease 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 fucceeding irregular species of the confluent small-pox, which arose in the beginning of 1670, the fourteenth, or, at longest, the feventeenth day proved most fatal, which if the patient furvived, he was in no further danger; having never known a person destroyed by this disease after the seventeenth day. But in this species of the confluent fmall-pox there was danger after the twentieth day; and fometimes 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 rheumatifm, and frequently came to suppuration, and terminated in very large finus's and imposthumes in the muscular parts; fo that the patient's life was greatly endangered for feveral days after the fmall-pox was gone off. Hence I clearly perceived by what degrees this epidemic diftemper advanced thro' these three constitutions, the latter whereof

whereof always exceeded the former, both in the degree Chap.4. of putrefaction, and the indigeftible state of the morbific matter.

3. But the small-pox, whereof I now treat, seems to This smallme to be a new species arising from the former, now in pox Jeems to their decline. For tho', according to the tendency of kind. the air productive of this epidemic, the black fmall-pox, which first appeared in 1670, had arrived at its declenfion, 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 difease being renewed, and having obtained fresh force, feemed clearly to revive, and appear again in its juvenile state. And this kind prov'd fo much more irregular, and was accompanied with greater putrefaction, in proportion as the matter occasioning it was groffer and fouler than that which produced the preceding kind. In order to render this still more apparent, it must be confidered, that the temperature of the air cannot ufually be fuch as to propagate a particular epidemic in one place, and a very different one in another not far distant from the former; for if this were the case, as it fometimes is, every motion of the winds would have a power of fpreading the constitution. But I conceive it more probable, that a certain particular tract of air becomes replete with effluvia from fome mineral fermentation, which infecting the air thro' which they pass, with fuch particles as prove destructive sometimes to one fpecies of animals, and fometimes to another, continue to propagate the diseases resulting from 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.

4. But whether this or any other hypothesis may Was of a better ferve to folve the phenomena, is equal to me, who groffer and pretend to nothing more than is clear from the fact it- more putrefelf. This however I certainly know, that the present ture. fmall-pox exactly refembled that of the preceding constitution; only it seem'd 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 species I had hitherto seen; and, in

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Sect. 5. my opinion, was as fatal as the plague itself, with respect to the numbers affected thereby: but the diffinct kind was not more dangerous than any other species, and by the fize of the puffules, their colour, and other particulars, clearly manifested itself to be of a good fort.

es suited wed Intimated contrary curative indications.

The method

of cure spe-

cified.

5. With respect to the cure, I have long wondered to find fuch manifestly contrary indications, as this disease feem'd to intimate. For it was apparent, that a hot regimen immediately caus'd fuch fymptoms as proceed

from a too violent inflammation; viz. a delirium, purple fpots, and the like, whereto this difease is chiefly fubject. And contrariwise too cool a regimen prevented the fwelling of the face and hands, which is highly necessary here, and funk the eruptions. But after a long and thorough confideration of these matters, I at length found that I could remedy both these inconveniencies at the fame time, For by allowing the free use of milk boiled with three parts of water, fmall-beer, or fome fimilar 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 puftules, and the fwelling 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 flimulus in order to a further fecretion of the matter: fo 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 cover'd therewith; and, with respect to the pustules, they are to be brought to suppuration by the gentle heat of the ex-

It failed in this species of imallpox.

ternal parts. 6. But though this method fucceeded well with me in the other kinds of the confluent fmall-pox, it nevertheless failed in those of this constitution; so that most of those died who had them in a violent degree, whether they were treated by my method, or by the hot regimen and cardiacs. I was very fensible therefore that, befides the medicines which ferve to check the ebullition, or promote the elevation of the puftules, and fwelling of the face and hands, there was

further

further required a medicine of fufficient force to over- Chap.4. come the putrefaction, which appeared to be much greater in this species than in any other I had observed. At Adifferent length I thought of fpirit of vitriol, which I conceived one Jet might answer both intentions, viz. (1) check the pro- down, gress of the putrefaction, and (2) mitigate the vehement which sucheat. Whereupon leaving the patient to himfelf, without doing any thing till the pain and vomiting preceding the eruption were gone off, and all the puftules appeared, at length on the fifth or fixth day I allowed fmall-beer, gently acidulated with spirit of vitriol, to be taken at pleafure 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.

7. This fpirit, as if it were truly a specific in this Spirit of disease, surprizingly abated all the symptoms; the face vitriol fwell'd earlier, and in a greater degree, the spaces be-commended. tween the eruptions approach'd more to a bright red colour, like that of a damask rose; the smallest pustules also became as large as this species would allow, and those, which had otherwise been black, discharged a yellow matter, refembling a honey-comb; the face, inftead of being black, appeared every where of a deep yellow; laftly, the eruptions came fooner to fuppuration, 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; fo that, when I found there was not enough of it drank to take off the fymptoms, I exhibited fome drops of the spirit of vitriol between whiles, in a spoonful of fome fyrup, or a mixture of fome diffilled water and fyrup, in order to make amends for the sparing use of the abovementioned liquor.

8. I have enumerated the many advantages of this No inconvemedicine, and indeed I have not hitherto found the least nience atinconvenience attending the use thereof (a): for tho' it use thereof. mostly stopt the falivation on the tenth or eleventh day, yet fome stools usually succeeded at this time instead of

(a) 'Tis 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 per campanam, or dulcified spirit of nitre, will answer the same end, and may be given much more fafely.

Sect. 5. it, which were less dangerous than that stoppage; for, as we have often mentioned, fuch as have the confluent fmall-pox are principally endangered on these days, because the saliva, being rendered more viscid, does then threaten fuffocation. Now, in the present case, this fymptom is relieved by the loofeness, which yet either goes off spontaneously, or is easily cured by the milk and water, and an opiate, when the danger from the fmallpox is over.

The patient not to lie always in the same place in bed.

The regimen.

Bleeding

and pur-ging when

to be used

after the [mall-pox

is gone off.

9. Whilst the patient lay in bed during this time, with his arms covered, I fuffered no more clothes to be thrown on him than he was accustomed to when in health; and permitted him to change place as often as he pleafed, to prevent his fweating, which he was extremely subject to, notwithstanding this remedy. In the mean time he fup'd water-gruel and barley-broth, and fometimes eat a roafted apple. Towards the decline of the difease, in case of faintness, or fickness at stomach, I indulged three or four spoonfuls of canary. And after the fifth or fixth day I exhibited an opiate, earlier than ufual, every evening in grown perfons, for children had no occasion for it. I prescribed fourteen drops of liquid laudanum in cowslip water.

10. On the fourteenth day I allowed the patient to rife, and on the twenty-first directed bleeding in the arm (b), and then exhibited two or three purges at convenient internals; after which the face appeared of a more florid colour, than was usual when the disease had proved very violent. For this method likewife preferved the face from those unseemly scars, which are occasioned by the corrosion of the skin from hot hu-

mours.

The method exempli fied in a grown per on.

11. On the twenty fixth of July, 1675, Mr Elliot, one of the grooms of the bed-chamber to the king, committed to my care one of his fervants, who had this dreadful species of the black small-pox coming out.

(b) Few authors have infifted upon bleeding univerfally after the (mall-pox, and the modern practice by no means favours it; and indeed when the difease 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 mark'd as exceptions to the general rule.-Purging is always proper, and ought never to be

He was about eighteen years of age, of a very fan- Chap.4. guine constitution, and was attacked with this distemper foon after hard drinking. The puftules were of the confluent kind, and ran together more than any I had hitherto feen, fo that fcarce any intermediate space was left between them. Relying upon the virtue of this efficacious medicine, I omitted bleeding, tho' I was called in foon enough to have done it, and ought indeed to have performed it, as the difease was occasioned by drinking wine too plentifully. When the eruption was over, viz. on the fifth or fixth 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 fo much at the nofe, that the nurse, terrified by this fymptom, fent in great hafte for me. Accordingly I went, and perceiving that this hemorrhage arose from the immoderate heat, and extraordinary commotion of the blood, I ordered him to drink more freely of the acidulated small beer, whereby the flux of blood was foon ftopt. The falivation being plentiful enough, and the swelling of the face and hands, and the filling of the puftules, proceeding in a proper manner, the difeafe went on very well, except that in the decline it was attended with fome blood, and mucous ftools. which might poffibly have been prevented by bleeding in the beginning. Nevertheless I us'd no other medicine in this dyfentery, fince this fymptom required nothing further than the opiate, which I should have ordered to be taken every evening, if this diforder had not happened; and by this means it was checked, till the eruptions went off; and afterwards, upon taking away a fufficient quantity of blood from the arm, and drinking plentifully of milk and water, the patient foon recovered.

12. About the same time, Mr Clinch, a neighbour- In two ing gentleman, committed two of his children to my children. care; the one was four years of age, and the other fuck'd, and was not fix months old; the eruptions were very small and confluent in both, and of the black kind, and came out like an eryfipelas. I directed spirit of vitriol to be dropt into all their drink, which, notwithstanding their age, they drank without aversion; and not being affected with any more violent symptom,

they

Sect. 5. they foon recovered. My intimate friend, Dr Mapletoft, accompanying me to visit them, found the eldest recovering, and the youngest then lying ill in the cradle.

Spirit of unnecessary in the di-AinEt kind.

The fmall-

pox not to

crates, or

Galen.

13. But it must be observed that as the distinct species vitriol was of the small-pox of this constitution was mild, it needed not this remedy; the method we have before laid down, for the cure of the distinct kind, fusficing here.

14. And now I have given the reader all my observations relating to the [mall-pox; and tho' they may perhaps in this censorious age be esteemed of little moment, yet I have with great pains and care fpent many years in collecting them; nor had I now published them, if a defign of benefiting mankind had not induc'd me to it, even at the expence of my reputation, which I am fenfible will fuffer on account of the novelty of the method. And yet I cannot conceive why a new method of curing a difease, not to be met with in Hippocrates, or Galen, (unless perhaps some passage in their writings have a forc'd interpretation put upon it) be met with should be censured, since the methods of cure appropriin Hippoated by the modern phylicians, not having been eftablish'd by those great lights of physic, may as reasonably

be rejected by fome as magnified by others.

15. And for the fame reason it should not seem ftrange, that I have made some alteration in the method of curing those fevers, which depend on the conflitution wherein the fmall-pox is epidemic. For if the [mall-pox never appeared in those early ages, it follows likewise that such fevers never existed. But it is highly probable there was no fmall-pox to be found at that time; for if this diftemper had been as common then as it is now, I am of opinion it could not have been concealed from the fagacious Hippocrates, who, as he understood the history of diseases more thoroughly, and has described them more accurately, than any of his fucceflors, would also have left us, according to his custom, a plain and genuine description of this disease.

16. Hence therefore I conjecture, that diseases have certain periods according to the different age of the earth, and the fecret and hitherto unknown alterations happening in its bowels. And that as fome difeafes have existed in former ages, that are now either quite extinct, or at leaft appear very feldom, as being wasted with age, fuch as the leprofy, and perhaps some others; so the dif-

Difeafes have certain periods, and whence.

with the same

eafes

eafes which now prevail, will at length vanish, and Chap. 4. yield to other new species, of which indeed we can form no idea. This may be the cafe, whatever conceptions we, (who were born, as it were but yesterday, and to morrow perhaps may die,) have of this matter; nor are the practical observations of the ancients of much longer date, if compared with the beginning of the world.

## C H A P. V.

Of the epidemic Cough of the Year 1675, and the Pleurisy and Peripneumony which followed upon it.

1.TN 1675 the feafon having continued unufually The rife of warm, like fummer, till towards the end of Oc- an epidetober, and being fuddenly fucceeded by cold and moift mic cough. weather, a cough became more frequent than I remember to have known it at any other time; for it scarce fuffered any one to escape, of whatever age or constitution he were, and feized whole families at once. Nor was it remarkable only for the numbers it attack'd (for every winter abundance of persons are afflicted with a cough) but also on account of the danger that attended 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 fome meafure, leffen its violence, the cough made way for, and readily changed into the fever. In the mean while, as the cough affifted the conftitution in producing the fever, fo the fever on this account at- The fever tacked the lungs and pleura, just as it had affected the remain'd head even the week preceding this cough; which fud- not withden alteration of the fymptoms occasion'd some, for standing want of fufficient attention, to esteem this fever an ef- the sudden fential pleurify or peripneumony, tho' it remained the change of fame as it had been during this constitution.

2. For it began now, as it always did, with a pain Exemplified in the head, back, and fome of the limbs; which were in the manthe fymptoms of every fever of this constitution, ex- ner of its cept only that the febrile matter, when it was copiously thecure.

depolited

Sect. 5. 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 precifely the same with that which prevailed to the day when these coughs first appeared; and this likewise the remedies to which it readily yielded plainly shew'd. And tho' the pungent pain of the fide, the difficulty of breathing, the colour of the blood that was taken away, and the rest of the symptoms that are usual in a pleurify, seemed to intimate that it was an effential pleurify; yet this difease 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 pleurify, as will hereafter appear. Add to this that when the pleurify is the original difease, it usually arises betwixt spring and fummer; whereas the diftemper we now treat of, begun at a very different time, and is only to be reckoned a fymptom of the fever which was peculiar to the prefent year, and the effect of the accidental cough.

Particulars to be confidered, preparatory to the method of curs.

3. Now in order to proceed in a proper manner to the particular method of cure, which experience shews to be requifite both in this cough and in those which happen in other years, provided they proceed from the fame causes, it is to be observed that the effiuvia which used to be expelled the mass of blood by insensible perspiration, are struck in, and thrown upon the lungs, from the fudden stoppage of the pores by cold, and by irritating the lungs, immediately raife a cough. And the hot and excrementitious exhalations being by this means detained in the habit, a fever is eafily raifed in the mass of blood; namely, when either the vapours are fo copious that the lungs are unable to expel them, or the inflammation is increased by the adventitious heat arifing 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 dispos'd to this disease. But of whatever kind the flationary fever be which prevails the fame year, and at that particular time, this new fever foon affumes its name, and becomes of the fame kind, and is every where fubfervient thereto; tho' it may still retain fome fymptoms belonging to the cough, whence it arose. In every cough, therefore, proceeding from this cause, 'tis sufficiently apparent that regard must not only be had to the cough, but likewise Chap. 5.

to the fever that fo readily accompanies it.

4. Relying on this foundation I endeavoured to re- The method lieve fuch as required my affiftance by the following of cure demethod: if the cough had not yet occasioned a fever, livered. and other fymptoms, which, as we faid, usually accompany it, I judged it fufficient to forbid the use of sleshmeats and all kinds of spirituous liquors, and advised moderate exercise, and the benefit of the open air, with a draught of a cooling pectoral ptifan to be taken between whiles. These few things sufficed to relieve the cough, and prevent the fever, and other fymptoms, usually attending it. For by the abstinence from slesh and spirituous liquors, along with the use of cooling medicines, the blood was fo cooled, as not eafily to admit of a febrile impression, and by means 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 commodioufly exhaled in the natural and true way, with advantage to the patient.

5. With respect to quieting the cough it is to be Opiates, observed that opiates, spirituous liquors, and heating spirituous medicines us'd for this purpose are all unsafe; for the liquors, and heating mematter of the cough being hardened thereby, those dicines unvapours which should pass off from the blood, in a gentle safe. and gradual manner, by coughing, are detain'd in the mass, and raise a sever. And this frequently proves very fatal to abundance of the common people, who whilft they imprudently endeavour to check the cough, by taking burnt brandy and other hot liquors, occasion pleuritic, or peripneumonic diforders; and by this irrational procedure render this difease dangerous, and often mortal, which of its own nature is flight, and eafy of cure. Neither do they err less, tho' they seem to act more reasonably, who endeavour to remove the cause of the difease by raising sweat, for tho' we do not deny that fpontaneous fweats frequently prove more effectual then all other helps in expelling the morbific cause yet 'tis apparent that whilft we attempt to force fweat we inflame the blood, and may possibly destroy the patient.

6. But it happens fometimes, not only when the The cough disease has been unskilfully treated, in the manner fornetimes above described, but also spontaneously, at the begin- fewerish

ning fymotoms.

Sect. 6. ning of the illness, or in a day or two after, especially in tender and weakly perfons, that the cough is fucceeded by alternate intervals of heat and cold, a pain in the head, back and limbs, and fometimes a tendency to fweat, especially in the night; all which symptoms generally followed the fever of this constitution, and were frequently joined with a pain of the fide, and fometimes with a conftriction, as it were, of the lungs, which occasioned a difficulty of breathing, stop'd the cough, and increased the fever.

The feverproms, how best reliev-

A caution

concerning glyfters.

7. According to the best observation I could make, the fever, and its most dangerous symptoms, were best reliev'd by bleeding in the arm, applying an epispastic to the neck, and giving a glyster every day. In the mean time I advised the patient to fit up some hours every day, to forbear flesh meats, and sometimes to drink fmall-beer, fometimes milk and water, and fometimes a cooling and lenient ptisan. If the pain of the fide abated not in two or three days, but continued very violent, I bled a fecond time, and advised the continuance of the glyfters. But with respect to glyfters, 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 difease; for the blood and juices of such persons are easily changed, and soon agitated and heated.

whence the animal occonomy is diffurbed, and the febrile

fymptoms continue beyond the usual time.

Rough methods, and abundance of remedies very perni-CLOUS.

8. But to return to our fubject: whilst by this means we allow'd time that the blood might gradually free itfelf from those hot particles that were lodged in the pleura and lungs, all the fymptoms usually went off in a gentle manner; whereas when the difease was treated in a rough way, by giving abundance of remedies, it either destroyed the patient, or render'd it necessary to repeat bleeding oftener than the difease required, or would fafely bear in order to preferve life. For tho' repeated bleeding answers every purpose in the genuine pleurify, and is alone fufficient for the cure, provided there be no hinderance 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, un- Chap. 5. less 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.

o. Upon this occasion I shall briefly deliver my fen- A mali timents with respect to a very trite and common opi- gnant pleunion; viz. that a pleurify is found to be of fo malig- rify somenant a nature in some years, that it will not then bear times hapbleeding, at least not so often as this distemper ordinarily demands. Now tho' I conceive that a genuine and essential pleurify, which, as shall hereafter be observed, happens indifferently in all conflitutions, does in all years equally indicate repeated bleeding; yet it fometimes 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, whilft the fever notwithstanding continues precisely the same. Wherefore in Repeated this case, tho' bleeding may be used to abate this sym- and copious ptom when it is very violent, yet, generally speaking, bleeding little more blood ought to be taken away than is re- bad herein. quired by the fever whereon this symptom depends; for if the fever be of fuch a kind that it will bear repeated bleeding, it may likewise be repeated in the pleurify, which is a fymptom thereof: but if the fever will not bear repeated bleeding, it will prove prejudicial in the pleurify, which will go off, or remain as it does. And in my judgment this was the case in the symptomatic pleurify 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 in view the constitution of the year, with its tendency to produce some particular epidemic disease, and likewise to reduce all the other happening at the same time to the form and likeness of this, proceeds in an uncertain and fallacious way.

10. In the month of November of the above-men- Apain in tioned year, I attended the eldest son of Sir Francis the fide, &c. Windham in this fever. He was afflicted with a pain remov'd in his fide, and the rest of the symptoms that are com- without remon in this difeafe. I bled him only once, applied an bleeding. epispastic to his neck, injected glysters every day, gave him cooling ptizans and emulfions, and fometimes milk and water, or small-beer to drink; and advised his fit-

Chap. 5. ting up a few hours every day; by which means the symptoms went off in a few days, and a purge compleated the cure.

The cough without a fever, how to be treat-

II. But it must be remarked that the' these were the common fymptoms which fucceeded the cough, during this winter, yet the cough, unattended with thefe fymptoms, was more prevalent at the fame time. But this required neither bleeding, nor glyfters, provided a fever was not occasioned by a hot regimen, or heating medicines; it fufficed to allow the benefit of the open air, forbidding the use of flesh, wine, and other spirituous liquors of the like kind. I likewife ordered the following troches to be taken often, which indeed excel all those I have hitherto found in stopping coughs occasioned by taking cold (a).

Pettoral troches.

Take of Sugar-candy, two pounds and 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 feeds of anife 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 requifite art; which the patient should always carry in his pocket, taking one of them frequently.

12. Before I conclude this effay on epidemic difeases, I must answer an objection that I foresee will be made to part of it; viz. that it does not feem sufficient to oppose the malignity that accompanies many of these diseases. 'Tis not my defign, nor am I able, to confute the received opinion of the learned, whether ancients or moderns, in relation to malignant, fince there

(a) 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 bliftering freely is highly serviceable. -The following loboch, from the Edinburgh dispensatory, is an excellent medicine to stop a cough occasioned by a thin, tickling

Take of compound powder of gum-dargon, two drams; of the white of eggs, beat up, an ounce; fyrup of diacodium, two ounces; mix them together into a lohoch; whereto may be added a dram of . Japan earth.

are evident proofs of it in most epidemics (b). I only Chap.5. beg leave to propose my sentiments of the nature of this malignity, in order to prove the reasonableness of

my practice.

13. I conceive then that all the malignity which ap- Malignity pears in epidemics, whatever its specific nature be, con- explained. fifts and centers in very hot and spirituous particles, that are more or less opposite to the nature of the juices contained in the body; because only such particles are capable of producing fo fudden an alteration of the juices, as is frequently observed in malignant diseases. And I judge that these hot and spirituous particles chiefly act by way of affimilation; for 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 feiz'd with a malignant difease infects another by an emission of spirits, which soon assimilate the juices to themselves, and change them into their own nature.

14. From these considerations it seems to follow that In what tis best to expel these particles by sweat, fince by this kind thereof procedure the difease would be immediately eradicated. Sweating But experience contradicts this, and shews that every is proper. fpecies of malignity will not admit of this remedy. For tho' in the plague, the pestilential particles, as well on account of their exceeding fubtility, as likewise because they relide in the most spirituous parts of the blood, are diffipable, and may be expelled by an uninterrupted fweat; yet in other fevers, where the affimilating particles are lefs fubtile, and mixt with groffer humours, the malignant minera cannot only not be expelled by fweat, but is frequently increased by the diaphoretics that are given to promote it. For the more active those hot and spirituous particles are rendered by the use of heating medicines, the more is their power of affimilating increased; and the more likewise those

(b) Malignant diseases are known by these signs; they begin with a flight 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 drowfy but cannot fleep, and if he does, a greater de-cay 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 wrift, and death is at hand,

Sect. 5. juices are heated whereon they act, fo much the more readily are they affimilated, and yield to the imprefiions thereof. Whereas, contrariwife, 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 fmall-pox, increase more readily in proportion as the patient is heated; and that, according to the coolness of the regimen employ'd, which is very fuitable in these diseases, they are us'd to decrease and be diminished.

Why malignant dif. eases have often few bioms.

In what

fracaring.

15. Now were it to be inquired whence it happens, fince malignity confifts in fuch hot and spirituous particles, that fo few figns of a fever are frequently found febrile sym- in the most malignant disease; it might be answered, first, that in the plague, the most remarkable instance of malignity, the morbific particles are fo very fubtile, especially in the beginning, that they pass thro' the blood like lightning, and (the spirits being as it were fix'd or congealed) raise no ebullition therein, whence the pati-

ent dies without a fever.

16. But in other epidemics, accompanied with a less degree of malignity, the febrile symptoms are sometimes fo flight, from the difturbance raifed 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 fymptoms that are fuitable to the discase, and almost all the phenomena that happen are irregular, by reason of the entire subversion of the animal oeconomy; in which case the fever is often deprest, which of its own nature would be very high. Sometimes also fewer figns of a fever appear than the nature of the disease requires, from the translation of the malignant cause, either to the nervous system, to fome other of the folid parts, or to fome of the juices lying out of the road of the circulation, while the morbific matter is yet turgid.

Malignity how most

17. But which way soever it be, I am not able even to conjecture what other method of cure ought to be convenient- used to conquer the malignity, besides that which is fuitable to the epidemic wherewith it is joined. So that can no longer be perceived in the wellt, and

whether the epidemic be of the fame nature of those Chap. 5. wherein the febrile matter is first concocted, and then properly expelled by iweat; of the nature of those that are terminated by some eruption; or of those that require the affiftance of art to make way for them: in all these kinds, the malignity, which is the concomitant of the disease, will rise, and fink, remain, and go off with the original difease; and consequently whatever evacuation agrees in general with the fever, agrees likewife with the malignity, how much foever thefe evacuations may be of a contrary nature to each other. Hence the malignity that accompanies autumnal intermittents, and also the continued fever, which is of the fame nature, will yield to a fweat, which follows concoction as its effect. And the feafonable suppuration of the puftules in the fmall-pox will take off the malignity attending that difease, and so of the rest:

-Singwitell

## C H A P. VI.

bot long continuance, or if the patient was

ly confirm'd by experience.

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 it is likewise universal-

# The Recapitulation.

1. A ND thus we have, at length, shewn, that the Five kinds fpace of years which furnished us with the pre- of constituceding observations produced five different kinds of tions deconstitutions, that is, five peculiar dispositions of the feribed in air, productive of as many peculiar enidence. air, productive of as many peculiar epidemic fevers. going sheets: But the first of these severs, which prevailed in those years wherein autumnal intermittents chiefly raged, feems to be the only one, as far as I could hitherto obferve, in which nature regulated all the fymptoms in fuch manner as to fit the febrile matter, prepared by proper concoction, for expulsion in a certain time, either by a copious fweat, or a freer 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

Sect. 5.

the regular method which nature uses in promoting and accomplishing the digestion of the morbisic matter at the appointed time, as also because it occurs more frequently than other severs.

Intermittents, the most frequent aiforders.

2. For 'tis probable that intermittent fevers oftener prevail epidemically than all other difeases whatsoever, if those authors may be credited who have writ so largely concerning their frequency in former ages, whatever may be the reason of their appearing so seldom fince the plague depopulated this city; for the pestilential fever was the forerunner of the inflammatory fevers that afterwards fucceeded. And it feems reafonable to judge that the necessary and excellent aphorisms, left us by Hippocrates and other ancient physicians, are adapted to the primary fever abovementioned, by means of which it is to be regulated in fuch manner that the febrile matter may be prepared to make a proper crifis by fweat: nor do I perceive how these aphorisms can be applied to the fucceeding species of fevers, which are of a very different nature, and are rarely cured by fuch a method. But however this be, I effeem it worth obferving, that this fever, which depended on that conftitution wherein intermittents prevailed over the rest, if it proved of long continuance, or if the patient was weaken'd by large evacuations, formetimes changed to an intermittent; whereas the fevers that prevailed in the following years, tho' they continued very long, fcarce ever became intermittent; which afforded a pretty clear proof, that that continued fever and those intermittents differed little in their nature from each other.

The species of a fever, bow difcovered.

of emplina.

3. Now if I should be ask'd in what manner the species of a continued sever may be gathered from the signs set down by me in the description of severs, since every particular sever is mostly attended with those symptoms which all severs have in common, as heat, thirst, restlesness, 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 sever; 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

either by his own observations, or the relation of others, Chap. 6. what other difeases, besides this sever, 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 fuch fymptoms only as are common to all fevers, efpecially if it be diffurb'd by an unfuitable method of cure, yet other epidemics will clearly discover the figns that are peculiar to its nature and genius.

4. Thus, for inftance, whoever is thoroughly acquainted with the history of the fmall-pox will eafily conjecture, either by the day on which the eruptions came out, or by their fize, colour, and the like, to what kind of small-pox this particular species is to be referr'd; and when once that species of the small-pox is discovered, which prevails chiefly in that year and in those places, the species of any fever that then and there prevails will manifeftly appear. And undoubtedby if I were perfectly acquainted with the history of difeases, 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 feen it, so likewise having seen any sever, 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, conftantly attends every particular conftitution.

5. (2) Besides the signs, which an attention to the contemporary epidemics affords, the fymptoms of every fever let in some light for discovering the species thereof. For tho', as we intimated above, all fevers have fome fymptoms in general, yet there are certain distinguishing figns which nature has particularly affixed to every species; but as these are more latent and minute, they are usually discovered only by very diligent and accurate observers. Amongst these distinguishing signs, I have Sweating always reckoned that fweating or dryness, at a particular or dryness time of the difease, chiefly shewed the species of the principal distinguish. fever, in case the sever had not been forc'd from its own ing signs. natural state by an improper method. And this manifestly appeared to me in all the epidemic severs, which have been treated of in these observations.

Exemplified.

Sect. 5. 6. To give some instances of this: in those severs which prevailed upon the decline of autumnal intertermittents, the external parts were dry, nor was there the least fign of fweat before the concoction of the febrile matter, which was generally completed 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 fubfequent inflammatory fevers, no fpontaneous fweat appeared, but a fweat might be raifed in the beginning, by exhibiting fudorifics, and as foon as it flowed all the fymptoms went off. In the next fucceeding fever, which accompanied the small-pox in those years wherein it prov'd regular, the patient was subject to profuse spontaneous sweats in the beginning of the illness, but by encouraging them all the fymptoms 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 difease: tho' the sweat which accompanied the former fever was fomewhat 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 feems exceeding difficult to me to discover the species of a new fever in the first year of a constitution, when we have hitherto feen no example of it, nor are able to conjecture what epidemic difeases may hereafter arife, which are generally preceded by this fever. It would be tedious to enumerate all the particulers that occurred in those years of which I have treated, whereby it might appear that many manifest figns were fuggested by nature, to enable us to make fuch discovery; and consequently this knowledge necesfarily depends upon a careful and accurate observation

of all particulars.

8. But tho' it be difficult, if not impossible, to afcertain the species of a new fever at its first coming, yet with respect to the cure, the indication to be taken from fuch things as do good or mischief, at least, remains to affift us therein; by means of which we may by degrees find out a way to fecure the patient, provid-

ed we do not nurry on too fast, which indeed I esteem Chap. 6. 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 confulted the fafety of my patient, and my own reputation, most effectually, by doing nothing at all; for whilft I carefully attended the difease, that I might be able to overcome it more commodioully, the fever either went off by degrees fpontaneously, or assumed such a shape, as shew'd what medicines were to be used to remove it. But 'tis much to be lamented that abundance of fick persons are so ignorant, as not to know that 'tis fometimes 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 neglect 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 much

9. And now I have delivered nearly all the observations I have hitherto made (at least fuch as could be brought into fome 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 feemed to be going off. As to the difeales that may hereafter fucceed, they are only known to him from whom nothing is hid.

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### Of intercurrent Fevers.

Stationary fevers prevail according to their prder.

HE observations of the preceding years, as bove delivered, fufficiently flew that fome fevers are deservedly entitled stationary fevers; I mean fuch as arise from some particular 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 afcendant over all the reft, during that continued course of years. Whether there are any other species, besides those just mentioned; or whether they fucceed 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 difcover. But there are also other continued severs, which, tho' they fometimes rage lefs, and at other times more feverely, yet because they are mixed with all kinds of other indif- 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 severs, and the method of curing them : they are, the fearlet fever, pleurify, bastard peripneumony, rheumatism, crysipelatous fever, the quinsey; and, perhaps, some others.

Intercurrents mixt with thefe and each criminateiy.

Intercurrents enumerated.

The fever disease in all.

2. But as all these diseases are, during their state, or the original at least were, accompanied with a fever, till it went off, the febrile matter being thrown upon fome particular part, according to the nature of the diftemper, I queftion not that the fever is to be accounted the primary difeafe, and that the other diforders whence those difeases generally derive their name are symptoms, which chiefly regard either the peculiar manner of the crifis, or the part principally affected. But provided the thing be agreed upon, I shall not dispute about names; tho' I take the liberty to call a difease by this or that name,

as best pleases me.

3. It must be observed, that as the stationary fevers, Chap, 1. of which we have treated above, prevail'd more or less epidemically, as we faid, according as they were fa- Intercurvour'd by the constitution of years, resulting from a rents are fecret and inexplicable temperature of the air; fo like-Jometimes wife did these intercurrents sometimes, but less frequently. For the' they generally arise from some particular diforder of particular bodies, whereby the blood and juices are some way vitiated, yet sometimes they proceed mediately from fome general cause in the air. which, by its manifest qualities, so disposes the human body, as to occasion certain faults 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 fuddenly fucceeded by warmer weather, pleurifies, quinsies, and the like diseases usually arise, whatever be the general constitution of the year. And because these difeafes, which happen indifferently in all years, do fometimes rage as epidemically as those which only happen in a certain successive course of years, we chuse to call them intercurrents, in order to diftinguish them from the latter.

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4. But notwithstanding the considerable difference Wherein there is between these two kinds of fevers, with respect to stationary the causes proceeding from the air, yet they frequent- and inly agree in other external and procatarctic causes. For tercurrent fevers not to mention infection, which fometimes communi- agree. cates stationary fevers, and furfeits, which give rise to both ftationary and intercurrent fevers, the manifest external cause of the greater part of severs is to be fought for hence; either (1) a person hath left off his Most severs cloaths too soon, or (2) imprudently exposed his body occasion'd by to the cold after being heated with violent exercise; catching whence the pores being fuddenly closed, and the per- cold. spirable matter retained in the body, that would otherwife have pass'd thro' them, such a particular kind of fever is raifed in the blood, as the then reigning general constitution, or the particular depravity of the juices, is most inclin'd to produce. And indeed I am of opinion that abundance more have been destroy'd by this means than by the plague, fword, and famine together; for if a phylician examines his patient strictly concerning the first occasion of the disease, he will generally

Sect. 6. 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 friends never to leave off any wearing apparel, till a month before midfummer; and to be cautious of expoling themselves to the cold, when heated by exercise.

Most intercurrents are effential difeafes.

· Simming

When not are to be treated.

5. But it must here be carefully remarked that tho' the difeases I am now to treat under the title of Intercurrents, were most, if not all of them, effential difeases; yet frequently certain disorders happen in stationary fevers, refembling these intercurrents as to the phenomena, and likewise characteriz'd by the same name, which however are manifest symptoms of those fevers. Now in this case they are not to be treated by so, how they the method which is to be used when they are essential diseases, but rather by that which the sever requires, whereof they are now fymptoms, which method is only to be flightly adapted to their particular cure: and great attention is to be had to the fever of the year, and to find out the method whereby it may be easiest conquered, whether by bleeding, fweating, or any other procedure; for if this be difregarded, we shall frequently mistake, to the great detriment of the patient. Should it be objected that the disorders under confideration, which I term effential, are in reality only fymptoms, I reply that perhaps they may be symptoms with refpect to the fever whereto they properly belong, but they are at least fymptoms of fevers, which always neceffarily produce them. To exemplify this matter : in an effential pleurify the fever is of fuch a nature, as always to deposite the morbific matter upon the pleura; in an effential quinfey, of fuch 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 difeafes fucceeds 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.

Effential and fymptomatic disorders how to be distinguish-

6. But, in order to diffinguish rightly between effential and meer symptomatic disorders, it is of moment to consider that the same symptoms which accompany any particular flationary fever at the beginning, will likewise happen at the same time in a pleurisy, or quin/ey,

quinfey, when these are only accidental symptoms of Chap. 1. fuch a fever, We had a proof of this in the abovementioned symptomatic pleurify, that succeeded the fever which prevailed in this winter of 1675, For all that were feized with the pleurify, 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 pleurify, and continued after that disease went off. Whereas when either of these intercurrents is the effential disease, it attacks in the fame manner in all years indifferently, having nothing at all in common with the then prevailing stationary fever. Besides, all the symptoms that afterwards arife are more apparent, as not being concealed and perplex'd 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 effential intercurrents usually make their appearance, frequently points out the kind of diforders whereto they should be referred. But, lastly, he is best qualified to discover the diagnostic figns, both of these, and all other difeases, who, by daily and diligent observation, hath fearch'd fo intimately into their phenomena, as at first fight to be able to diffinguish the genus; tho' perhaps the characteristic differences of some of them may be fo very fubtile, that he cannot express them by words to another.

7. But as these different species of fevers, so far as I These difcan learn by carefully confidering their concomitants, ferent and the method of cure, proceed from an inflammati- species of on of the blood, peculiar to every difease, I place the fevers how principal part of the cure in cooling the blood. In ed. the mean time I endeavour univerfally to expel the morbific matter, by a method of cure, varied according to the nature of the difease, and which experience thews to be readily curative of the particular species thereof. And, in reality, whoever is thoroughly acquainted with the method of expelling the febrile matter, whether by bleeding, fweating, purging, or any other more proper way, will have the best success in the cure of all fevers.

#### H A Ρ.

#### Of the scarlet Fever.

Rife and (ymptoms of the fearlet fever.

'HO' the scarlet fever may happen at any time, yet it generally comes at the close of fummer, when it feizes whole families, but especially children. (1) A chilness and shivering come at the beginning, as in other fevers, but without great fickness; (2) afterwards the whole skin is covered with small red spots; which are more numerous, larger, and redder, but not fo uniform as those which constitute the measles: (3) they continue two or three days, and after they are vanish'd, 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 fuccessively.

The method

2. As this difease seems to me to be nothing more, of curing it. than a moderate effervescence of the blood, occasioned by the heat of the preceding fummer, or fome 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 perform'd. Accordingly, I refrain from bleeding, and the use of glyfters, which make a revulfion, whereby I conceive the noxious particles are more intimately mixed with the blood, and the motion which is more agreeable to nature is check'd. On the other hand I forbear cardiacs, by the heat of which the blood may perhaps be put into a more violent motion, than fo gentle and mild a separation as effects the cure requires; and befides by this means a high fever may be occasioned. I judge it fufficient 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 fkin is entirely peeled off, and the fymptoms vanished, 'tis proper to give a gentle purge, fuited to the age and strength of the patient. By this plain and manifestly natural method, this disease in name only, for 'tis little more, is eafily cured, without trouble or danger. 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 fuperfluous remedies, the disease is immediately augmented, and he Chap. 2. frequently falls a victim to the over-officiousness of the phylician.

3. But it should here be observed, that when epilep- What to be tic convulsions, or a COMA, arise in this disease at done if conthe beginning of the eruption, which fometimes hap-vulfions, or pen to children and young perfons; 'tis highly proper attend the to apply a large and ftrong epispastic to the neck, and beginning immediately exhibit a paregoric of fyrup of white pop- of the eruspies, which is to be repeated every evening during the tim. 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.

#### C H A P. III.

### Of the Pleurify.

I. HIS disease happens at any time, but chiefly When a between fpring and fummer; for the blood, pleurify being then heated by the fresh approach of the fun, is arises, and greatly disposed to fermentations, and immoderate chiefly afcommotions. It chiefly affects the fanguine, and fre- feets. quently also attacks peasants, and such as have been accustom'd to hard labour. It generally begins (1) with Its symia chilness and shivering, which are followed (2) by proms. heat, thirst, restlessness, and the other well-known fymptoms of a fever; (3) in a few hours, (tho' fometimes this fymptom comes much later) the patient is feized with a violent pungent pain in one fide, in the parts adjacent to the ribs, which fometimes extends to the fcapula, fometimes almost to the spina dorsi, and fometimes to the fore-part of the breaft; (4) a frequent cough, likewise, afflicts the patient, and occasions great pain by the fhock it gives to the inflamed parts, fo that he fometimes 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 frequently streaked with blood; but in the course thereof it is more copious, and more concocted, and likewise mixed and coloured with blood; (6) in the mean time the fever proceeds equally, and even grows more violent with the symptoms arising therefrom:

Sect. 6. 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 (a).

2. (7) But the matter productive of this difease does not always undergo fuch a concoction in the courfe thereof, as fits it for expectoration; for it frequently remains thin, and only a finall quantity is expectorated, as in the beginning, and confequently the fever and its. concomitants remit not at all till they prove mortal. (8) In the mean time, the belly is fometimes too coflive, and at others too foluble, the stools being both frequent and very liquid; (9) fometimes, when the difeafe proves extremely fevere, and bleeding has been omitted, the patient cannot cough, but having a great difficulty of breathing is almost suffocated by the violence of the inflammation, which is fometimes fo very confiderable, that he cannot dilate his breaft fufficiently for respiration, without the most exquisite pain (b). (10) And

> (a) A pleurify is excellently described by Aretaus in these words: An acute pain accompanies it, which reaches to the throat, and " in fome to the back and shoulders; it is succeeded by a difficul-" ty in breathing, watching, nausea, redness of the cheeks, and " a dry cough; the spittle is difficultly expectorated, and is either "phlegmy, very bloody, or yellowish. 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 feiz'd with an embyema. See Aretai oper, lib. 1. cap. x.

(b) 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 persect ease and freedom, both externally and internally. They may be prevented externally, first by adhering to the pleara; and secondly, by a quantity of first, by adhering to the pleura; and secondly, by a quantity of extravalated 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 fo common a case, that I believe the number of those who upon diffection are found with adhesions, greatly surpasses the number of those without them; but then these adhesions are of finall ex-

tent, except in very difeafed bodies.

Whilft 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 fufficient 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.

(10) And fometimes when the inflammation has been Chap. 3. violent, and bleeding omitted (c) which should have been us'd at the beginning, an imposshume is occasioned,

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 in breathing; and

the adhesion is always on the side on which the patient lies with

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 adherica, there is no such endeavour towards a separation.

And, secondly, when there is an adhesion, and the parts are inflam'd, the action of respiration should, for the case 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

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 fide 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 Lessyness on the grants of respiration, p. 76, 77

tion. See his Lectures on the organs of respiration, p. 76, 77.

(c) 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 consirm'd thereby, or degenerates into a mortification; and the former does little service, the blood in the mean time showing more freely to the part affected, and the obstruction increasing with the inflammation. See Hossman, Med. rat. systemat. tom. quart. pars I. p. 435.

To this we shall subjoin an excellent remark of Dr Huxham's in relation to 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.

Sect. 6. the mttter being emptied into the cavity of the breaft, 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 heelic fever succeed, and the patient is destroyed by a consumption.

A plenrify [ometimes

3. Now tho' the pleurify proceeds from that peculiar symptoma- and specific inflammation of the blood, which usually produces it when 'tis a primary difeafe, yet it fometimes accidentally fucceeds other fevers, of whatever kind they be, occasioned by the fudden translation of the febrile matter to the pleura, or intercostal muscles (d). 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 confequently not fitted for a proper separation by the most convenient out-lets. But this evil is most frequently caused by an unseasonable use of such heating medicines, as are usually given by ladies of fashion to persons in low circumstances; whose charity, in the mean time, would be much better plac'd in feeding the necessitous than in curing their difeases. But this, it seems, they do, to raise sweat at the beginning of the disease, little dreaming of the ill confequences thence arifing. For nature, being hereby disturbed, is forced to expel the yet crude humours thro' the first passage that offers; whence the febrile matter is fometimes hurried violently to the meninges, and occasions a delirium, and sometimes to the pleura, and occasions a pleurify; especially when the age, conflitution of the patient, and the feason of the year, namely that between spring and

> (d) The inner furfaces of the ribs, and intercostal muscles, and diaphragm, and the whole external furfaces of the lungs and pericardium, are most exactly covered by the pleara; which is a finooth strong membrane stretched over, and lining the whole cavity of the breast, and forming by its duplicatures the mediastiwam, which divides the caviry 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 assisted 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 obvioud to perform the greater share in the action. the former will be obliged to perform the greater share in thea:tion of respiration. Id. p. 71, 72.

fummer, jointly concur thereto: for in that feafon fe- Chap. 3.

vers are apt to turn to pleurifies.

4. Now the colour of the blood that is taken away Remarks on in a pleurify, feems to flew that this difease arises from the blood in the fudden translation abovementioned, for at the fecond this diffembleeding at least, the blood, when cold, looks like melted per. tallow to a confiderable 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 tenacious fibrous fkin; and perhaps 'tis only the fanguineous fibres, which having loft their natural red covering by precipitation, have hardened into this whitish membrane 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 opened vein, but runs perpendicularly down along the fkin, it is frequently of another colour, which I confess I cannot account for, and fuch a bleeding is also less ferviceable. I have likewise observed that if blood, that is fresh drawn, be stirred about with the finger, the top will appear of a red florid colour as in any other difeafe, in what manner foever it flowed. But whatever be the appearance of the blood, this disease, tho' it has an evil 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.

5. Upon a thorough attention to all the various phe- Whence a nomena of a pleurify, I conceive it to be only a fever oc- pleurify, cafioned by a peculiar inflammation of the blood, where- and what it by nature throws off the peccant matter upon the aleuby nature throws off the peccant matter upon the pleura (e), and fometimes upon the lungs, whence a peri-

(e) A true pleurify is an inflammation of the blood, caus'd by a flagnation thereof in the minute vesiels of the bronchia, discovered a few years ago by the celebrated Ruyschius, which serve only to the nutrition of the membranes, vehicles, and vehicles confituting the lungs. And therefore the lungs themselves are chiefly affected but only in their external surfaces. It is attended with greater difficulty in breathing, than the spurious, or bastard pleurist, along with a spitting of blood, and is terminated by expectoration. It is also join'd with a more acute sever, 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. pars 1ma, p. 427. In the spurious, or bastard pleurity, the pain in the side is very

acute

Sect. 6. pneumony arises (f); which, in my judgment, only differs of from a pleurify in degree, and in respect of the greater violence, and larger extent of the fame caufe.

6. In order, therefore, to cure this discase, I have the Intentions following ends in view (g); (1) to check the inflammation of cure in this difease.

> and pungent, and is increased by touching the part affected; the patient cannot eafily lie on the pained fide, 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 fiveat, or freer perspiration about the seventh day, and is nothing dangerous. Ibid.

Boerhsave observes that there are two kinds of pleurify, a dry and a moist one, whereof the latter is easily cured, but the former generally threatens death; whence it is necessary to distinguish them. The moist pleurist 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 pleurify, the spittle is thin, and comes from the throat, which is a light that the inflammatory matter is not to be expectorated.

See Prax. Med. pars 1vta, p. 164.

(f) A peripreumony is accompanied rather with a tenfive, obtufe and heavy pain, than an acute one, and extends to the back and shoulders; but the difficulty in breathing is greater than in a pleurify, and is also attended with anxiety, and a difficult expectoration of a various-coloured matter. For in this disease the velfels 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 congelation. Hence it is more dangerous, and eafily 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 before quoted, p. 428.

(g) 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 down the coagulation, and promoting the circulation; in order whereto these indications are to be answered. (1) All sarther inflammation and stagnation of the blood are to be prevented; (2) the lenter of the blood is to be diluted and diffolved; (3) the part affected, become tense by the fpasm, pain, and copious afflux of blood thereto, is to be softened and relax'd, so that the blood, stagnating therein, may be driven out by the arterious blood brought to it, and be again put in mo-tion; and lastly (4) the expectoration of the viscid, bloody and purulene matter, lodg'd in the bronchia, is to be promoted, and the

generation of an abicefs, and empyema prevented.

Bleeding is to be us'd, 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 fooner it is perform'd, the more beneficial it proves. Dilnents and discutients admirably affift in dissolving down and diluting the viscolity of the blood, for which purpose water gruel, or

of the blood, and (2) to make a revulsion of the inflamed Chap. 3. particles, fixed upon the pleura by proper evacuations.

Depending therefore chiefly on bleeding, as foon as I am The method called in, I order about ten ounces of blood to be drawn of cure spefrom the arm of the affected fide, and the following cified. draught to be taken immediately after the operation.

Take of distilled water of red poppies, four ounces; fal Accoling prunella, one dram; fyrup of violets an ounce; mix draught. them together for a draught.

At the fame time I prescribe the following emulsion.

Take seven blanched sweet almonds, the seeds of melons An emulsiand pumpkins, of each half an ounce; the feeds of on. 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.

Take of the common pectoral decoction, a quart; syrup Apectoral of violets and maidenhair, of each an ounce and half; apozem. mix them together for an apozem, of which let half a pint be taken three times a day.

barley water, sweeten'd 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 fill'd 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. Expectoration may be greatly promoted by the following linetus.

Take of fresh oil of sweet almonds, half an ounce; sperma ceti, two drams; saffron pulverized, ten grains; syrup of violets, and white sugar, of each an ounce and half: let a spoonful of this be taken often alone, or dissolved in a draught of water gruel, or whey, made warm.

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, swear, or stool must be carefully refrained. Opiates are bad in aged persons, and where the humours are thick, and the inflammation confiderable. Expectorating medicines are not to be exhibited in the beginning, nor till the matter is concocted, vifcous, moveable, and fit for excretion; otherwise a greater flow of humours to the lungs will be occasioned. See Hoffman, Med. rat. lyst. tom. quart. pars 1ma de feb. pneumon. sparsim.

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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 lincius, according to the rules of art.--- A small quantity of this is to be swallowed leisurely often in a day.

Fresh oil of fweet almonds alone, or linfeed-oil, is also

frequently used with great advantage.

The regi-

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, forrel and liquorice roots, &c. boiled in water, and sometimes small beer. And I also prescribe the following liniment.

An emollient liniment. Take of oil of sweet almonds, two sunces; 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.

I direct the abovementioned remedies to be continued

the diftemper throughout.

Bleeding how to be performed.

8. On the day I am first called, if the pain be extremely acute, I order the fame quantity of blood to be again taken away; if the case be otherwise, the next day, and the third; and if the pain and other fymptoms rage feverely, I bleed in this manner four days fuccessively. But if either (1) the difease be less violent and dangerous, or (2) repeated bleeding at fuch fhort intervals be contraindicated by the weakness of the patient; then, bleeding having been twice performed, I interpose a day or two between every fubfequent operation. In this case I make the contraindications the rule of my procedure; on the one hand estimating the violence of the difease, and on the other the weakness of the patient. And tho' in the cure of diseases I would always be fuffered to take away more or less blood, in proportion to the demand, yet I have feldom known a confirmed pleurify cured in grown perfons without the lofs of about forty ounces of blood. In children, however, 'tis generally fufficient to bleed once or twice. Nor does a loofeness, which sometimes happens, obstruct the abovementioned repeated bleeding; for in reality it may foon be stop'd thereby, without exhibiting astringents.

9. I either refrain from glysters entirely, or order only Chap. 3. fimple ones of milk and fugar, and take care to have them injected at as great a distance between the bleedings as possible.

10. To prevent the patient's being over-heated du- The patient ring the continuance of the diftemper, I allow him to fit to fit up up a few hours every day, as his strength will permit; some hours which indeed is of fuch moment here, that if he be kept every day. always in bed, neither the plentiful evacuation of blood, nor the most cooling remedies will fometimes at all avail in conquering the fymptoms above specified.

11. Immediately after the last bleeding, and some- Aparge times before, all the fymptoms abate, and the patient when to be recovers his former strength soon after, when it is proper given. to give fome gentle purgative. And he should be debarr'd for fome days longer from gross foods, and all kinds

of fpirituous liquors,

12. But if it be faid here that our method is defective, Why expecbecause we are so far from treating amply of the means toration is of promoting expectoration, in the different stages of the not treated difease, that we scarce mention them; we reply, that ofthis has not been omitted thro' negligence, but purpofely, after mature confideration, as having always judged those to be in great danger who trusted the cure of this difease to expectoration. For, not to mention the tediousness of this method, by which nature endeavours to expel the morbific matter, 'tis likewife unfafe; for it often happens that part of the matter being concocted, and perhaps expectorated, the remainder continues yet crude, and this fuccessively; the most powerfully expectorating medicines having been ineffectually us'd. For fometimes expectoration goes on very well, and at others is quite stopt, the patient, in the mean time, being on all fides endangered, and as I have no power at all over expectoration, it remains uncertain whether the diftemper will terminate in his recovery or death. Whereas, on the contrary, by bleeding, the morbific Advanmatter is brought under my regulation, and the orifice tages of of the opened vein may be made to supply the function bleeding. of the wind-pipe (h). Moreover, I fcruple not to affirm

(b) To endeavour to promote expectoration in a fimple pleurify is abfurd. Nothing does fo much fervice here as timely, copious and frequent bleeding, along with diluting and emollient liquors,

al armini

Sect. 6. that this difease, which is justly reckoned amongst the most fatal when treated according to the method we have condemn'd, may be cured with as much certainty and fafety as any other difease, by the method just laid down, not to mention the fhort time wherein the cure is compleated: nor have I ever known a person in the least injur'd by the loss of so large a quantity of blood, which the unfkilful feem to apprehend (i).

freely, for these dilute and feed the blood, whilst they relax the too rigd fibres, and at length refolve the coagulated humours; especially if nitre and camphire be taken in a proper manner, with which opium may be conveniently mixt between whiles, to ease the vehemence of the pain. For opium is also a powerful re-laxer, and is therefore very ferviceable 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 fediment in the urine is frequently observed after the use thereof.

In reality a true pleurify no more requires pettorals, linetus, and the like, than an inflammation of the leg, or the gout itself: much more fervice is done here by proper fomentations, which frequently relieve the pain, and conquer the difeafe. --- Moreover in a sharp and obstinate pain, the application of cupping-glasses, and scarifications prove highly beneficial, when every thing befides avails little. And in case the distemper be very violent blisters are sometimes applied. See Huxham de Aere & Mirb.

epid. p. 64. 65.

(i) The general method of cure in those fevers, which are attended with disorders in the organs of respiration, is so judiciously laid down in a fummary way by Dr Hoadley, that I must willingly take this occasion of transcribing the whole of what relates thereto; as well to supply any deficiency of our author, as to spread those admirable directions farther, and by this means render them more univerfally beneficial.

Whenever a physician, fays 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 fide, cough, difficulty in breathing, or any other of the symptoms, which show the organs of respiration are difordered; he is diligently to inquire into the rise of the whole disease, and carefully to examine into every. complaint, in order to form a judgment, whether the diforders 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 the 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 thecure of the fever.

And as it is known by experience, that there is a great variety in fevers; that fome will not abate, but rather grow worfe, on bleeding, whilft others will hardly yield to any method without frequent repetitions of it; that some will be greatly increased by

13. I have indeed frequently endeavoured to discover Chap. 3. fome other method that might prove equally effectual, without bleeding fo copiously; viz. either (1) by refol-

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 fome will not bear even the gentleft opening phyfick, without a very dangerous loofeness following upon it, whilst others visibly increase, unless the body be kept open by the daily ule of glysters, or small doses of rhubarb; that some will give way at once, as it were to a charm, on the application of blifters, 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 fubmit 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 phylician, 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 blifters.

This I am fensible 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 purfue: but I make no doubt that there may be some figns pointed out, by which we. may at least be directed, when to defift from too obstinate a pur-

fuit of any of them.

For tho' it be confess'd to be difficult for us to determine of what fort the fever is, which attends a pleurily, (for example) fo foon as the violence of the pain, and the danger of the difease requires 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 fecond fleps in the same method; viz. they will 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 fide, and difficulty in breathing continue as violent as ever, or nearly fo; 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 defift.

I have instanced particularly in bleeding, because it is universally allow'd 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 itlelf affords us an opportunity of examining into the alterations which

Sect. 6. ving the humour, or (2) by expelling it by expectoration; but have not hitherto found one of equal efficacy with that above delivered; whereby (notwithstanding the fa-

> 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 affift us in determin-

> ing, 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 ferum, or very fizy; bleeding is evidently to be repeated even to the fourth time, if the symptoms require ir, and the cool emollient method to be purfued : and towards the decline of the inflammation, if the continuance of the pain demands it, blifters may be applied, and generally answer their defign.

> But if the patient is of a weak and low habit of body; if his ftrength and spirits slag, 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, fuch as attacks upon the brain, fyncopes, Oc. and we ought to defift, as was faid before.

> In these cases the blood is generally of one, or other of these very different kinds: it is either very fizy, or has all its parts broken, diffolved and blended together, and what little craffamentum there is, breaks upon the flightest touch, and mixes with the reft.

> In the first case, a free use of the volatile salt, or spirit of harts. born, the volatile salt of amber, or such like, repeated every fix, four, or three hours, as occasion requires, together with warm medicines, are of the greatest service, and sometimes give almost immediate relief. Blitters too may in this case be applied at the very first finking of the pulse and spirits, as they answer the fame intention with the other volatile falts. It feems to be from cases of this kind that goats blood, and horse dung, merely as containing volatile falts, or spirits, have gain'd their reputation for the cure of pleurifies.

> In the other case, neither blisters, nor the volatile salts, seem to afford fo much relief to the patient, as large quantities of acids; fuch as diffill'd vinegar: together with the warm cordial medicines, as mithridate, confect. RALEIGH, &c. At the fame time, a whey made with the aqua theriacalis is a very furtable and beneficial drink for conftant 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 diforders in breathing, in these acute discases: but not with a design thar 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 vary'd, as the symptoms may re-

> But that I may not be thought to have advanced what I have faid of the different method of treating thefe fevers, merely on

tal prognostic Hippocrates hath left us concerning a dry Chap. 3. pleurify) I recover the patient without waiting for expectoration.

my own authority, and as the refult only of my own observation, I shall transcribe a sew 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 pleurifies, by quick repetitions of bleeding in large quantities, should not be purfued.

Here the quotation is inferted, as taken from Seet. 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 medica, which I shall transcribe likewise, and then conclude.

The passage translated is as follows:

The paliage translated is as follows:

"These particulars are farther verified by a sever of a certain

kind, which has prov'd very fatal of late years to the common people of this nation, and ordinarily prevail'd sometimes

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 foreshew'd: but these remitting, 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 oppression in the precordia, and a "breathing, with a great oppression in the pracordia, 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 ftraw colour. Obstinate watchings continued the di-" stemper throughout, but the parient 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 after-" wards the cough became more frequent and lafting, the matter " being more copious and tougher, till the difease was terminat-" ed either by a very plentiful expectoration, or the patient was " fuff-cated by a very viscous phiegm, remaining in the lungs: " which generally happened before the ninth day, feldom later, " and often fooner; especially if bleeding had been unseasonably re-" peated. Very few, except robust and plethoric young persons, " were observed to bear bleeding without inconvenience; but in "fuch, bleeding twice, and fometimes thrice, in the first days of the disease, did service: but in others bleeding was either wholly to be refrained, or to be perform'd only within a few hours of the attack; and tho' in a small quantity, it proved to " be highly dangerous, unless an emetic was foon given, and foi-" low'd by the continued use of expectorating medicines. For "the difease was of such a nature that, except in plethoric per"fons, 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 per"fons who were not plethoric generally stopt expectoration, and " occalion'd a very difficult respiration, with a rattling in the throat; and observation show'd that the oftner it was repeated, organic of respirations from p. 105 to the conclusion.

Sect. 6.

The tendon fometimes prick'd by bleeding.

How this accident is to be reme-died.

14. But as the cure of this difease 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.

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 fo 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 fwell much, the tumor not exceeding a hazel-nut; but an aqueous humour, or ichor, continually flows from the orifice, which in reality is efteemed the principal fign fo

" the more all the fymptoms were increas'd, 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 severs 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 sever, 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 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 severs in general, as well as those in particular which are attended with disorders in the organs of respiration; and because they are every where lest 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 physick 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 lessures on the organs of respiration, from p. 105 to the conclusion.

a punctured tendon. I have known it cured by the Chap. 3. following application.

Take of the roots of white lillies, four ounces; boil them An emollitill they become foft in a quart of milk; then take out- ent cutameal and linfeed flower, of each three ounces; boil them Plajm. to the consistence of a cataplasm in enough of the milk, strained from the white lilly roots, and having bruifed the roots, mix them therewith for a cataplasm, to be applied hot every morning and night to the part affected(k).

CHAP.

(k) As a puncture of the tendon will not always yield to this fimple application, and is attended with other fymptoms belides

thole 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 figns. (1) The patient feels so acute a pain, in the moment of the puncture, that he can scarce refrain from crying out aloud, especially if it continues; (2) this is soon succeeded by a tumor, inflammation, spassms, 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

The best method of curing this accident seems to be that which Ambrose Parey relates he formerly us'd with success in the cure of Charles the 9th king of France. For after the king had fignified 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 cover'd with a pl. i ter, of EMPLASTRUM DIACHALCI-TEOS, or the vitriol plaifter, let down with vinegar and oil of roses, over which the expulsive bandage was applied. Lastly, to compleat the cure, the following cataplasm was carefully applied to the arm, till the pain went off entirely.

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 lather to the confistence of a cataplasm.

Tho' the arm continued disordered in its natural motion for near

three months, yet by degrees it recovered its former strength.

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 laid over it, till the pain abates. Simple diachylon, or simple red lead plaister, may be substituted for the vitriol 242

Of a Bastard Peripneumony.

Sect. 6.

#### CHAP. IV.

# Of a Bastard Peripneumony.

Rife of a battard pe-

A Fever, attended with feveral peripneumonic fymptoms arifes 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, 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 passage of the lungs, and the sever wastes the mass of blood (a).

vitriel plaisser. But the greatest caution must always be had here, not to leave the wound uncovered, whilst these dressings are preparing. Some fort of plaister, therefore, whatever it be, should be immediately applied, and the whole arm wrapt round with compresses of linnen moistened in experate. For by this means the instammation is not only prevented, or mitigated, but the wound may be desended from the external air, or other pernicious matters. But in persons who are full of blood and juices, 'tis proper, to prevent the instammation and other threatning accidents, to take away a large quantity of blood immediately from any other limb. Scultetus, in his 47th 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 cut across some nerves wounded in this manner, with success. See Instit. chirurg. Laur. Heist. p. 11. Sect. I. Chap. XI.

(a) Not many have wrote of the bastard peripneumony, and it

(a) Not many have wrote of the bastard peripneumony, and it was known distinctly by sew except our author; others having treated of it under the name of a catarrh.

The body is appreffed with fat and phlegm during the cold, or winter feafon, but upon the approach of heat in the fpring and fummer feafon, there fucceeds a fudden folution of the humours, which are mix'd in the veins, and carried to the right ventricle of the heart, and to the lungs, whence the lungs are furcharg'd with cold and pituitous, but not inflammatory blood; and hence a peripneumony always arises after severe cold weather in the spring.

Heat dissolves the fat, which being afterwards mix'd with the blood, and carried to the lungs, is obstructed in the ramifications

2. At the beginning of the fever, (1) the patient Chap. 4. grows hot and cold alternately, (2) is giddy, and (3) complains of an acute pain in the head when the cough Its fimis most troublesome; (4) he vomits up all liquids, proms enufometimes with, and at others times without cough merated. ing; (5) the urine is turbid, and intenfely red; (6) the blood taken away refembles pleuritic blood; (7) he breathes quick, and with difficulty: if he be advis'd to cough, his head achs, as if it would burft, for fo the patient generally expresses himself; (8) a pain of the whole breaft accompanies the difeafe, and(9) a wheezing is heard by the attendants whenever the patient coughs, the lungs not being fufficiently dilated, fo that the vital pallages feem to be closed by the fwelling; whence the circulation is fo intercepted, that there are no figns of a fever, especially in gross habits; tho' this may likewise happen from the abundance of the phlegmatic matter, whereby the blood is fo furcharged, that it cannot rife to a perfect ebullition.

3. In order to the cure of this fever, I judge it proper, Intentions (I) to take away that blood which inflames the lungs, of cure to be and endangers suffication; (2) to open and cool the lungs answered. 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 feem to indicate frequently repeated bleeding; yet, on the other hand, I learnt, from the most accurate observation, that this practice prov'd 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 fubflituted, where the patient hath an aversion to copious and frequent bleeding (b).

4. Accordingly I proceeded in the following manner; The method I directed bleeding in the arm in bed, and forbid the pa- of cure partient to rife till two or three hours afterwards; because ticularized. bleeding, which in fome meafure weakens the whole

of the pulmonic artery; and hence proceeds the cause of a peripneumony from humours collected in the body during the winter, and alterwards mixt with the blood. See Boerhaave, Prax. Med. Vol. IV. de Perip. notha.

(b) Boerhaave advises only a fingle bleeding: but highly exto's laxative glysters, bathing, and blistering. ib.

Sect. 6. body, may by this means be more eafily borne; for the patient can better bear to have ten ounces taken away in bed, than fix or feven when he fits up. The following day I give this purging draught in the morning.

A purging draught.

The regi-

men.

Take of fresh pulp of cassia, an ounce; liquorice root two drams; three 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 solutive syrup of roses: mix the whole for a purging draught.

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 fmall beer, if he defires it.

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 pleurify, with this difference only, that a peripneumony does more univerfally affect the lungs. And indeed both diftempers are cured by the fame method, namely by bleeding chiefly, and cooling medicines.

Wherein

differs from a dry afthma.

7. Tho' the bastard peripneumony in some measure rethe disorder fembles the dry afthma, both in the difficulty of breathing, and fome other fymptoms, yet 'tis fufficiently diffinguifhed from it, as being attended with manifest figns of a fever and inflammation, which never appear in the dry afthma; but they are much less considerable and apparent in the bastard peripneumony than in the true peripneu-

> 8. It must be carefully remarked, that when this difeafe attacks fuch as have been great drinkers of brandy and other like spirituous liquors, it is by no means safe to quit them of a fudden, but they must be left off gradu-

ally;

ally; for so sudden a change makes way for a dropsy: Chap.4. and this should be made a standing rule in all other difeafes arifing from the fame caufe. 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 occafion a stupefaction; or that it was totally prohibited to use it internally, and only allowed to be applied externally by furgeons in fomentations, to digest ulcers, or to heal burns. For, in the last case, it excells all other ap- Spirits of plications hitherto known, as it preserves the cutis from wine excelputrefaction, and on this account speedily finishes the lent in cure, without waiting for digestion, which runs thro' burns. its frages very flowly. 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 (c).

### CHAP. V.

## Of the Rheumatism.

His difease happens at any time, but especially in Autumn, and chiefly affects fuch as are in the matifm vigour of life. 'Tis generally occasioned by exposing how caused, 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 fucceeded (2) by heat, restlessness, thirst, and the other concomitants of a fever; (3) in a day or two, and fometimes fooner, there arifes an acute pain in fome one or other of the limbs, especially in the wrists, shoulders and knees; which, fhifting between whiles, affects these parts alternately, leaving a redness and swelling in the part last

The rheuand when it arifes. Its (ym=

(c) 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 exy-crate 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 likewife prevents the rife of blifters, and other bad symptoms. See Heift. Institut. chirurg. P. I. lib. iv. Chap. XV. p. 331.

Sect. 6. affected. (4) In the beginning of the illness the fever and the abovementioned fymptoms do fometimes come together; but the fever goes off gradually, whilft the pain continues, and fometimes 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, fufficiently thews.

Often taken forthe gout.

A Aubborn but not a dangerous di ease.

2. This difeafe, when unattended with a fever, is frequently taken for the gout; tho' it differs effentially therefrom, as will eafily appear to those that are thoroughly acquainted with both diseases; and hence it is perhaps that phyfical authors have not mentioned it, unless indeed we esteem it a new disease (a). But however this be, it is at prefent very frequent, and tho' when the fever is gone off, it feldom proves fatal, yet the violence of the pain, and itslong continuance, render it no contemptible disease. For, in case of wrong management, it frequently remains not only feveral months, but some years, nay even during life; tho' in this case it is not equally painful, but has its periodical returns, like the gout; and the pain may possibly go off spontaneouf. ly 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 contractel inwards, with stony concretions as in the gout, which rather appear in the internal parts of the fingers than the external, whilst the appetite may be very good, and the general health not amifs.

(a) In the rheumatism the muscles, together with their common membrane, and tendons where they are inferted 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, inafmuch as they unite with the perioffeum, are more vehemently affected. But as in a beginning gout the pain is feated more in the furface of the ligaments; fo in an obstinate one, the vitiated humour, which occasions the pain, is more deeply feated, and possesses the space between the cavities of the joints in a greater degree. There is also this difference between the gout and rheumatism; the gout returns with greater frequency, gives more pain, continues longer, and is harder to be cur'd; but the rheumatism sometimes seizes a person only once or twice during his life, and does not laft fo long, and is more easily cured. The pain likewise often differs in the two diseases; for in the rheumatism 'tis more tensive, heavy, join'd with cold, without any remarkable tumor and redness; but in the gout it is tearing, pungent, and as it were threatens the burfting of the part affected, which appears to be much swell'd and red.

3. There is another species of this disease, tho' tis Chap. 5. not generally esteemed of this kind, which may properly be called a rheumatic lumbago. It is a violent fixt Another pain of the loins, reaching fometimes to the os facrum, species of and refembling a nephritic paroxyfm; only the patient shis difeale. does not vomit. For, besides the intolerable pain near the kidneys, the whole conduit of the ureters, even to the bladder, is fometimes affected with the fame, tho' in a less degree. And I have been formerly led into an error hereby, as imagining it to arife from fome gravel lodged in those, parts; whereas, in reality, it proceeds from the peccant and inflamed matter of the rheumatifm, which affects only those parts, leaving the rest of the body free. Unless this acute pain be removed in the fame manner as the former species, it continues as long, and proves equally violent; fo that the patient cannot lie in bed, but is forced either to leave it, or fit upright therein, and be perpetually moving his body backwards and forwards.

4. Since both the kinds of this difease seem to arise Both the from inflammation, as appears from their concomitants kinds caufjust mentioned, and especially by the colour of the blood ed by intaken away, which exactly refembles that of persons in flammation. a pleurify, which is univerfally allowed to be an inflammatory difease; 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 incraffating

medicines, along with a proper regimen (b).

5. Accordingly as foon as I am called, I direct ten How to be ounces of blood to be immediately taken away from the treated. arm of the fide affected, and prescribe a cooling and incraffating julap, nearly after the following manner.

(b) In order to the cure of this diftemper, we are to confider whether it be recent, and proceeds from a fulness of blood, or whether it has been of fome standing, and proceeds from a collection of foul ferum; and according to these circumstances our in-

dications 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.

Mild diaphoretics, mix'd with nitre, given frequently in moderate doses, do singular service in both cases: gentle laxatives are alfo extremely proper; and warm bathing in the decline of the disease. - In the cold rheumatism nothing excells blistering. Oplares are necessary if the pain be very violent.

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Sect. 6.

A cooling julap.

Take of the distilled waters of lettice, pursain, 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.

The regi-

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 (c). With respect to diet, I enjoin a total abstinence from slesh, and even the thinnest slesh 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. boilded 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 augments the disease.

Bleeding how often to be used.

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 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 frequent 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,

Inconveniencies attending the use of opiates.

(c) The following liniment from Hoffman, with little variation, is preferable for this purpose.

Take of hungary water, two ounces; balfam of Peru, two drams; old Venice treacle, a dram; let them infuse together for some time; then strain off the tineture, to which add tineture of saffron and castor, of each two drams; oil of nutmegs, half a scruple; camphire, a dram: mix them together, and anoint the parts affected frequently therewith.

But if there remains a stiffness and numbness of the part, occasioned by the long continuance of the pain, the following liniment has been frequently found to do admirable service.

Take of human fat, two ounces; balfam of Peru, and oil of cloves, two drams: mix them together, to be us'd as the former.

Med. rat. System. tom. iv. pars 2da, p. 444.

bleeding, I judge it highly necessary to refrain from Chap 5. opiates, because the disease is fixed thereby, and does not yield fo readily to bleeding, fo that where fuch medicines are given too frequently, bleeding must in confequence be oftner repeated than is otherwise necesfary. Befides, in the height of the difease, they do not answer the expectations we have conceived of them.

7. Whilst the abovementioned remedies and regimen are carefully continued, I inject glyfters made of milk and fugar, between times, on the intermediate days of bleeding; earnestly recommending the exact observance of these directions, for at least eight days after the last bleeding; and then I prescribe a gentle Purging purging potion to be taken in the morning, and in the when proevening a large dose of syrup of white poppies in cowslip- per. 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 confiderable time, from wine and all spirituous liquors, salt or high seasoned flesh, and in general from all food of difficult digestion.

8. After having repeated bleeding, as above specified, the pain is greatly abated, tho' it does not go quite off; but as foon as the strength returns, which bleeding had greatly impaired, the fymptoms will vanish, and the patient recover perfectly, especially upon the approach of the following feafon of the year, which will be more conducive to recruit the strength, than that

wherein he was first attacked with the disease.

9. But the this, or a fimilar method, feafonably us'd Mischiess of in the beginning of the difease, does generally prove a contrary fuccessful; yet it frequently happens, when the cure is method. attempted by a contrary procedure, that the patient is feverely afflicted during life with flying pains, which are fometimes violent, and at others more gentle; whereby the unskilful are easily deceiv'd, and they are commonly reckoned fymptoms of the fcurvy. And here by the way, to speak my sentiments freely, I shall add, The scurvy that the' I do not at all doubt that the scuroy is to be less common met with in these northern countries, yet I am per- than it is fuaded it is not so frequent as it is generally supposed to supposed to be; for most of those disorders we term scorbutic, are be.

Sect. 6. the effects of difeases going to be produc'd, but not vet existing, as not having hitherto assumed a certain form of appearance; or they are the remains of fome difeafe imperfectly cured, whereby the blood and juices are vitiated. Thus, for instance, in those bodies wherein a matter fuited to produce the gout is newly generated, but not yet thrown upon the joints, there appear various fymptoms, which occasion us to suspect the scurvy, till the formation and actual appearance of the gout

remove all doubt concerning the diftemper.

10. Neither are we ignorant that as many fymptoms, refembling the fcurvy, afflict gouty persons after the fit of the gout is over; namely, when an unfeafonable use of evacuations, or the advanced age of the patient, or fome other cause hath obstructed nature, so as to have render'd her unable to throw off all the gouty matter upon the joints; which being retained, and yet of no ule, 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 dropfy. Tho' tis proverbially faid, that where the scurvy ends, the dropfy begins; yet this maxim is only to be understood in this fense, that as soon as the dropsy shews itself by manifest figns, the preconceived opinion of the scurvy falls to the ground. And the fame may be maintained of feveral other chronic difeases, which are either yet growing in the body, and accordingly have not affumed 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 univerfally, and comprize most diseases. Whereas if we make an accurate fearch into the fecret causes of every disease, and strip it of the difguife of those irregular symptoms which ferve to conceal it, we shall foon discover its species, and eafily reduce it to its proper class. Moreover, the method whereby these diseases are to be cured, must not be fuited to those irregular symptoms, but to the individual difeafe; of whatever kind it be, as if it were perfectly formed, and actually existed.

11. But 'tis here to be observed, that when the rheumatism hath taken deep root by a continuance of some years, 'tis improper to repeat bleeding at fuch fhort intervals, as in the beginning of the difease; and better

Frequent bleeding improper in an inveterate rheumatism.

to interpose some weeks between the operations. By Chap. 5. this means the morbific matter will either be quite expelled, or at least in fo great a degree, that the remains of it may be carried off entirely, by an iffue made in one of the legs, and exhibiting a proper quantity of fome volatile fpirit every morning and evening in canary.

12. But the there is a remarkable difference between Ascorbutic the true rheumatism and the scurvy, as intimated above, rheumait must nevertheless be owned that there is another tism. fpecies of the rheumatism, which is near a-kin to the feurvy; for it refembles it in its capital fymptoms, and requires nearly the fame method of cure; and therefore I call it a fcorbutic rheumatism (d). The pain sometimes affects one and fometimes 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 fymptoms: fometimes it affects one limb and fometimes another, fometimes it only attacks the internal parts, and causes fickness, which goes off again upon the return of the pain of the external parts. In this manner the patient is alternately afflicted, and the difease proves of long duration, like those distempers which are esteem'd most chronic. It chiefly attacks the female fex, and men of weak conflitutions; fo 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.

13. Such likewise as have gone thro' a long course of the Perusian 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 diseafe, whether it proceeds from this or any other cause, is eafily conquered by the use of the following reme-

(d) Hoffman also observes that there is a scorbutic rheumatism, in which the whole mass of the lymph and terum is vitiated with foul, excrementicious, fulphureous, faline, sharp particles, which occationally manifest themselves by different kinds of eruptions; it proceeds from unwholesome, hard, falt diet, an idle and sedentary life, the common use of a heavy, vapid air, and long continued grief; and hence the inhabitants of fea-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 milk, along with a convenient regimen, are likewise of great officacy in curing this species of the disease.

Sect. 6. dies, which I should have concealed had I not prefer'd 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 difill dwater.

The scorbutic water. Take of garden scurvy-grass, eight handfuls; of water-cresses, brook-lime, sage and mint, each four handfuls: the peel of six oranges; nutmegs bruis'd, half an ounce; insuse them in six quarts of mum, and draw off only three quarts for use, in a common still.

The dose of the compound powder of wake-robin must by no means be diminished.

#### C H A P. VI.

# Of the erysipelatous Fever.

When the eryfipelatous fever arifes, and whom it chiefly affects.

I. THIS difease 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 (a). (1) The face swells of a sudden, with great pain

(a) 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 press'd with the singer, it whitens remarkably; but upon taking off the singer, becomes red, as before. It oftenest attacks the arms and seet, 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 selt in burning severs: and hence it is call'd both by the ancients, and the people of the lower Saxony, ignis sacer, or St Anthonie's fire.

It proceeds from the same causes as all other inflammations: but chiefly from sudden cold succeeding a great heat or sweat;

pain and redness, and (2) abundance of small pimples Chap. 6. appear, which, upon the increase of the inflammation, often rife up into small blisters, and spread considerably Its symover the forehead and head, the eyes in the mean time proms. 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 ftings of bees, or wasps, excepting only that there are pustules. And these are the figns of the common and most remarkable species of the erysipelas.

2. But whatever part is affected by this difease, and at whatever time of the year it comes, a chilness and fhivering, unless they preceded a day or two before, as it fometime happens, generally attend this inflammation, with thirst, restlesness, and other signs of a fever. As the fever in the beginning occasioned the pain, fwelling, and other fymptoms, (which increasing daily sometimes terminate in a gangrene) fo in the course of the difease, these symptoms greatly conduce to the increase of the fever, till both are taken off by proper remedies.

3. There is another species of this disease, tho' it Another happens less frequently. This attacks at any time of species of the year, and is mostly owing to too free an use of sub- an erysipetile attenuating wines, or fome fimilar spirituous liquor. It begins with a flight fever, which is immediately fuc- Its symceeded by an eruption of pustules, almost over the proms. whole body, refembling those occasioned by the stinging of nettles, and fometimes they rife up into blifters, and foon after disappear, and lie concealed under the fkin, where they cause an intolerable itching, and after gentle fcratching come out anew (b).

obstructed perspiration; drinking too strong liquors, and surcharging 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. I. Lib. IV. Cap. VI. p. 290.

(b) Practitioners generally divide the eryfipelas 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 feated in the furface 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 eafily 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

Sect. 6. The cryfipelas how to be treated.

4. In order to the cure I conceive (1) that the peccant matter, which is mix'd with the blood, must be evacuated in a proper manner, (2) the ebullition of the

more dangerous, often proves of long continuance, and difficultly admits of being healed. Moreover the erysipelatous fever is sometimes idiopathic, or an original disease; sometimes symptomatic, and a fecondary disease. A symptomatic erysipelas likewise frequently succeeds an anasarca, the ascites, and an inveterate yellow and black jaundice, and fuddenly destroys the patient. It is also often complicated with wounds of the nervous parts, especially of the cranium and its membranes, and tractures of the bones, in which cases there is danger. Hoff. Med. rat. Syst. tom. iv.

par. 1ms p. 304, 305. Under the same head he observes, with respect to the prognoflic; that when the eryspelas 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 remedics, the swelling sinks by degrees in a day or two, the heat and pain vanish, the rosy colour is chang'd into a yellow, the cuticula burits, and scales off, and the disease is happily terminated. Moreover it fometimes exhibits a manifest mark of health; other discases, especially a convulsive assima, and a convulsive colic, having been taken off by an eryfipelas succeeding them. But where it is large, deeply feated, in a remarkably feul habit of body, and attacks an exquilitely fentible part, 'tis 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 discuss'd, but suppurates, and causes ulcers of a bad kind, fiftulas, and a gangrene. In foul habits, and in fuch as are partly fanguine and partly phlegmatic, the eryfipelas 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 remov'd. But those who die of this disease, generally perish by a fever, which is mostly join'd with a difficulty of breathing, sometimes with a delirium, sometimes with drowsiness, and death generally happens within the feventh day.

It is render'd 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 tollowed. Bleeding likewise has

of the fromach, and death have followed. Bleeding likewise has fometimes struck it in, and render'd it wandering with much greater inconvenience. I have also observed that after being repell'd in the leg, by a topic made of camphire, red lead, and bole, it has been succeeded by a high sever, 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 eryspelas had been invited back to its former seat by a blifter, and antispalmodies and mild sudorifies given inwardly. And I certainly know that an erysizelas of the head, having been treated by repellent, cooling, binding, or too spirituous applications, and camphorated liniments, has brought on a vertigo, lethargic different contracts which orders, a quinfey, delirium, and a palfy of the tongue; which

blood check'd by cooling remedies, and laftly (3) that Chap.6. the matter thrown out and fixt upon the skin be diffcuffed (c). To answer these purposes, as soon as I am

evils have frequently prov'd 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. xx111.

(c) The intentions of cure, according to Hoffman, are, (1) by no means to depress the fever, unless it be to high, and if too low, to raise it; (2) to fosten the subtile, caustic matter lodg'd in the nervous parts; and (3) to refolve the inflammatory stagnation of the putrid and caustic lymph in the external parts, and

make way for its perfect expulsion.

'Tis a standing rule in practice, he observes, that in acute and eruptive fevers, the body is always to be kept in a gentle breathing fweat, that so an equable motion of the blood may be continued to the furface thereof, and the excrementitious matter continually carried with it, expell'd. Hence this is likewife 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 miti-

gated, and the discussion powerfully promoted.

The utmost caution is requir'd in the use of externals, to prevent their doing mischief, either by striking in the erysipelas, or changing it to an ulcer. Befides, as most persons have a peculiar idiolyncrafy, or a certain specific and individual fensibility, which principally prevails in the skin, as a nervous part; fo for this reason also greater circumspection is requir'd 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 an innocent 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 fafest to apply only paregoric species, made of flowers of camomile, elder, and melilot, liquorice root, and bean flower, 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 feems to extend to the periosteum, the erysis elas tends to suppuration. Then, therefore, we are to have recourse to such things as promote suppuration, yet so as at the time to check the putrelactive corruption. Simple diachylon, with an addition of a fufficient quantity of camphire and saffron, or Barbette's lead plaister with foro, covering it with balfamic 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 left the abfeefs, especially in glandulous places, should, after the discharge of the matter, degenerate into a fistulous and malignant Sect. 6. call'd, I direct a fufficient quantity of blood to be taken away from the arm, which generally refembles the blood of pleurities. The next day I give my common purging potion, and exhibit a paregoric draught at bedtime, in case it has operated briskly, e. g. syrup of white poppies in cowship flower water, or fomething of the fame kind. After purging, I order the part affected to be fomented with the following fomentation.

The emollimt fotus.

Take of the roots of marshmallows and lillies, each two 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 leffer centaury, of each one handful; linseed and fenugreek seed, each

malignant ulcer, a balfamic liquor should be injected, made of

when the erysipelas is very large, and deeply scated, 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 putters with a small quantity of compliance. trefaction, especially nitre, with a small quantity of camphire, spirituous and strengthening externals, made of lime-water, camphorated spirit of wine, wine vinegar with litharge, mix'd also with effence of foordium, and myrrh, are frequently to be applied to the part affected, pieces of linnen feveral times doubled being dipt therein.

Bleeding in the erysipelas is fometimes hurtful, fomttimes ferviceable. If an eryfipelatous fever attacks plethoric persons, or fuch as are accustom'd 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 'tis 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 scorbatic erysipelas, of long standing, such medicines as survive the blood gentle layatives, and sudorifice are to be used.

purify the blood, gentle laxatives, and fudorifics are to be us'd; purging at first for some days, and afterwards exhibiting sudorifics and diuretics for fome time, and repeating them alternately a number of times. And the patient's common drink should be a imoothing decoction, made of mucilaginous roots and woods, a-

long with bitters, especially succery and dandelion roots, and raisins.

To prevent the return of this disorder, which is dangerous; the best method is, after having prepar'd the body by bleeding, or laxatives, or both, as there is occasion, to go through a course of fome proper mineral water, under a convenient regimen. But where this cannot be complied with, bleeding, especially spring and autumn, feafonable purgation, and fuch medicines as cleanfe the blood, along with a proper regimen, as to diet, exercise, &c. are commodiously substituted in its stead.

half an ounce; boil them in enough water to leave Chap.6. three pints, strain off the liquor, and when 'tis used add two ounces of spirit of wine to every pint thereof. Let the part affected be somented twice a day, with soft stannels dipt in this somentation bot, and wrung out, and after somenting bathe it with the sollowing mixture.

Take of spirit of wine, half a pint; Venice treacle, The mixtwo ounces; long pepper and cloves, reduced to pow-ture. der, of each two drams; mix them together: cover the part affected with brown paper, moistened with

this mixture (d).

5. Moreover

(d) The present practice does not authorize so hot and siery a medicine in this case; nor, in the course of my reading, have I met with so warm a one prescrib'd 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 slowers of elder, liquorice root, prepar'd chalk, cerus, and myrrh, mix'd together in equal quantities, with the addition of a little camphire, to be applied warm to the par; included in blue, or blotting paper, or a piece of linnen. To this he adds Mynsicht's powder against the erysipelas, observing that 'tis not only frequently us'd by the apothecaries, but highly effectual. Amongst the liquid medicines he observes that camphorated spirit of wine, alone, or mix'd 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 faw an instance of as violent and extensive an eryspectas, as, perhaps, ever happened. The case was this—A middleaged person, of a hot and bilious constitution, and somewhat inclin'd to corpulency, having for fome time loft the use of his arm, from what cause I do not remember, was advis'd to apply a stimulating warm fomentation, and a warm nervous liniment thereto, in order to recover its motion. But foon after using these remedies, which avail'd not at all in relieving the complaint, an erysipelas arose in the part, and from thence gain'd one shoulder, and one fide of the face, and afterwards extended all over one fide 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 contriv'd, and a high fever with great thirst and restlesness accompanied the diforder; which however yielded, fooner than was expected, to repeated bleeding, gentle purging, diluting liquors drank freely, nitrous medicines, and emollient cataplasms, often renew'd, made chiefly of elder bark, boil'd in milk, with the addition of a small quantity of ointment of elder.

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The regimen.

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5. Moreover I order the patient to fup only barleybroth, water-gruel, and eat roaft apples, to drink fmall beer, and to refrain from bed fome hours every day. By this method the fever and other fymptoms are generally foon taken off; if not, I repeat bleeding, and fometimes 'tis necessary to bleed a third time, interposing a day between each operation, that is, if the blood be greatly vitiated, and the fever high. On the intermediate days of bleeding, I order glyfters made of milk and fyrup of violets, and cooling julaps made of the distilled water of water-lillies, &c. as delivered in the cure of the Rheumatism, to be used very often in a day. But a fingle 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 refembling the stinging of nettles; only, external applications are lefs necessary here.

Some other eruptive disorders require a different treatment.

6. I shall observe here, by the way, that tho' not only this difease, but the greater part of such as affect the skin, and are attended with some fort 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 foever repeated, nor testaceous powders exhibited, at all avail to fweeten the blood, when a noxious, recrementitious matter lies deep in the skin, and cannot be removed but by fuch remedies as ffrengthen the tone of the blood,

described.

The method and are confequently proper to open 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 fuccefs.

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; fyrup 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 fix spoonfuls of the following julap.

It was hoped that the confiderable inflammation, whichhappened here; would have rouz'd the natural heat of the arm, and in fome measure restor'd its former motion, but nevertheless it remain'd as motionless as ever.

Take of the distill'd water of carduus benedictus, fix Chap. 6. ounces; plague and treacle water, of each two ounces; fyrup of cloves, an ounce; mix them together. The cordial

7. The patient should sweat an hour or two every morning after taking the medicine, or rather promote a plentiful perspiration in bed, for the same space of time, by covering himfelf 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; The cleanspomatum, an ounce; flowers of fulphur, three drams; ing linioil of rhodium, half a scruple: mix them together ment. for a liniment.

But the medicines above prescribed must by no To be premeans be used before bleeding and purging have duly ceded by preceded; which, tho' they do not effect a cure when bleeding used alone, are however preventive of a fever, which and purgmight otherwise arise from the use of such hot me- ing. dicines.

8. There is another kind of eruption, tho' less frequent, wherein no evacuations avail. This, tho' it mon eruptifometimes appears in other parts, generally affects the on, and ics breaft, and fixes itself in some certain place; it rises care devery little, if at all, higher than the fkin, and appears forib'd. like a broad fpot, or a kind of branny fcurf, of a yellowish colour. Whilst this spot keeps out, the patient continues pretty well, but when it vanishes, as it frequently does, a flight fickness succeeds, the urine becomes more turbid, and of a deeper red, but fomewhat inclining to yellow. This disorder, after using general evacuations, is to be treated in the fame manner as the stubborn itch abovementioned; only it must be remember'd that the use of wine, and flesh of easy digestion, must by all means be indulg'd, all coolers being rather detrimental than ferviceable. 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 (e).

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(e) Amongst the peculiar kinds of the erysipelas, there is coe, which few of the moderns are acquainted with, and the ancients have also taken little notice of: it is called by Pliny, Zoster, and by

#### CHAP. VII.

## Of the Quinsey.

When the Quinley happens, and whom it chiefly attacks.

His difease 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 (a). It begins (1) with a chilness and shivering,

us Zona. It appears with dangerous fymptoms, and furrounds the body, just above the navel, like a girdle, and is generally several fingers broad, and attended with very violent hear, and an eruption of sharp pussules, burning like fire. It 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 soul habit of body, after a great loss of strength, and sometimes also in malignant and pestilential severs: 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 tieth 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 pracordia. It has been conquered in sources days, by mild diaphoretics taken internally, and pil of eggs applied to the part affected.

oil of eggs applied to the part affected.

(a) Hoffman defines this diforder, "an inflammation of the "throat, accompanied with a burning pain, swelling, redness, a "difficulty of breathing and swallowing, along with a fever, "arting 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 assumption, which are thirteen in numbers, the large and small glands of the tonsille, the muscles which move the jaws, and the fine ramifications of the blood, 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 ancient, 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 sever, and, in case it be very severe, a dis-

ing, (2) a fever fucceeds, and (3) immediately after a Chap. 7. pain and inflammation of the fauces, which, without fpeedy relief, hinder deglutition, and prevent breathing Its similar thro, proms.

ficulty both of breathing and fwallowing, and much danger accompany it. But the external species rather extends towards the eyes, and chiefly poffeffes the external mufcular and glandulous parts, the almonds, the root of the tongue, and the woula;

and is also more easily resolved.

The most violent and dangerous kind of the quinsey, particularly confidered, with respect to the part affected, is that which is feated 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 lois of speech is occasioned by the contraction of the larynx, but likewife a difficulty of respiration, and sometimes a total stoppage thereof, and in fo short time, that it has been often observed to prove mortal in twenty four hours, or on the third day. This species is called by the Grecians, 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 ancients parasynanche, but that which attacks those of the larynx, paracynanche.

'Tis 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 difeafe, 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 quinfey may be further divided into a dry and very burning one, and a moift or very mucous one. The former proceeds from the blood, and is joined with a very acute fever, as we remarked of the true quinfey; but the latter is rather chronic, attends cararrhal fevers, and is very common in cachectic and (corbutic habits, and furrs 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 · a sophagus, which is usually called, prunella alba; for in this the

Sect. 6. thro' the nofe, whence suffocation is endangered from the inflammation and tumour of the uvula, tonfilla, and larynx. This difease is extremely dangerous, and fometimes 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 tumult is not timely enough prevented by proper remedies.

The curative method delivered.

2. In order to the cure I immediately bleed plentifully in the arm, and prefently afterwards in the

tangue and all the parts of the throat are lin'd with a white mucus, the tongue is affected with painful fiffures, or chaps, and a great heat is also joined with it, which extends even to the precordia. This often happens in malignant fevers, and generally affords a bad prognostic, because it indicates an actual inflammation of the flomach and a fophagus. Nor is every inflammation of the throat a quinfey; but that only which is attended with a fever, and a difficult respiration and deglutition.

The quinfey is also frequently fymptomatic; for it happens in a diarrhoea and dyseatery, 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 peltilential 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 fome malignancy. This happens after a long run of moilt, rainy

weather, in fpring or autumn. With respect to the prognostic, this disease is very dangerous, both on account of its being frequently join'd with an acute fever, and endangering fuffocation; which latter is chiefly to be apprehended when the muscle called thyroarithmoideus, which is defigned to close the larynx, is affected therewith. It is a bad fign when the fwelling of the external parts fuddenly vanishes, the fymptoms rather increasing than abating at the same time; for the distemper then slies to some other nervous parts, and seizing the brain, occasions a delirium, with convulsions; or being tranflated to the lungs, causes a mortal peripneumony, as Hippocrates testifies in the 5th section of his aphorisms, the tenth aphorism. But when the troublesome suff cation remits, and the pain and reduces appear more outwardly, and vanish by degrees, it fore-shows that the disease will terminate happily. If otherwise, it degenerates into an imposthume, or threatens death. If into an imposthume, and the marter be discharged into the bronchia and lungs, the event is very precarious, as Forestus testifies, lib. 14. observ. xx iv. If it threatens death, this is portended by a frothing at the mouth, a confiderable swelling, and a dusky redness of the tongue, a coldness of the extremities, great contraction of the pracordia, and anxiety, along with a hard, convulfive, intermitting pulfe. A symptomatic quinfey is adjudged dangerous, and can feldom be conquered, by reason of the weak state of the body, and the virulence of the matter. See Hoffman, Med. rat. System, tom. 1v. p. 1. p. 389, ad 395.

veins under the tongue; and then I order the inflamed Chap.7. parts to be befmeared with honey of rojes, 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 fpit out; and this to be repeated between whiles.

Take of distilled waters of plantain, red roses, and frog- The gargaspawn, of each three ounces; three whites of eggs, rism. beat to a liquor; white fugar, three drams: mix them together for a gargarism.

I also order the emulsion described in the cure of the

pleurify, or the like, to be taken daily. 3. I bleed again in the arm the next morning, unless the fever and difficulty of fwallowing be in some meafure abated, in which case I give a gentle purge, much experience having taught me that this is highly neceffary and useful after bleeding. If the fever and other fymptoms threaten disturbance even after purging, which yet feldom happens, they are to be quieted by repeated bleeding, and applying a large and ftrong epispastic between the shoulders. During the whole course of the difease, a cooling and emollient glyster must be given every morning, except on the purging day.

4. I enjoin a total abstinence from slesh and broths The regimade thereof, allowing only barley-broth, water-gruel, men. roast apples, and the like for diet; and ptisan, or small beer, for drink. The patient must likewise fit up some hours every day; for the warmth of the bed increases the sever and its concomitants, which I endeavour to conquer by this method. 'Tis well worth observing, that the quinsey, which is only a symptom of a stationary fever, must be treated by the fame method which the fever demands, and, accordingly, is either to be carried off by perspiration and fweat, or fome other method which the original fever, whereon it depends, requires (b).

5. There

(b) 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 phylician ought folely to be directed. When therefore there are manifest figns of a confiderable 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 the impulse of the blood from the part affected, which is most commodiously done by open-

Sect. 6. 5. There are other fevers which ought to be enumerated amongst the intercurrents, which, on account of their terminating immediately fome other way, in

> ing 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 fwelling, with a flight pain and inflammation, in foul and phlegmatic conflictutions, affects the external parts of the neck, occaffoned by an abundance of vifcous ferum, 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 faltness. But it 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 refolve and difcufs the blood, or ferous 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 drunk 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 foftened, and the stagnating fluids dissolved. In case of a great heat and pain, I would not advise the injection of gargarisms with a syringe; 'tis 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, dulcified spirit of nitre, are advantageously used for this purpose, and may be varied according to the size of the prunella, dulcified spirit of nitre, are advantageously used for this purpose, and may be varied according to the size of the spirit of nitre. pose; and may be varied according to the circumstances, and mix'd 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 flower, to which some add swallows nests, and album gracum, as specifics. Lenient and emollient plaisters deserve also to be com nended for this purpose, as simple diachylon, melilot plaister, let down with oil of sweet almonds, or rendered more effectual by a mixture of sperma ceti, saffron, and camphire.

In the use of externals, the different kinds of inflammations of

fome peculiar symptom, are not usually accounted fe- Chap. 7. vers; tho' they were originally fuch. And the diforder, whence the difease takes its name, is only the symptom of the fever, which terminates at length therein. At prefent I shall only briefly treat of two of these, namely, a bleeding at the nose, and a spitting of blood.

6. A bleeding at the nose happens at any time of the year, A bleeding and chiefly afflicts fuch as are of a hot and weakly conflitution, and more frequently in the decline of life, than proms dein youth. Some figns of a fever appear in the be- scribed. ginning, which goes off fuddenly, making way for itfelf thro' the nostrils, but there remains a pain and heat of the forepart of the head. The blood flows for fome hours, and then stops a while, and foon after breaks out anew; and this it does alternately, till at length the hæ-

morrhage

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 roles with nitre, and a small proportion of camphire, is very beneficial. Harts-horn jelly is also an admirable alliftant here. But if the throat be dry, and burns, the tongue fwells, and there be a difficult respiration and deglutition, the following linetus 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; fal 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 quinfey, the mouth is to be washed between times with only milk and cream, with an addition of sal prunella and strup of red poppies; and whey to be drank frequently. But in the inflammation of the asophagus, which often happens in malignant fevers, at the state, tis proper to give the following powder internally with an emultion of fweet almonds, and to hold fome 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 flagnation of a sharp saline ferum, 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 discuss'd in the beginning, by gargarizing the mouth and throat with Rhenish wine.

When a copious, foul, ferous humour falls upon the glands of the palate and throat, gentle laxatives, and detergent gargarifms,

Thould be frequently used.

Sect. 6. morrhage 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.

How to be treated.

7. In this case I endeavour to check the excessive heat and ebullition of the blood, whence the preternatural extravafation 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 pleurify; I order a cooling and incraffating diet, as milk boiled with thrice the 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 preferibed. I advise the patient to refrain from bed some hours every day, and not to omit taking a lenitive and cooling glyfter 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 vefiels, befides revultion and cooling, I usually give a gentle purge, even in the height of the difease, and an opiate in a larger dose than ordinary after the operation is over, and when the fymptom is entirely gone off, I repeat the cathartic.

8. As to external applications, a linnen compress, dipt in a folution of fal prunella in cold water, and gently fqueez'd out, may be applied to the nape and both fides of the neck, often in a day. And after general evacuations the following liquor may be used (c).

A Ayptic liquor.

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 this liquor into the nostril whence the blood flows, and keep it therein two days (d).

(c) See Sect 1. Chap. 4. par. 48.

<sup>(</sup>d) The Edinburgh dispensatory, p. 77, has a composition under

Linnen compresses dipt in this liquor, and applied to the Chap. 7.

part, will ftop any external bleeding.

9. A spitting of blood, which seizes weak persons, of Aspitting a hot conftitution, and diforder'd lungs, and young per- of blood defons rather than old, between spring and summer, near- scribed, and ly approaches the nature of the hæmorrhage just treat- its cure. ed: this being a fever likewise, that loses its name and effence, 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 impetuoufly to the veins of the nostrils, whereas in this hæmorrhage it hurries to the lungs. And as in the former diforder a pain and heat in the forepart of the head continue to afflict the patient, during the flux of blood, fo in this the breaft is affected with a 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 confumption. But frequent bleeding, a glyfter injected every day, and diacodium taken every evening, along with a cooling and incraffating regimen and medicines, will effect a cure.

10. And thefe are the particulars I have hitherto ob- The obserferved, concerning that numerous tribe of difeases, vations hiwhich is divided into different species, and comprehend- vered, quite ed under the generical name of fevers, and concerning practical. the fymptoms thereon depending; in which I have follicitously endeavoured not to intrude my own inventions and imaginations on the world, but, with a candid and impartial mind, and confequently attach'd to no hypothefis, have delivered the history of the diseases themselves, and their natural phenomena, and subjoin'd the method of cure with equal caution and fidelity. And if an earnest defire of discovering and establishing a more certain method of cure has led me to strike out a new road, 'tis hoped that none of the learned will accufe me, either of contemning their judgment, and trufting too much to my own, or a love of novelty; fince the fuccess which has attended my enquiries has hitherto much encouraged me, and the experience of my fuccef-

fors will doubtless testify my fidelity.

II. In

the title of a flyptic-water, which is much the same with that here described, only that the flegm of vitriol is there dropt, and its place more commedioully supply'd by spring-water.

Sect. 6.

Fevers defiroy two
thirds of
mankind.

afflict mankind daily, and deftroy 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 delivered by theoretical authors have hitherto afforded, gave me little satisfaction when I first considered these matters; for I clearly perceived that those trisling 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. It therefore I have contributed in some measure to lessen the distinctly 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 severs, and the symptoms thereon depending, to the thirtieth of December 1675, when I

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An EPISTLE of ROBERT BRADY, M. D. Master of Caius College, Cambridge, and Regius Professor of Physic there, to Dr Sydenham.

DE BRASY'S FOIR

Learned Sir,

OU are the only physician that has hitherto attentively considered the force of the air, and its influence upon the human body, an incompetent enquiry having been made by all others, with respect to the manner of its action in preserving life, the great share it has in the fermentation, alteration and circulation of the blood, and in performing animal motion: and the writers of natural and medicinal history seem to have wholly omitted searching into its natural temperature, and various alterations; which constitutions

tions, you, with great judgment, intimate.

In reality, as the air infinuates itself into all, even the most impervious parts of the body, it must needs communicate the changes it undergoes from the matters 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, justly founded your medicinal obfervations of the history and cure of acute diseases upon the various constitutions of years, and their feafons; 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 prevail'd, indicates the most useful, if not the only, method of establishing a fure basis for practice. Let me intreat you, therefore, if you have any observations relating to the fevers of the immediately preceding years, to publish 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 quantity, and repeat it frequently; and others who prepare extracts and insusions of it, and make the insusions into emulsions, julaps, &c. affirming that they can hereby certainly cure intermittents, and likewise some continued severs. 'Tis doubtless an excellent remedy in intermittents, and I have used it almost twenty years successfully in a variety of sorms and preparations. If your experience has taught you any thing particular concerning its use, let me intreat you to make it publick.

In the cure of the rheumatism you have proposed frequent and copious bleeding as necessary (a); 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 matters, you will certainly be censured and calumniated by the malevolent, as you have heretosore been, however displeasing it may be to the candid and ingenuous part of mankind, who generally look on

fuch persons with contempt.

And, in reality, if they would be acquainted with a history of fevers, their effences, 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 purfuing your enquiries, despise the scurrility of the superficially learned, and affift the candid part of mankind: you have shewn the way, and if your endeavours displease, it lies upon

those who censure it to shew us a better.

I take my leave with affuring you, that your compliance with my request will oblige the whole faculty, and, amongst the rest,

Your already obliged friend,

Cambridge, Dec. 30, 1679,

R. BRADY.

Dr

### Dr Sydenham's Answer to Dr BRADY: Containing the History of the epidemic Diseases from the Year 1675 to 1680.

Dear Sir,

I. IF I have at all contributed by my observations to The author's render the cure of diseases more certain, it doubtless becomes me in particular to communicate them, more freely than other men, to those who defire it; for as I am fatisfied that my knowledge does not exceed that of others, it can be of no prejudice to me to publish fuch trite and inconfiderable remarks. Nor do I deserve equal praise with others, for publishing what may be of use in the cure of diseases, since I can so easily imagine how much fatisfaction it would give me, who have laboured under the gout near thirty years, and been a long time feverely afflicted with the stone, to be informed of a method that might give me relief.

2. But few persons are endow'd with such qualificati- The duty of ons, as may make them ferviceable to mankind in this eminent case, and it is only to be accomplish'd by those whose men. abilities are superior to mine. Nevertheless I have always thought it a greater happiness to discover a certain method of curing, even the flightest disease, than to accumulate the most affluent fortune: and whoever effects the former, I esteem not only happier but better and wifer too. For can a person give a clearer proof of his benevolence and wisdom, than by his endeavouring always to promote the public good, rather than his private interest, which makes so small and inconsiderable a part of the whole? For, to use the expression of Cicero, that great mafter of thought and diction, and genius of his age, Imay fay of mankind; As the laws prefer the good of the whole to that of particulars, so a wife and good man, who knows his duty, and obeys the laws, confults the good of mankind more than his own or any fingle person's (a). And in reality, as it is the part of a wicked man to destroy his fellow-creatures; fo it is the duty of a good man to preferve them and afford others fuch helps and me-

thods

thods, as may enable them to fave others from death even after his own deceafe. Nor can any thing be more inhuman and deteftable, than to infinuate a difregard and unconcern for whatever misfortunes may hap-

pen to mankind after our death.

3. But, not to infift upon these matters at present, I must own, I think myself obliged to communicate to you the discoveries I have made relating to diseases mentioned in yours, however trifling they may feem. I must likewise return you my thanks for the generous fense you are pleased to express of the ill treatment I have received from fome persons, whose censures I should have escaped, if the blameless conduct of a perfon, who has injured no man in words or actions, could have fecured me. But fince this has proceeded from no fault of mine, nor I hope ever will, I am determin'd to give myfelf no concern for the failings of others, being convinced that my bufiness is only 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,

The author

complains

of injurious

treatment.

and in what manmer.

4. I will therefore deliver the observations I have made concerning the difeafes 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 fucceeded 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 prefent

reigning constitution of fevers crept in.

The diseases of 1676 the same with those of the three former years.

5. The year 1676 gave rife to the fame tribe of difeases, as were generated by the constitution last mentioned, in our observations above delivered, viz. those of 1673, (in the autumn whereof it first began) 1674, and 1675. But this conftitution being in its decline, the difeases that appeared were less severe than ordinary, and not fo epidemic, notwithstanding the peculiar difpolition of this year, with respect to the manifest qualities of the air, in which it differed confiderably from the preceding years. For the heat of the fummer, and the cold of the winter, were much greater than in most years within our remembrance. And yet, as fo great a

dif-

diffimilitude of feafons gave rife to fimilar difeafes, 'tis plain from hence that the fecret temperature of the air favours their production more than its manifest qualities (b). 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.

6. Thus, the measles that appeared in the beginning The measles of the year, tho' it was not very epidemic, was re-continued markable for its longer duration; for whereas it begins long this usually in January, increases till the vernal equinox, year. and then abating gradually, almost goes off at the summer folftice, this year it continued till near the autumnal equinox, occasioned perhaps by the summer's heat, whence it gain'd force, fo as to prove of longer continuance; and nevertheless it requir'd no new method of cure.

7. At the close of summer the cholera morbus rag'd Avery vioepidemically, and being render'd more fevere by the ex- lent cholera traordinary heat of the feafon, was accompanied with morbus more violent and inveterate fymptomatic convulfions, rag'd at the than I had hitherto observed. For not only the abdo- summer. men (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 fometimes leap out of bed, and extend his body different ways, in order, if possible, to mitigate their violence.

(b) Perhaps our author afcribes too much, here and elfewhere; 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 appear'd. Whereas, on the contrary, the manifest or sensible qualities of the air, such as its heat, cold, dryness, moisture, &c. have evidently a consideraable power over epidemic difeafes, the fymptoms whereof feem to take their rife, 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 fituation 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 rife and courfe of epidemic difeases. For proof of this the reader may confult Dr WINTRINGHAM's commentarium nofol. Hux-HAM de aer. O' morb. epidem. HILLARY's accurate account of the principal variations of the weather, and the concomitant epidemic diseases, as they appear'd at RIPPON, &c. during the space of eight years; which is added to the 2d edition of his excellent pracatical essay on the SMALL-POX, lately publish'd. RAMAZZINI conflitut. epid. Mutinenf. HOFFMAN. med. rat. fyft. &cc.

## Of the epidemic Diseases

It required ates shan ordinary. Exemplified in a cale.

8. But the this disease admitted of the usual method ffronger opi- of cure, yet stronger opiates, and the repetition of them with more frequency than ordinary, 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 fymptom, 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, it was apprehended that a larger quantity of the vehicle might occasion the medicine to be vomited up, as it often happens in fuch cases. I waited near half an hour, and finding the medicine too weak to stop the vomiting, and take off the convulfions, I was oblig'd to repeat it, and increase the dose proportionably, till these obstinate symptoms were at length quieted; observing however to give it at fuch intervals, that I might be able to conjecture what effect the last dose would have, before I exhibited another. The convultions, notwithstanding, being apt to return upon putting the body into the leaft motion, I strictly enjoined that the patient should remain quiet for a few days, and take the abovemention. ed medicine between whiles in a fmaller quantity, even after his recovery, in order to prevent a relapfe: and this method had the defired fuceefs.

The author's reasons for giving laudanum copiou/ly-

 Nor ought I to be accounted too rash for exhibiting laudanum in fo great a quantity, fince experience will clearly shew that in disorders where opiates are indicated, viz. violent pain, vomiting, or immoderate looseness, and great disturbance 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 fuch a dofe as may conquer a flight fymptom, will prove ineffectual in a ftronger; and what would otherwife endanger life, will in fuch a case be a means of preferving it.

10. These are the diseases that prevail'd this year, being the fame, as I have already intimated, with those of the three preceding years. But I can give no account of

Prevented by fickness from obferving the diseases of 1677.

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 soon afterwards was attacked with the gout, which kept more in my bowels than in my limbs; and these disorders were succeeded with a decay of strength, a loss of appetite, a swelling of the legs, and other equally dangerous fymptoms; fo that death would then have been welcome to me. My ill state of health confined me within doors for three months, and afterwards obliged me to go into the country for my recovery, and flay almost as long there. I came back to town in autumn, when my friends inform'd me that there still remain'd a few intermittents here and there, most of which had first seiz'd the patients in the country; but having been prevented from attending the fick by my own illness, I can give no account of the difeafes of this year.

11. The constitution of the following year, namely Intermitof 1678, being entirely changed, fo eminently favour'd tents arose, intermittents, that they again became epidemic, whereas from 1664 to this time, including the space of thir1678. teen years, they were in a manner extinct in town, except only that they feiz'd a few fporadically, 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 prevail'd fo much over all other difeases at the decline of fummer and beginning of autumn, as to be the fole epidemic difeases. But in the winter they yielded by degrees to the fmall-pox, and the other reigning epidemics, till the return of the feafon proper for them.

12. To proceed now to deliver what we have learnt Tertians by diligent observation, relating to the nature and causes and Quotiof these Fevers. First then it is to be noted that the' dians most quartans were more frequent formerly, yet now terti-frequent. ans or quotidians were most common, unless the latter be entitled double tertians; and likewife that tho' thefe tertians fometimes began with chilness and shivering, which were fucceeded first by heat, and foon after by fweat, and ended at length in a perfect intermission, returning again after a fix'd time, yet they did not keep this order after the third or fourth fit, especially if the

patient

patient was confined to his bed, and used hot cardiacs, which increase the disease. But afterwards this sever became so unusually violent, that only a remission happened in place of an intermission; and approaching every day nearer to the species of continued severs, it seized the head, and proved satal to abundance of persons.

Dangerous to attempt their cure by Sudoritics.

13. As to the cure, I have learnt, from the experience of many years, that 'tis dangerous to attempt to remove tertians and quotidians by fudorifies; for when they are recent, and have assumed no certain shape, they nearly approach to continued fevers. And tho' it is well known that as foon as the fweat flows, the reftlefness and other fymptoms prefently go off, and a perfect intermission succeeds, and consequently that it should be fomewhat promoted, or at least not hindered, when the fit is going off, yet 'tis manifest that if fweat 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 (fince it exceeds the degree of the febrile matter, already to exalted by the heat of the fit, that it may now be expelled by despumation) after it has expelled that part thereof which might produce a fingle fit, proceeds to inflame the blood. Upon confidering, 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 furest hopes; of which I can truly affirm, notwithstanding the prejudice of the vulgar and a few of the learned, that I never found, or could reafonably fufpect, any ill consequence follow its use; unless that such as have taken it for a confiderable time are fometimes feiz'd with a fcorbutic rheumatism, as I have before remarked in treating of the Rheumatism (c). But this diforder farely proceeds from this cause, and, when it does, readily yields to the remedies there prefcribed.

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 this difease, but likewise in those of the uterus and stomach: so little reason there is to complain of its unwholesomness.

(c) Sect. VI. Chap. V. Par. 13.

The bark not only good in intermittents.

15. But I conceive that the Cortex has been ill Why it has spoken of, chiefly, for the following reasons. (1) Be-been excause the numerous train of violent symptoms, which claim'd aaccompany, previously to the use of the bark, inveterate intermittents, are afcrib'd to it, tho' it has been taken only once. (2) As it cures the difease by a secret virtue, and not by any fenfible evacuation, feveral perfons maintain that the morbific matter, which ought to have been expelled, is retained in the body by its aftringency, ready to occasion fresh disturbance, the disease not being entirely carried off. But fuch perfons do not fufficiently confider, that the fweats happening at the decline of the fit have expelled all the morbific matter that was collected during the preceding interval, fo that only the feeds of the difease remain, which require time to be ripened, and the bark by closely purfuing the retiring fit, and cutting off the supplies of the disease, cannot be a means of retaining any morbific matter in the blood, which is now existent there only in embrio; consequently the bark is not to be esteem'd productive of those obstructions which are commonly judged to proceed from its ufe.

16. But how does it appear that the bark cures in- It does not termittents by its aftringency? In order to prove appear to this, other aftringents, possess'd of the same vir- astringency. tue, must first necessarily be produced; I have tried the strongest ineffectually. Besides, the bark effects a cure, even where it purges, which is fometimes the cafe. Upon the whole, therefore, they act the wifest part, who limit their enquiries to their abilities. But if a person imposing upon himself should imagine that he is posfelled of other faculties than fuch as are ufeful, either an natural religion, by which we learn that God, the creator and governour of all things, is to be worship'd with profound veneration, as he justly merits; or to moral philosophy, that he may practife virtue, and render himfelf every way ufeful to fociety; or, laftly, to the medical, mathematical, and mechanical arts, which fupply mankind with many helps and conveniencies: I would have him, in the first place, deduce an hypothesis from natural philosophy, that may enable him to explain the cause of but a fingle specific difference of things in nature. For instance, let him account for

S 3

the univerfal greenness of grass, and why it is never found 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 employ'd in investigating the history of diseases, and applying those remedies which stand recommended by experience for the cure thereof; observing notwithstanding that method which is sounded 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 Fefuit'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 fince; and indeed very defervedly, as these diseases before this time were feldom cur'd by any other method, or medicine; whence they were reputed the opprobria medicorum, and not without cause. But not long after it lost its character, and was entirely difused, for two confiderable reasons. (1) Because being exhibited only a few hours before the coming of the fit, according to the received custom of that time, it fometimes 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 the powder, tho' very rare, did, however, defervedly prevail with the more prudent phyficians to refrain its use. (2) Because tho' the patient was for the most part freed from the fit, that would otherwise have come, by this medicine, yet a relapse commonly happened within a fortnight, particularly when the difease was recent, and had not been weakened by a long continuance. Thefe reasons weigh'd so much with the generality, that they loft all the hopes they had hitherto conceived of this medicine; nor did they efteem it fo material to prevent the access of a fit for a few days, as upon this account to endanger their lives by taking the bark.

The best medicine in intermittents.

18. But having fome years fince thoroughly confidered the extraordinary virtues of the bark, I was firmly perfuaded that intermittents could not be better cur'd than by this efficacious medicine, provided it were given with proper caution. For this reason I spent much

time

time in confidering how I might prevent the danger enfuing from its use, and the relapse that succeeded in a few days, which were the two inconveniencies to be remedied, and by means thereof to reftore the patient

to perfect health.

19. (1) I conceived that the danger proceeded less How renfrom the bark itself, than from the unseasonable use der'd more thereof; for when a large quantity of febrile matter is feetual. collected in the body upon the intermediate 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 preternaturally 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, fo that a stop might be put to the fucceeding one; and by repeating it upon the intermediate days, at proper distances, till the approach of a new fit; and that by this means the blood might be impregnated gradually, and confequently fafely, with the virtue of the bark.

20. (2) As the relapfe, which generally happened in a fortnight, feem'd to me to proceed from not fufficiently impregnating the blood with the virtue of the febrifuge, which, however efficacious, was not powerful enough to cure the difease at once, I judged that the best method of preventing a relapse would be to repeat the powder, at proper intervals, before the virtue of the preceding dofe was quite fpent, even tho' the intermit-

tent appeared to be conquered for the prefent.

21. These considerations led me to the following The method, method, which I now use. When I am called to a specifed. person afflicted with a quartan, suppose on a Monday, if the fit is expected the fame 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 days, namely Tuesday and Wednesday, in the following manner.

Take of Peruvian bark, very finely powdered, one ounce; The febri-Syrup of cloves, or of dried roses, enough to make it fuge electus into an electuary; to be divided into twelve doses, ary. whereof let the patient take one every fourth hour, beginning

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beginning immediately after the fit is gone off, and drinking after each dole a draught of any kind of

Or, if pills be more agreeable,

The febrifuge pills. Take of the Peruvian bark very finely pulveriz'd one ounce; syrup of cloves, enough to make it into pills of a middling fize; of which let the patient take fix 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 ufual fweats which terminated the preceding fit, and a collection of fresh matter being prevented by the repetition of the

powder upon the intermediate days.

The first quantity of The bark to berepeated 3 or 4 times.

purges.

22. But in order to prevent a relapse, which was one of the inconveniencies above recited, I always gave the fame quantity of the powder, an ounce divided into twelve doses, upon the eighth day, precisely after taking the last dose. But tho' a single repetition of the bark in this manner does frequently remove the difease, yet the danger is not over unless the patient will comply with the directions of his phyfician, and take it thus a third or fourth time; especially when the blood has been impoverish'd by some preceding evacuation, or the body unadvifedly exposed to the cold air.

To be given with laudanum, if it

23. Now tho' there is no inherent purgative virtue in this medicine, yet a violent purging is frequently occafioned thereby, on account of some peculiar idiosynerasy in the constitution. In this case it is indispenfably 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 difease, and that it may be retained long enough to answer its end. Therefore I direct ten drops of laudanum, to be given in a little wine, after every other dofe of the powder, provided the purging does not go off.

24. I follow the fame method in other intermittents, whether tertians or quartans: for immediately

upon

upon the fit's going off I administer a dose of the The same powder, and repeat it in point of frequency, at as close process to be intervals during the time of the intermission, as the na- tians or ture of the difease will admit; but with this difference, quartans. that a tertian may be fo far conquered with fix drams of the bark, as at least to give a respite, whereas a quartan can very rarely be removed with lefs than an

ounce of it, divided into proper dofes.

25. But tho' tertians and quotidians after a fit or two Tho' there may feem entirely to intermit, yet, as I have before observed, they afterwards frequently degenerate into a species of continued fevers, and only come to a remission even upon those days that promised an intermission; efpecially when the patient has been kept too warm in bed, or been tormented with medicines to carry off the intermittent by fweat. In this case, I have no other way left, but to take advantage of the remission, tho' it be ever fo fmall, 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 fo short an interval.

26. And the prefent reigning intermittents, af- The more ter the fecond or third fit, incline to continued fevers, the interyet they must be referr'd to the intermittent kind; tends to a and therefore I feruple not to order the bark, even in continued the most continued of this species; the repetition of fever, the which in the abovementioned manner will certainly more bark remove the difease, provided the constant warmth of went. the bed, and the improper use of cardiacs, have not rendered it a continued fever; in which case I have frequently observed that the bark proves ineffectual. Nor have I ever found that the wine, wherein the bark is administered, did the patient harm, which might reafonably be suspected; but contrariwise the heat, thirst, and other febrile fymptoms generally went off foon after taking a fufficient quantity of this medicine. But it must here be observed that the nearer the intermittent approaches to a continued fever, either fpontaneoufly, or from using too hot a regimen, so much the more necessary it is to exhibit a larger quantity of the bark; for I have fometimes found that the intermittent

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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, an electuary, or in pills, I give them an insusion of it, which is made with two ounces of bark grossly powdered, insused cold for some time in a quart of Rhenish wine. This insussion, being several times passed thro' a fine strainer, becomes so clear, as not to be nauseated by the nicest palate. Four ounces of this insusion, after it has stood some days, should seem equivalent in virtue to a dram of the powder in substance; and as it is neither disagreeable, nor lies heavy upon the stomach, it may be exhibited with twice the frequency of the other formulæ, till the disease vanishes.

In case of vomiting, this must be stope before giving the bark.

28. When this disease hath 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, I proceed to the use of the bark.

To be given in a julap to children.

29. For children, who, on account 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 prescribed the following julap (d).

The febrifuge julap.

Take of black-cherry water, and Rhenish wine, each two ounces; Peruvian bark, finely powdered, three drams; fyrup of cloves, an ounce: mix them together for a julap. Let a spoonful or two (according to his age) be given to the child every fourth hour till the fits vanish, dropping into every other dose, in case of a looseness, one or two drops of liquid laudanum.

30. It

(d) 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.

30. It must further be observed, that the intervals The bark, in between the fits in tertians and quotidians are fo fhort, tertians or quotidians, that they do not allow fufficient time to impregnate the does not alblood perfectly with the febrifuge virtue of the cortex: ways put by fo that 'tis not to be supposed that the patient should the fit after fo certainly miss the next fit after the first time of ta- the first king it, as it commonly happens in a quartan; for the king it. medicine in these cases will frequently not effect the cure in less than two days.

31. It must also be noted, that if the patient, not- What to be withstanding the observance of the cautions above de- done in case livered, should relapse, which happens less frequently in of a relapse. a quartan, than in tertians or quotidians, it will become a prudent phyfician not to adhere too closely to the method of giving the bark at the abovementioned intervals, but to attempt the cure, as his judgment fhall direct, by some other procedure; and here the bitter decoction is generally effeemed of most powerful

efficacy.

32. With respect to diet and regimen, the patient Theregimen must be allowed the use of all kinds of solid or liquid in interaliment that agree with his ftomach, fruit and cold liquors always excepted, because they impoverish the mass of blood, and are very apt to occasion a relapse. Let the diet therefore be flesh of easy digestion, and a moderate use of wine may be permitted for common drink; by the fole use whereof I have sometimes recovered fuch as have been fo debilitated by the frequent return of the intermittent, that the bark prov'd ineffectual to their cure. The patient likewise must not unadvifedly expose himself to the cold air, till the blood has recovered its former healthy state.

33. It must here be noted, that tho', in treating of Acaution intermittents heretofore, we recommended due purging concerning after the difease was gone off (e), yet this practical caution is only to be understood of fuch intermittents as either went off fpontaneously, or were cured without the affistance of the bark. For when the cure is effected by this medicine, cathartics are unnecessary and hurtful; fo powerfully does the bark, alone, refift 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

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certainly endanger a relapfe, and perhaps reproduce the diféafe.

Thefe intermittents had fynnproms re-(embling a true Apoplexy.

34. And here 'tis proper to mention that a very remarkable fymptom did fometimes fucceed these intermittents in the first years of this constitution. For the fits did not begin with chilness and shivering, which were fucceeded by a fever, but the patient was feiz'd with the fymptoms of a true apoplexy, tho' in reality, how nearly foever it refembled this difease, it was nothing more than the effect of the fever's feizing the head; as plainly appeared from other figns as well as the colour of the urine, which in intermittents is usually of a deep red, tho' not fo red as in the jaundice, and likewife lets fall a lateritious fediment. But tho' in this case all kinds of evacuation seem to be indicated, in order to make a revulfion of the humours from the head, as is generally practifed in the genuine apoplexy, yet they are to be wholly refrained, because they are very prejudicial in the intermittents, whence this fymptom originally proceeds, and confequently endanger life, as I have observed. On the contrary, therefore, we must wait till the fit goes off spontaneously, when the cortex, in case it could not be given sooner, must immediately be exhibited, and repeated with fufficient frequency in the intervals, till the patient be perfectly recovered.

Azed perfons fometimes (eiz'd with a diabetes, from ment.

35. It fometimes happens, tho' very rarely, that the aged, after having been long afflicted with this difeafe, and weakened by improper bleeding and purging, are feized with a diabetes, tho' the intermittent be perfectill manage- ly cured. For their blood being by this means fo impoverished, as to be wholly unable to affimilate the juices received into the mass, they pass off crude and indigested by the urinary passages, and, in consequence of the large quantity of urine which is voided at every evacuation of this kind, the strength is gradually impaired, and they become greatly emaciated, the fubstance of the body being in a manner wash'd away. The indications of cure in this case, and every diabetes, however occasioned, are (1) to enrich and strengthen the blood, and (2) to ftop the preternatural discharge by urine.

(c) and a Line When he are the sun was and

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How cured.

For instance, Take of Venice treacle, an ounce and The restrinbalf; conserve of orange peel, one ounce; diascordi- gent elecum, 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-armeniac, two scruples; gum-arabic, half a dram; syrup
of dried roses, enough to make all together into an
electuary: of which let the patient take the quantity
of a large nutmeg in the morning, at five in the afternoon, and at bed-time, drinking after each dose
six spoonfuls of the following insusion.

Take of the roots of elicampane, masterwort, angelica, The bitter and gentian, of each half an ounce; the leaves of insuson. 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 sive pints of canary, and let them stand together in a

cold infusion, and strain it as it is used (f).

The patient's diet should be food of easy digestion, as veal, mutton, and the like: he must forbear vegetables, and fruits of all kinds, and drink Spanish wine at meals.

36. That

(f) The diabetes here should seem to proceed from a poorness, join'd 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 sluids; the chief of which kind are the preparations of mercury; and having continued these for some time, it will be proper to exhibit aftringents, join'd with deobstruents, as bitters, spices 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 solowing insusion.

Take of rhubarb, half an ounce; white and yellow fanders, each a dram; the leffer cardanom feeds, half a dram: pour upon them a pint of canary, and let them stand together in a moderate heat, in a well-closed wessel. Let the patient take six spoonfuls of the strain'd 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 generate viscous juices.

The fluor albus cur'd by nearly the same treatment.

36. That obstinate and lasting disease, the fluor albus, is 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 more during the whole process, because all kinds of evacuations destroy the virtues of strengthening remedies (g). But this by the way.

The bark best alone.

37. And these are the observations I had to communicate, in a summary way, concerning the use of the bark; for my design was not to consult the pomp of medicine. And in reality they who add any thing more to the Cortex, 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 whole, would not be induced to commit such a fraud for his private advantage. As to what remains, if my cotemporaries had pleased to have considered what I published sour

(g) Bleeding, if the case requires it, should be perform'd in the beginning; then, if the stomach be soul, 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 slowers, bay and juniper berries, &c. will be of admirable service.

Hossiman recommends a course of mineral waters. An inveterate stuor alous, 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 intected, cats and corrodes the fine sibres of the parts it passes over; and thus occasions sharp darting pains, excoriations and users; whence proceeds the matter of a virulent slaw. From this account, which is taken from diffections, it clearly appears, that, in order to wash away, dilute, and weaken these insected juices, soften the hardened glands, strengthen the sibres that are fretted and corroded, and join them again with the other untainted parts, a course of mineral waters is highly proper. And they 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, balsanic remedies, and a moderate decocition of the drying woods, are to be us'd 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.

years fince in my history of acute diseases, (which, 'tis highly probable, I was acquainted with before that time) relating to the method of exhibiting the bark in the intervals of the fits, and the succeding repetition of it, when the disease was gone off, perhaps the lives of many persons had been saved; how much soever some men contemned my slender endeavours for the publick good, and slighted the cautions there delivered in the following words, which contain, in a concise manner, what I have here judged proper to enlarge upon, viz. (b)

38. "(1) Great caution must be had not to give How to be this bark too early, namely, before the disease be in given. fome measure spontaneously abated; unless the extreme weakness of the patient requires it to be given

fooner; for the giving it too foon may render it ineffectual, and even fatal, if a fudden stop should be

thus put to the vigorous fermentation raised in the blood in order to its despumation. (2) We must not direct purging, much less 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 difease returns so much the more expeditiously and certainly, after the virtue of

the bark is fpent. 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

66 by this means the bark has more time to produce its 66 full effect in, and, befides, the mischief is avoided

"that might happen by putting a fudden and unfea-

fonable stoppage to the fit just approaching. (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 difease will, at length, be perfectly cur'd.

"For these reasons I prefer the following method of

" giving the bark to all others.

Take of the Peruvian bark, one ounce; conserve of The febriroses, two ounces; make an electuary thereof: suge electake the quantity of a large nutmeg, every morn-

"ing 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."

39. But

Vernal tertians bow cured without the bark.

39. But the' the bark is the best medicine, hitherto discovered, for the cure of these diseases, yet I have known vernal tertians, in persons in the prime of life and of a fanguine conftitution, yield to the use of the following remedies. For inftance; bleed in the arm upon the intermediate day, and fome hours afterwards, upon the same day, give an emetic of the infusion of crocus metallorum, regulating the time in fuch manner that its operation may be over before the fit comes; and as foon as it is gone off, let the following electuary be given.

The flomachie electuary.

Take of the extract of wormwood, gentian, and the leffer centaury, each two drams; mix them together, and 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 whitewine, each three ounces.

In indigent per fons.

40. There is another method of curing these tertians in persons of low circumstances, who are unable to be at the expence of a long course of medicines in order to their cure. As,

The Sweatingdraught. Take of Virginian Inake-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 cloths, sweat three or four hours afterwards, and let it be repeated twice in the same manner.

Intermittents appear'd anew in 1679.

41. In the following year, viz. 1679, these intermittents re-appeared at the beginning of July, and increafing every day, prov'd 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.

A cough avember.

42. For at the beginning of this month a cough arose, rose in No- which was more epidemic than any I had hitherto obferved; for it feized, 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 enfued. On the first days of the diforder, the cough was almost dry, and the expectoration not confiderable, but afterwards the mat-

ter in some measure increased. In short, from the fmallness of the expectoration, the violence of the cough, and the duration of the coughing fits, it feemed to make a near approach to the convulsive or hooping tough of children; only it was not fo fevere. But it was attended with a fever and its usual concomitants, in which particular it exceeded the convulfive cough,

which I never knew accompanied therewith.

43. Tho' coughs are common at the beginning of Whence it winter, yet every one was aftonished to find them so affected very frequent this year; which I conceive proceeded numbers. chiefly from this cause: The month of October having been wetter than usual, (for it feldom ceased raining) the blood, corresponding with the season, drank in abundance of crude, watery particles, by reason that perfpiration was ftopt 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 fome will have it, thro' the glands of the windpipe.

44. When there is occasion for medicine, 'tis doubt- Bleeding less proper to undertake the cure by evacuation, name- and purgly, bleeding and purging; for the redundant ferous par- ing ferticles cannot be fo commodioufly expell'd by any other herein. method, as by bleeding and purging, which greatly

empty the veins.

As to pectorals, fetting afide their pleafing the pati- Pettorals ent, I own I cannot conceive how they can remove the useless. cause of the cough; fince their whole operation seems to confift, either in thickening the matter when 'tis too thin to be expectorated, or in attenuating it, when, by reason of its viscidity, it can scarce be raised. This I certainly know, that 'tis lost time to give such medicines, and that fometimes the blood is fo impoverished by the retention of the ferous particles which are prejudicial to nature, and further that the lungs are fo shaken by the violence of the cough, that a confumption is often occasioned thereby, from which the patient should be freed by hastening the cure. Nor are fudorifics much fafer; for fometimes they cause a fever, and fometimes also the particles of the blood, which are eafily inflammable, are so fixt upon the pleura that a pleurify is occasion'd, which happen'd to numbers during the course of this epidemic cough, with great danger,

45. Accord-

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The cure particulariz'd. 45. Accordingly I took away a moderate quantity of blood from the arm, and applied a fufficiently large and strong epispastic to the neck, in order to make a revulsion of part of the peccant matter. Asterwards I exhibited a lenient cathartic every day, prepared of an infusion of senna 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 a clock, sleeping upon them.

The hooping cough, cur'd by the fame treatment.

46. The convulsive or hooping cough of children is only cured by this method, viz. by bleeding and repeated purging, which otherwise proves a very lasting and almost incurable disease. I know not what others may be able to do in this case, but I own that I have often tried different, and almost all other kind of remedies here without fuccess: but only lenient purgatives must be exhibited, and these by spoonfuls, in proportion to the age of the patient. And I conceive that this moderate evacuation cures this cough in this manner. For inflance, tho' a copious ferum is not found in the lungs, yet the hot exhalations, which are carried to them from the blood at fet times, occasion these violent fits of coughing in children, the force of which upon the lungs feems to be most effectually check'd and prevented by this method only; whereby a contrary motion to the former is given to the cause of the disease, name-47. But ly, by the bowels (i).

(i) As this diforder will not always yield to the method 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 streak'd with blood, I always order bleeding, and especially if the sever 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 blossims, exymel of squils, the insustant or decostion of specacuanha. For the cough, as Walschmide observes, preceeds partly from the stomach; a fit of the booping cough seldom ceasing before the tough, tickling phlegm be vomited up, and there is frequently so large a quantity of it, that 'tis necessary to repeat the emetic a third, or fourth time.

The belly is likewise to be loosened between whiles, but only lenient purgatives must be administer'd for this purpose; as rhubarb, alcalisate mercury, and calomel. By this means the mucous matters are carried off, so that they do not foul the chyle, or the

latteal

47. But in the first stage of epidemic diseases, of Bleeding to whatfoever kind they be, great care must be had not to precede purge before bleeding. For the diseases which arise the beginfrom an epidemic constitution of the air, are either ac- ning of evitually fevers, or upon the least occasion degenerate into demic diffevers; fo that a fever may eafily be caused by the distur- eases. bance raifed in the blood and juices by the mildest purgative, and the heat fucceeding it, which nature had otherwise expelled by the usual evacuations of the

lacteal vessels, by getting into the blood; for great costiveness is univerfally prejudicial, occasioning a fever, or greatly increasing the difficulty of breathing. Nor is there need only of evacuations, but fuch 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, join'd with proper flomachies. The difficulty of breathing and oppression of the breast often require a solution of gum-ammoniac, an expression of wood lice, or the like; and sometimes, to abate the violence of the cough, LE MORT's afthmatic elixir, or diacodium may be given, which, indeed, is the best and safest opiate in this disorder. But if the sharp humour falls plentifully upon the larynx, or the lungs, it is necessary to make a revulsion thereof, by applying a blifter between the shoulders.

This distemper readily yields to these remedies, which otherwife frequently proves very obstinate, and can only be cur'd 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, fomewhat resembling the nature of the bark. For this noble Indian drug not only attenuates grofs humours, but strengthens the whole nervous system; and, operat-

ing in this manner by both properties, cures intermittents. Moreover, the periodic return of this cough, which is often as certain as the fit of an intermittent, shews that this difease does not greatly differ from the nature thereof; which feems still more probable from hence, that both these disorders generally prevail in the same season, arise from the same cause, and are cured by the

fame remedies. Huxham de Aer. & Morb. epid. p. 76, 77.

Dr Burton, in an effay upon this diforder, placed at the end of his treatife upon the Non-naturals, highly extols the following remedy, when this cough arises, as it frequently does, from viscous phlegm.

Take of the extract of Peruvian bark, three drams; Spanish flies, and camphire, each a scruple: mix them together. - Give the child eight or nine grains more or less, (in proportion to its age, the violence of the complaint, &c.) every third or fourth hour, in a spoonful of a solution of a small quantity of Balsam of Capivi in any simple distilled water. And let the child's common drink be an emulfion made with sweet almonds, and barley water, sweetned with fine sugar or something of the like

morbific matter; as, for instance, by a catarrh, or an epidemic cough, of which we now treat, or by a diarrhoea, when the epidemic fever has a tendency to 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 expells the morbific matter from the blood by fome fuitable evacuation. This I affirm to be fact, tho'the present practice is to exhibit cathartics before bleeding, or, which is still more dangerous, without bleeding

The reasons for it.

48. 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 raifed 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 lefs, than it usually does when exhibited before bleeding (k); and I am apt to think that numbers, and children especially, have perished for want of knowing this, or thro' a neglect of it.

Experience likewife in

49. And this I have learnt from a long course of experience, which is the furest guide in these cases; and favour of it. 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 difeases, and the method of cure, and only provided with receipts; and on the other hand by fuch idle pretenders, as rely wholly upon theo-

> (k) This is true in fact; and to account for it, let it be remembered that all the excretions univerfally 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 sulness of blood, 'tis clear that this sluid 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 fluggish 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 flimulates them to discharge their contents.

ry: whence both together destroy greater numbers than the difeases would without their assistance.

50. But that method of practice, and that only, will re- practice lieve the patient, which deduces the indications of cure from whereon to the phænomena of diseases, and afterwards confirms them be founded. by experience; by which means the great Hippocrates gained fuch an extraordinary character. And if the art of medicine had been delivered by any person according to this method, tho' the cure of a difease or two might have been made known to the multitude, yet the whole art would then have required more prudent and skilful men than it now does, nor would it have loft any credit thereby. For as the operations of nature, upon the observation whereof true practice is founded, are much more fubtile than in any art, tho' eftablished upon the least contested 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.

51. We have a proof of this in fevers, which con- Exemplified stitute two parts in three of the employment of physi- in fevers. cians, and I appeal to any person of consideration for the truth of what I affert. For is there an empiric, tho' ever fo illiterate, who will acknowledge himfelf 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 fudorifies, and (2) to relieve the symptoms which succeed evacuations of this kind? For he is fure that VENICE treacle, GASCOIGN's powder, plague-water, and the like, given internally, along with a hot regimen, will force fweat; which is all he proposes in the cure of this difease, especially if, by accident, he hath heard of the term malignity. And as to relieving the fymptoms, diacodium is in readiness to cause sleep, in case of watchings, and a glyfter, as often as the belly is bound: and fo of the reft. But he cannot of himfelf discover, or learn from his prescriptions, what species of fever it is which he attempts to cure, if we only believe, as pofterity perhaps will, that there are various kinds of fevers, every one of which requires its 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 fomewhat different thro' all its stages, as long as it continues.

52. Now if a person be ignorant of the natural hiftory of the difease, which only can point out the true method of cure, how shall he be able to deduce the indications of cure from fome less remarkable symptom, when he cannot judge whether it proceeds from his method of cure, or the difease itself? It would take up too much time to enumerate the various and minute particulars that must be attended to in the cure of this and other difeafes, which being fo numerous, and 10 momentous, in order to the prefervation 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 found judgment would be efteemed phyfi-Cians. But these particulars by the way.

A fever a-

role from treating the cough unskillfully.

How cured.

53. When the abovementioned cough was unfkilfully treated, it caufed a fever, refembling that which was fo very epidemic, in the winter of 1675, the hiftory 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 fame method which I have delivered above for the cure of that cough (1), viz. by bleeding, applying an epifpaffic 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 recover; yet in the fever proceeding from the cough, purging for three days proved fufficient to conquer it; as I have frequently observed in the constitution

under confideration.

Join'd at the beginning with defluxions upon the lungs.

54. 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 ferum was gradually expelled 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, fo that it did not require a different treatment from

that which the cough accompanied.

55. This fever continued in the abovementioned Continued manner till the beginning of 1680, when I wrote till the bethese observations, and as the year advanced intermit- ginning of tents arofe, which remained without any alteration, 1680. till the beginning of 1685, when I was preparing this fecond edition for the prefs. 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 conflitution still favours intermittents, fo 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: fo powerfully does this conflitution 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 hafte and violence, running thro' the stages of the concoction and despumation of the morbific matter too foon: which happens otherwife in the depuratory fever, wherein the figns of the concoction of the febrile matter to be expelled, fometimes by fweat, or rather by a freer perspiration, do not appear before the thirteenth or fourteenth day.

56. These particulars being well confidered, I doubt The depuranot that the epidemic depuratory fevers of the years 1661, tory fevers 1662, 1663, and 1664, were only the remains of cer- of 1661, tain intermittents which had prevailed for a course of and 1662, 1663, years before: but how long they prevailed I know not. only the re-For when the constitution which favoured intermittents mains of became milder and declined, the fevers it afterwards fome intergenerated were more humoural and earthy, whence the mittents. depuration of the blood went on by flow degrees; whereas those in the first years of this constitution were produced by more fubtile principles, and, being intermittents, generally finish'd their course with speed. Now, allowing this to be the cafe, it feems probable to me, that this depuratory fever will return as foon as the present constitution abates a little, and continue for a

certain term of years, before the plague arifes.

## Of the epidemic Diseases

The bark where likely to do milchief.

57. But throughout those years in which this fever fhall prevail, (how many foever they may be) intermittents may at times appear, and perhaps prove epidemic for a fhort 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 prefent reigning intermittents, I cannot fay: but if it be given in the plague, and the continued epidemics which will regularly follow this, we must expect the fame effects from it, which we now find it produces in the pleurify, the peripneumony, quinjey, and the like inflammatory fevers, in which diforders it not only does no fervice, but is manifeftly pernicious. But however this be, epidemics will fucceed 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 thefe, Sir, are the principal observations I have made of the epidemic difeases of the foregoing

Mischief of curing the rheumatism by copious bleeding.

58. 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 ftrength is not only impaired for a time, but weak perfons 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 beingstirr'd into action, by taking cold, or fome other flight caufe. These reasons induc'd me to search after some other method of curing this disease, different from such repeated bleeding. And having well confider'd, that it feem'd to proceed from an inflammation, as appears from the other fymptoms, but especially from the colour of the blood, which exactly refembles that of pleuritics; I judged it might probably be as fuccefsfully cur'd, by a plain cooling and moderately nourifhing diet as by repeated bleeding; and the inconveniencies likewife vantageous, attending that method avoided. Accordingly, I found ly us'd inits that a diet of whey used instead of bleeding had the defired effect.

Whey ad-Stead.

Illustrated by a case.

59. I was called last fummer to Mr Malthus, an apothecary in my neighbourhood, who was afflicted with a

ievere

fevere rheumatism, accompanied with the following fymptoms. 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 foon 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 difeafe. As he was of a weak and dry conftitution, I was apprehensive that by taking away much blood his strength, which was already considerably impaired, might be wholly fpent, especially, as the summer was fo far advanced, that it was to be feared that winter would come, before he could recover his strength debilitated by frequent bleeding; and therefore I ordered him to live upon whey only for four days, after which I allowed him white-bread, befides the whey, for his common food, namely once a day, instead of a dinner, till he recovered. Contented with this flender diet, he perfifted 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 fufficient nourishment. At the end of this term, when the fymptoms were gone off, and he got abroad, I allowed him to eat flesh, as boiled chicken, and other food of eafy digeftion. But every third day he lived upon whey only, till at length he recovered, having efcaped the inconveniencies I mention'd above, which had been very troublesome ten years before, when repeated bleeding was used by my order for his cure.

60. If any one should lightly esteem this method, This meon account of its inelegance and plainness, I must tell thed not to him, that only weak minds flight things because they be contemare common and fimple; and that I am ready to ferve plaimefs. 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 fuited to other diseases, which I shall not now enumerate. And in reality it would be much more ferviceable than the pompous garlands of medicines, with which fuch as are ready to expire are crowned, as if they were to be fa-

crificed like beafts (m). 6r. But

(m) The admirable and approved virtues of whey appeared for

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 swell'd; he was extremely sick, had a burning pain in the stomach, and was almost kill'd with heat. I ordered him to drink three gallons of warm water as quick as possible, and to take a large draught of the same after each time of vomiting; and

well deferving notice to Dr Hoffman, that he wrote a differtation to recommend it to more general use. The ancients, he observes, highly esteem'd it, and frequently us'd it in these disorders, which proceed from an acrimony of the juices, as ulcers of the lungs, bladder and kidneys, the leprosy, various eruptions of the skin, and ulcerations of the slessy, and obstructions of the viscera, &cc. They often prescrib'd 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 sew days, but more copious and longer in deeply-rooted and obstinate diseases.

was to be drank more sparingly, and only for a sew days, but more copious and longer in deeply-rooted and obstinate diseases.

The author recommends it in a Hypercatharsts, whether occasion'd by drastic purges, or some kinds of posson, the scurvy, all diseases proceeding from, or attended with, an acrimony or soulness of the juices, hypochondriac and hysteric complaints, and in the beginning of a dysentery. He surther tells us that 'tis a safe and excellent laxarive in all kinds of severs, the small-pox, measles, and all severish disorders, exhibited by itself, or with manna, syrup of rhubarb, cream of tartar, sal polychresium, and the like disolved 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 asternoon, but in a less dose, and always limiting the time of the course to the duration and obstinacy of the disease.

He observes that it 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, leses 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 driness, 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. Differt. de salub. ser. last.

wirtut. foarfim.

A remains to

-आर्थ श्रीवेद

as foon as it appear'd, from the gripings, that the poifon was going downwards, I likewife directed warm water, alone, to be plentifully thrown up by way of glyfter, in order to wash his bowels. The wretch complied, being now very defirous to live, and drank feveral 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 infipid; and the gripes that fucceeded were remedied by injecting water alone glyfterwife. By this fimple method the patient was recovered in a few hours, only the fwelling 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 less knowing without success) and all other liquors, because being very thin, it seemed fitter to absorb the particles of this poisonous falt, than any other liquor that was thicker, or already impregnated with the particles of some other body.

62. But to return to the rheumatism: how fuitable The aged in foever a milk-diet may be in young persons, and such as a rheumahave lived temperately and by rule; 'tis notwithstand-tifm not to ing unfafe to treat the aged in this manner, and fuch as be treated have long accustomed themselves to too free an use of by a milk have long accustomed themselves to too free an use of diet. wine and other fpirituous liquors; for it injures their ftomachs, and by confiderably chilling the blood, difposes to a dropfy. In this case therefore 'tis highly proper to use nearly the same method of cure, which I have already delivered (n): tho' fince I wrote that, I have found by experience that 'tis better after the fecond or at most the third bleeding, to purge often, 'till the fymptoms go off entirely, than to trust to bleeding only. For purging being an affiftant to bleeding in the cure of this difeafe, it will not be necessary to lose so much blood; and befides by this means there will be place left for opiates, which otherwise must be refrained, how fevere foever the pain might prove, because they fix the difease, and it does not yield so easily ro bleeding. But the purgatives should be of the milder kind, as tamarinds, fenna, rhubarb, manna, and folutive fyrup of rofes;

for fuch as are made of fcammony, 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 fornewhat earlier than ordiary.

A remarkable symptom accompanying intermittents.

63. It is to be noted here, that during the prefent conftitution I have observed a certain symptom, which, in respect of the violent pain in the loins, resembles a nephritic pain, and being accustom'd to succeed intermittents, proceeds from a translation of the febrile matter to the muscular parts of the body. But this fymptom did not require a different treatment from the intermittent which it accompanied; for it is exafperated, and life endangered by frequent bleeding, or any other evacuation .-- I judg'd it proper to drop this short hint concerning it, that no one might be deceiv'd thereby.

64. And thefe, worthy Sir, are the particulars which I have learnt from diligent observation, relating to the difeases which are the subject of your enquiries; and if they prove acceptable to you, or useful to others, I have gain'd my end: at least I enjoy the fatisfaction of having done my duty by complying with your request

in the best manner I am able, who am

Your most devoted servant,

points to a diopiya da this cale they lose

ing unfafe to treet the legal in this manner, and factors is never

proper to reference to the standard of the respond THO. SYDENHAM. of edition of the Experience that his better arrive to the

# An EPISTLE of Dr HENRY PAMAN to Dr SYDENHAM.

The Littlery and Treatment

empiries, barbons, and fuch unfaithed perfores,

Worthy Sir,

HE healing art hath received great improvements from your compleat history of acute difeases, founded upon accurate observation, and faithful experience; which you have written with an upright and honest view, and not to acquire riches or fame: whereas you might have fat down content with having done your duty, in attending your patients, and ferving the prefent age to the best of your ability. I have hitherto conceal'd my defires, but I suppose you already foresee what I am going to request. He that commends your works, encourages you to do fomething which may still add to your reputation. 'Tis a difficult task to treat of acute diseases, because they run thro' their states fo speedily, that unless they be seasonably check'd, life is eminently endangered thereby; no medicines being afterwards powerful enough to prevent death. But you have enumerated their fymptoms, and directed what is necessary to be done in every exigency. In effect, your effays on this fubject are a finish'd performance, and could admit of no addition, had not you promis'd us a treatife of chronic diseases; which may be respited, and allow time for enquiry.

We have frequently convers'd together concerning the venereal disease, the infamous origin whereof the Europeans sollicitously endeavour to clear themselves of, and, to make its traces still more obscure, derive it from the remotest Indies. 'Tis a sit punishment for the unbridled lust of the lascivious, and perhaps the cure is attended with greater dissipation, that the repentance may be proportioned to the crime. And he seems to have been touch'd with a sense of humanity and sin at the same time, who openly wish'd that this distemper

might be only once cured.

But as the cure of it often falls into the hands of empirics,

empirics, barbers, and fuch unfkillful perfons, they either fraudulently or ignorantly prolong it for fuch a length of time, to the great expence and greater affliction of the patient, that life becomes burthenfome to him thro' the violence and tediousness of the process,

and the difease a less evil than the cure.

I intreat you, therefore, as a friend, to fulfil your promife, and publish your remarks on this difease first, as an earnest of the rest. Inform us truly by what method and medicines it may be best cured: for 'tis enough for the patient to be punish'd by heaven, 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

Your most obedient servant,

Lambeth House, Feb. 12, 1638.

H. PAMAN.

Dr Sydenham's Answer to Henry Pa-Man, 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,

The author thinks meanly of himself. tise 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 pursuing which men of greater abilities may be enabled to investigate the history and cure of these diseases.

How nature acts in producing acute difcases, hard to be difcovered.

2. And, in reality, so various, uncertain and subtile is the procedure of nature in the production of these diseases, that the oldest physician living is not able to describe their different symptoms, and the methods of cure adapted thereto with accuracy. Such a work would afford sufficient employment for any ten physicians, succeeding each other for as many ages, supposing them

also to be men of eminent skill, indefatigable industry, and very extensive practice, which may furnish them with numerous observations: so far am I from having attain'd, or imagining I ever shall attain the art of

phyfic.

3. As to those chronic difeases, the history whereof I Difficult to promifed you to write, my thoughts are fo fully turn- treat of ed that way, that I wish my life may be prolonged for chronic difthis reason chiefly, that, by an attempt of this nature, eases. I may be ferviceable to mankind. But the experience of every day 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 direct the mind in its enquiries into fo intricate a fubject; the affiftance and light which authors promife, being rather false than true lights, which tend to miflead, and not to direct the mind in its refearches after the genuine procedure of nature. Most of their writings are founded upon Hypotheses, which are the refult of a luxuriant imagination; and the fymptoms of difeases (wherein their true history consists) as described by them, appear to be deduc'd from the same source; and the method of cure, also, is deriv'd 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 fhould prolong my life, and I can find leifure, I may perhaps put my abilities to the test. In the mean while, to convince you of my readiness to serve you, I prefent you with this fhort differtation on the venereal disease, as a specimen of the whole; it being the only one I have yet prepared for the prefs.

The history and treatment of the venereal disease.

4. But in the first place I must observe to you that I The cure of have met with feveral, who either with a good intent, the venein order to deter the incontinent from their vicious real difease, practices, by the apprehension of the succeeding punish- why not to ment, or to acquire the character of chaste persons, have be conceal d. not ferupled to affert that the cure of the venereal difeale

ease ought to be kept secret. But I cannot be of their opinion; because I conceive that there would be very little room left for charity, unless the missortunes which the inconsiderate bring upon themselves by their own fault, were to be alleviated with humanity and tenderness. It belongs to God to punish the offence, but 'tis our duty to affish the distress'd, 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.

Whence and at what time brought to Europe.

5. The venereal difease 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 (a). But to me it rather seems to have taken its rise from some Nation of the Blacks upon the borders of Guinea (b); for I have been informed by several of our countrymen of great veracity, who live in the Caribbee islands, that the slaves which are newly brought from Guinea, even before they land, and likewise those that live there, are

(a) That the venereal disease was known neither to the Greeks or Romans, should seem probable from the silence of all their physicians for at least two thousand years, and its not having been mention'd by the ancient 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 liv'd 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 sisteenth century; that in symptoms it differed from every other distemper, that had ever been known or observed; that the insection was propagated throughout Europe from the kingdom of Naples, where it first spread itself amongst the French and Neapolitans; and lastly, that it was imported to Naples by the Spanish soldiers, who serv'd under Christopher Columbus, from the West Indies, Astruc of the venereal disease, the English translation, vol. I. book I. chap. I.

(b) This notion is directly contrary to matter of fact; for it is certain that no Blacks were transported into Hispaniola before 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 insected the French and Neapolitans, and by them

was foon after spread all over Europe. Ib. chap. XI.

afflicted with this disease, without having lain with an infected woman; fo that it frequently feizes whole families, both men, women and children, And, as far as I can learn, this difease, which so frequently attacks these miferable people, does not at all differ from that we call the venereal difeofe, with respect to the symptoms, viz. the pains, ulcers, &c. allowing for the divertity of Called the climates; tho' it goes under a very different name, for yaws in they entitle it the yaws (c). Nor does their method of fome parts of America. cure differ from ours, for in both cases a falivation raifed by quickfilver carries off the difeafe; notwithstanding what we fay here of the excellent virtue of guaiacum and far faparilla in those places where they grow, which is judg'd to be nearly loft in their long passage to us. The Spani-

6. It should seem, therefore, that the Spaniards, and supwho first brought this disease into Europe, were infect- pos'd to ed with it by contagion communicated from the Negros have got it which they purchased in Africa in forms with the voltagiwhich they purchased in Africa, in some part whereof on. 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, fpreading by degrees, fo infected these parts, that if it had proceeded with the fame 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 focial duty. But like vegetables, being transplanted from its native place to a foreign climate, it flourishes less in Europe, languishing daily, and its symptoms Grows gentgrowing gradually milder. For at the first appearance ler daily in thereof, when a person was seized with it, it quickly Europe. infected the whole mass of blood, occasioning violent pains of the head and limbs, and difcovered itself by ulcers in various parts (d). But it is an hundred years fince it first manifested itself by a kind of virulent gonorrhæa, which kind of appearance it yet retains, endeavouring to go off by this discharge; and 'tis at-

tended

(c) This disease, says Dr Turner, in Guinea is called by the name of yaws, as I have heard from some failors, 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 Siphylis, 4th edit. p.6, 7. (d) This will appear manifest by consulting the learned Astruc's elaborate treatife on this difease; vol. I, book I. chap. XII, XIII.

tended with no other apparent symptom, except in fome few perfons, who are seiz'd in the beginning with a small ulcer of the pudenda, commonly called a shanker, the virulence whereof not being expelled by a gonorrhæa immediately infects the blood.

How propagated. 7. This difease is propagated, either (1) by generation, whence 'tis communicated to the infant thro' the crime of one of the 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 (e). For the grown persons, whose sless grown figures.

(e) When the venereal disease first made its appearance in Europe, it was reputed epidemic and contagious; but truth at last prevail'd, and it is now known by certain and indubitable experience, and the unanimous confent of all 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 poifon being transmitted by the parents, whilst the tender body of the embryo is form'd: or (2) by contagion, the distemper being transmitted from a diseased person to a found one. The first I much suspect, having never feen the venereal disease, strictly so call'd, and diftinguish'd by the pathognomonic symptoms of the diftemper, 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 acquirem 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 difease cannot be propagated by the first; and it does not feem to be plainly made out that it can be conveyed by the intervention of an infected subject; as by lying in the fame sheets, wearing the fame 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 affign'd fuch reasons for acquiring the distemper, have contracted it by other means, which out of shame they have distembled. It is therefore mostly, if not folely communicated by the immediate contact of one diseas'd 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 singer or hand into the places contaminated by a venereal ulcer or flux.

firmer with age, can fcarce be infected by this means without impure coition, yet the flesh of children being of a fofter and more fpungy texture eafily admits the infection; which I have known got by lying in bed with infected parents. (3) The touching of a foft part, especially in impure coition, which is the most frequent way of gaining the difease; for the penis being turgid with spirits appointed for generation, readily imbibes the infection, from a venereal ulcer, or puftule in the vagina; both which lying hid in the body, the woman may nevertheless seem to be sound; the virus being so detained by the moisture of these parts, as to infect the blood very flowly, or, which oftner happens, being diluted, or in part expelled, by the menstrual purgations.

8. This infection, in my opinion, first attacks the What part fleshy substance of the penis, which it corrupts, first first attackoccasioning an inflammation, and afterwards, by de- ed thereby. grees, an ulcer, from which the matter, that appears in a gonorrhaa, distills slowly into the urethra. I am inclin'd to believe that this is the case, because I have feen fuch a virulent matter ouze from the porous fubstance of the glans, and not discharged from the urethra, when there has been no ulcer either in the prepuce or glans (f). But at length penetrating deeper, it usually occasions an ill-conditioned ulcer of the prostate;

The two first of these ways of contagion are so well confirm'd 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 kiffing, lying in the fame bed, or handling the parts diseas'd, whereas there are above a thousand, who, in the same interval of time, have caught the diftemper from the breaft, and more especially from carnal copulation. 16. Vol. 1. Book 2.

(f) That this is a mistake in our admirable author I readily

grant with Astruc, who, however, has pass'd too severe a censure upon him for it, in the following words.

They are mistaken who think with Sydenham that the venereal poifon 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 infinuates ifelf into the urethra, and fupplies it with that corrupt matter that drops from it in a governhea; which is fo far from truth, that its absurdity is now known to every barger-furgeon.

This gentleman is of opinion that a gonorrhan is feated in the feminary receptacles both in men and women; and from hence makes four different species thereof in both sexes. Ib. Vol. 1.

Book 3. Chap. 1. Seef. 2.

which is frequently found in the bodies of such as perish by this disease (g).

The various fymotoms of the first state enumerated.

9. This difease proceeds in the following manner. The patient, fooner or later, (according as the woman with whom he has lain was more or less infected, and according as his conftitution renders him more or lefs dispos'd to receive the infection) is first feiz'd with an uncommon pain in the parts of generation, and a kind of rotation of the testicles; and afterwards, unless the patient hath undergone circumcilion, a spot, refembling the meafles in fize and colour, feizes fome part of the glans, foon after which, a fluid like semen flows gently from it; which differing every day therefrom, both in colour and confiftence, does at length turn vellow, but not fo deep as the yolk of an egg; and when this disease is more virulent and severe, becomes green, and is mix'd also with an aqueous humour, copioufly streak'd with blood. At length, the puftule or foot terminates in an ulcer, at first resembling the aphthe 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 gonorrhæa in those who have formerly had this diforder, or whose glans is bare; the hardness and firmness which this part acquires by being expos'd 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 circumcis'd feldom have an ulcer of the glans, but only a gonorrhæa.

by other symptoms; as (1) a great sense of pain upon every erection of the penis, as if it were violently squeez'd 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 stretch'd in every erection, causes violent pain (b). There is likewise (3) a heat

(g) The author doubtless means upon diffection, without which the proflate do not come in view.

(b) This and the former fymptom are indifcriminately term'd, by some writers, a cordee, or priapismus.

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 (i). And fometimes (4) the urethra being excoriated by the continual flux of acrimonious matter, and nature too hafty in generating new flesh, the part is supplied with 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 passage of the urine; and these caruncles also emit a certain icher, which proceeds from the little ulcers adherent thereto, and greatly hinders the cure, occasioning a disorder more to be apprehended than death itself. Moreover, (5) it often happens that the matter which should have been discharged by the gonorrhæa is thrown upon the scrotum, either by violent motion, or the use of astringents, and causes a violent pain and inflammation, with a confiderable fwelling fometimes of one, and fometimes of both the tefticles; the gonorrhæa in the mean time abating, but the heat of urine remaining equally troublesome. These are the common fymptoms of this difease, during this state thereof.

II. But when, by the continuance of the difease in Those of the those parts, the virulence is communicated to, and by second state. degrees corrupts the blood, or when a putrefaction of the juices is occasioned by the retention of the virulent matter in the body, the true pox arises; in which (1) fwellings, or buboes, appear in the groin, and conftitute the first degree thereof. (2) Then violent pains feize 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 foon as the patient is warm in bed, and do not ceafe till towards morning. (3) Scabs also and fourf appear in various parts of the body, which are of a yellow colour, like a honey-comb; by which mark they may be diffinguished from all others; and fometimes they are very broad, and refemble the leprofy, as it is defcribed in the writings of phylicians: and the more this fourf spreads, the easier the patient All the fymptoms increase by degrees, and particularly the pain, which at length becomes fo in-

U 3 (i) This is ordinarily entitled a dysuria.

tolerable, that the patient cannot lie in bed, but is forced to walk about his chamber in a reftless manner till morning. Moreover (4) the feverity of the pain oceafions hard nodes, called exostoses, to grow upon different parts of the skull, and the bones of the legs and arms; which refembles the bony excrefcencies 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. (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 foon confume; fo that the nofe for want of its support falls flat. (7) The ulcers and pain increafing every day, the patient, wasted partly by the continued, pain, and partly by the ulcers and corruption, leads a life far worfe than any kind of death, thro' the stench, corruption and shame attending it, till, at length, his limbs rot away after each other, and the mangled carcafe, being odious to the living, is buried in the earth (k).

The author

12. As to what is term'd the intrinsic and effential ignorant of nature of this disease, Iam asignorant of it, except asit this disease, appears from the symptoms just enumerated, as of the effence of any plant or animal. But however that be, I am perfuaded that the humour occasioning this difease Caus'd by a is of a very inflammatory nature, and ought to be evavery inflam- cuated by fuch means as experience shews to be most matory hu- effectual; no intermediate 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 prov'd by

> (k) How emphatical, full and accurate a description is this of the beginning and progress of the venereal dilease! This appears to be copied from nature, and as long as the difeafe continues, will be a standing proof of the great experience of our author, and his close attention to the steps of nature. Default, sensible that nothing could be added to this hiftory thereof, has transcribed it in a treatife he wrote on this distemper, and at the conclusion of it makes this remark :

> From this exact description which Sydenham has given us of the venereal diforder, it appears, that the gonorrhea, bubo, physmolis, paraphymolis, shankers, warts, swellings, &cc. differ only from the pox more or lefs; that the leaven which produces them all is the same, and that it is only from the difference of the parts seized, that these different complaints take their distinction. See his treatise on this distemper, the English tran station. p. 7.

examples, that mercury has fometimes cur'd the venereal difease without a falivation, or a decoction of the woods without a fweat. Now having learnt by experience that the common fudorifics have been as effectual here, as a decoction of the woods; fo I doubt not that if a remedy could be found, either in the vegetable or animal kingdom, of equal efficacy with mercury in raifing a falivation, it would have the fame effect in curing the venereal disease (1). But as this disease, when 'tis only a gonorrhæa, differs confiderably from that which hath infected the whole mass of blood, and justly deferves to be entitled the lues venerea, fo it requires a different kind of evacuation from that which is necesfary in a confirmed pox.

13. With respect therefore to a gonorrhaea, of which The cure of we first treat, the whole of the cure, as far as we have a virulent

yet gonorrhæ2

(1) Dr Turner, having given a floort historical account of mer-

cury, 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 Afiruc advances, which also invalidates our author's argument against mercury, as a specific .-We have long fince learnt from experience, fays ke, which is superior to any argument, that mercury, even tho' it brings on no falivation, shall notwithstanding produce the same effects in the blood, as though a plentiful falivation 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 folids, remove the obstructions, dispel the venereal poison, and absolutely extirpate the disease. See his treatife of

the venereal disease, Vol. 1. p. 227.

Desault's method, which consists in a continued course of mercurial inttion, checking the falivation when it rifes, by purgatives, and using a mercurial water for common drink, is also a proof that mercury will cure without falivating; of which he produces many instances. Hoffman also delivers a peculiar method of curing the venereal difease by mercury without raising a fallvation. Vid. Hoffm. Oper. tom. 3. p. 321.

yet experienced, turns upon purging medicines; by means whereof the peccant matter is either evacuated, or the natural juices of the body drain'd 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 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 a clock, (that the patient may fleep 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 efteem it fufficient to purge every other day for another fortnight; and then the pills may 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 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 fqueezed 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 difease not thoroughly overcome; for tho' it be conquer'd in some measure, yet upon any flight occasion, as by excessive drinking, any violent exercise, or the like, it begins again, and the gonorrheea returns, that is, if the purging

be discontinued before the disease is perfectly cured (m).

15. If the gonorrhea does not yield to this course of Strong purpurging, it will be proper between whiles, (efpecially gatives in fuch as are not eafily purged) to give fome stronger sometimes purge instead of the pills, as the following potion, requifite. which having been taken only once, hath proved more effectual fometimes in stopping a gonorrhæa than the frequent repetition of lenient cathartics.

Take of tamarinds, half an ounce; the leaves of fenna, A frong two drams; rhubarb, a dram and half; boil them in purging a sufficient quantity of water, to leave three ounces draught. of the strain'd liquor; in which diffolve manna and solutive syrup of roses, of each an ounce; syrup of buckthorn, and electuary of the juice of rojes, of each two drams; mix them together.

Or when the cure goes on flowly, exhibit eight grains of turbith mineral, only twice or thrice, at proper in-

(m) 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 fymptom, by over-heating the patient. In this case therefore I direct a purging apozem to be prepar'd of pearl barley, marshmallow roots, the leaves of mallows, and femmel feeds, boiled in enough water, to a pint and half, dissolving a sufficient quantity of mama, and GLAUBER's falt in the strain'd liquor : to be drunk warm, about five or fix ounces at a time, at fuch 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 chalk, nitre, camphire, and cochineal, in a solution of gam arabic in barley-water sweetned with fine fugar. And when by this means the heat and pain in making water abate, I exhibit mercurial purges, if there be co-casion, and the habit be strong enough to bear them, but with great caution; being abundantly convinced that they sometimes do mischief, however discreetly us'd.

For as Afruc rightly observes, by the use of mercurials the stomach is weakened, and the strength impair'd, 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 conceal'd 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 be, and I doubt not but feveral other physicians have feen the tame, that mercurials, us'd even with caution, have brought on afresh a dysuria that was going off, and a running that was just finished, restoring it to its viruleney, as its yellow and green colour sufficiently evidenc'd. See his treatise of the ven. disease, vol. I. p. 278. Seet. 6.

tervals, left it occasion a spitting: and this is the most powerful remedy to conquer an obstinate gonorrhea. 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 fometimes the patient hath fuch an averfion to repeated purging, that he cannot abide the fight or fmell of the medicines. And fometimes a peculiarity of constitution obtains, so that the strongest purgatives avail not, whence a fufficient evacuation of the peccant matter cannot be made; and whilst we follicitously, but fruitlessly endeavour to effect the cure by this means, the difease at length advances, and becomes a true pox in fuch habits. In these cases, therefore, recourse is to be had to glysters, which will answer both indications; (1) by evacuating the humour, and (2) making a revulfion from the part affected. Befides, this method is fometimes more expeditious than the former, tho' in my opinion 'tis not equally fafe; 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 eafily be prevented by exhibiting cathartics on the intermediate days, in order to affift the glyfters (n).

17. Wherefore

(n) 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?

DrTurner observes that the cure by glysters, which were contrived for those, whose aversion to medicine is insuperable, is by throwing up half an ounce or fix 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 fort, or the elect. de suc. 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 ballamic also when the virus is taken off) is scarce to be consided in: nor have I known (unless very rarely) that it has answer'd the expectation. See his Siphylis, p. 79, 80. 4th edit.

17. Wherefore I proceed in this manner: I give the In what abovementioned pills, or others of a like kind, two or manner to three mornings fuccessively; and then I order the fol-begiven. lowing glyfter to be injected twice a day, viz. in the morning, and at five in the afternoon, till the fymptoms go off; except that once or twice a week I exhibit a cathartic, omitting the glyster that day.

Take of the electuary of the juice of roses, fix drams ; The ourga-Venice turpentine, dissolv'd in the yolk of an egg, tive glyster. half an ounce; dissolve them in a pint of barley water, and to the strain'd 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 Mecha, dropt upon a piece of fine fugar; this medicine being a kind of pure liquid turpentine, has the fame virtues, and does great fervice in ulcers of the pudenda; but where this cannot be had, the quantity of a hazle-nut of Cyprus turpentine may be fubflituted instead thereof, to be taken in the same manner.

18. Whatever method of cure be us'd, the patient The regimust during the process refrain from falt and spiced men to be meats, and all others of difficult digeftion; as beef, pork, observ'd fish, cheefe, roots, herbs, and fruit; instead of which I during the fubftitute mutton, veal, rabbit, chicken, and other light food. And I order him to feed very sparingly upon these, taking 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 fupper he may be allowed a little fmall beer. Moreover, in order to abate the inflammation, and heat of urine, I direct fome cooling emulfion, prepared in the following manner, to be drank on the intermediate days of purging.

Take of the feeds of melons and pompions, each half an Acooling ounce; the feeds of white poppies, two drams; eight emulion. 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 strain'd liquor with a sufficient quantity of fine sugar.

## The History and Treatment

Bleeding when to be used.

19. In a very fanguine constitution, the disease at the fame time being 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 right arm; but I am against bleeding fooner, lest the disease should be more confirmed thereby (0). I do not depend much upon injections into the urethra, because they ordinarily do much more mischief than fervice, either by their pungent acrimony, or stypticity: however, towards the declension a small quantity of rose-water may be injected.

Purging to be perfifted in longer in Such as are hard to purge.

20. I am not hitherto acquainted with a more effectual and fuccefsful method of curing a gonorrhæa, efpecially in fuch as are eafily purg'd; but in persons of a contrary disposition, tho' it never fails, yet it requires a long time to compleat the cure. In fuch persons therefore bleeding is to be repeated, and the purges must be made fironger, repeated oftener, and continued a longer time (p); or glyfters must be injected as abovemention'd, purging being the capital remedy here. For it may be truly affirmed, with respect to this disease at least, that whoever evacuates sufficiently, makes the best cure; provided no mineral waters be used, which by their affringent and too healing virtue shut up the remains of the difease in the habit, which should have been carried off, and fo render it more confirmed, as I have found by experience. Hence I have frequently observed swellings of the ferotum succeed from drinking them, at the beginning, or height of the difease, and

Mineral waters bad in this diftemper.

> (0) Where ever bleeding is proper, it should feem 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 enfue; for experience shews that bleeding, fo far from exasperating the disease, always renders the fymptoms more mild, and of course facilitates the cure.

(p) We learn from experience that there are constitutions which relift the operation of very strong purgatives, but readily yield to mild ones; the great irritation caused by the former, drawing the bowels of fuch 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 fome colics, where gentle cathartics anfwer the end, and in others where the strongest, however necesfary, avail not at all, nor indeed can be fafely given, unless join'd with an opiate, to abate the tension of the intestinal fibres, and by this means dispose the bowels to obey their operation.

more dangerous fymptoms, as caruncles, when they were drunk towards the decline: and this I politively affert, notwithstanding mineral waters are ordinarily and frequently directed in the prefent practice in this cafe.

21. I am also well aware how much some practition- Astringents ers boast of curing this disease in a shorter time, by and decoctimeans of remedies which bear a great name, but I have ons of the found by repeated observation that the matter which ful. should have been expelled, being detained in the body by aftringents, has proved highly detrimental to the patient, by frequently returning into the blood, and at length cauling the pox. Nor is the decoction of the woods more effectual, tho' 'tis fafer; for under a pretence of exhibiting specifics, the whole body, but especially the parts affected, already over-heated, are still more inflamed; and fometimes, as I have already obferved, I have known the gonorrhæa return, which vanish'd a little before (q).

22. But it must be observed that if the glans be to- purging to tally covered by the prepuce, and the lips of it so be refrainfwelled, hard and callous from the inflammation, that ed in case of it can by no means be flipt back; 'tis a fruitless endea- aphymoss. your to attempt the cure of the gonorrhæa by purging, tho' the strongest cathartics be given, and repeated every day with this view; unless means be us'd at the time to reduce the part affected to its natural state by removing the hardness and swelling, which continually increase the gonorrhæa. For this purpose I direct the The manner following fomentation.

of curing it.

Take of the roots of marshmallows and white lillies, An emollieach an ounce and half; the leaves of mallows, mul- ent fomenlein, elder and henbane, and the flowers of camo-tation. mile and melilot, of each one handful; the feeds of flax and fenugreek, each balf 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.

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 swell'd lips of the prepuce. But if the ulcer in the lips of the prepuce, or glans, by its constriction and callosity, hinders the prepuce from

flipping back with eafe, besides the fomentation above mentioned, I prescribe the following liniment.

A digestive 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 (r).

A swelling of the scrotum, how remedied. 23. But if, either from stopping the gonorrhæa too foon, violent exercise, or any other cause, the scrotum be greatly swelled, which is now the seat of the disease, I apply the abovementioned somentation twice a day to the part affected, and in case 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 likewise 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 (s): and here we finish our observations concerning the cure of the gonorrhæa.

24. But

(r) If the inflammation here be considerable, bleeding should be used, and repeated as there is occasion, and the body kept open with emollient diluting glysters, observing also a light diluting diet, if it be attended with a sever, 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 conceal'd under the prepuce; and an emollient cataplasm, like that described by our author, is to be applied to the tumessed 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 surther information in this particular. This latter recommends it as very necessary that the penis in this case be kept tied up to the belly.

(s) Dr Thrner entitles this an hernia hamoralis. It is ordinarily occasioned by the fudden stoppage of a gonorrhea, 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 be kept soluble by cooling laxative glysters; and all stimulating, restringent and balfamic medicines entirely forborn. The external applications prescribed by our author will certainly

24. But if the diftemper be got to fuch a height, as The veneto be justly entitled the venereal disease, or a confirm'd real disease pox, the procedure must be different from that above only by falldelivered; for the cure being more difficult, demands vation. more powerful remedies; and in reality not an instance can be produced, fo far as I know, where this difeafe hath been cured unless by a falivation by mercury; notwithflanding what has been haftily advanced by fome learned, as well as illiterate perfons, to the contrary (t). Since therefore a falivation answers every purpose here, I need only deliver what reason, and experience confirming reason, intimates concerning the raising and carrying it on.

25. And first I cannot conjecture the reason of the No necessity frequent cautions which are inculcated by fome physi- of preparcians, as to preparing the body duly by cathartics, di- ing the gestive medicines, bathing, and the like; not to men- body for it. tion bleeding, which some esteem the principal thing. For if we speak frankly, the whole of the question is reducible to this, viz. that fince a falivation must be procured by a poison (for we have not hitherto discovered a fafe and innocent medicine productive of this effect, and the difease cannot be cured without it) whether 'tis better to make use of it, when the body is in full ftrength and spirits, and consequently more able to bear it, or when it has been debilitated by bleeding and a low diet? Doubtless, every judicious and considerate person would think it better to do nothing at all, than to do mischief by such unseasonable attempts. Befides 'tis manifest from experience that a falivation is better supported by those who have not been debilitated by evacuations, or any other way, than by fuch as have been weakened before entering upon the course (u).

do fervice, along with the method just laid down, remembering to support the part with a convenient truss.

26. Omitting

Hoffman affires us that he hath sometimes known such tumors happily discuss'd, by only anointing the scrotum with a mercurial continent; which could not be refolv'd by the most powerful remedies, nor even by mercury given internally. See Hoff. op. tom.

(t) See above (l) where the contrary feems to be fully proved.
(u) Preparatory to raising a fallvation by mercurial unction, (and the same holds good of the internal method) Aftrue 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

How to be conducted.

26. Omitting therefore this mischievous preparation, as soon as I am called, I prescribe the following ointment.

Take

feafon of the year for fuch a remedy; (3) the preparing the body in fuch manner, that the diforders of the patient's blood, if there are any, may be corrected, and the dangers that are to be fear'd from the use of mercury may be avoided; and lastly (4) to the pre-

paration of the ointment to be employ'd.

With respect to the first, the unction is to be refrain'd in perfons afflicted with acute, or very dangerous chronic difeases, un-less it be highly probable that the latter originally proceed from the pox. Neither is it to be us'd 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, fpring or autumn is most suitable, and winter better than summer; but if the fymptoms 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 purg'd gently with cooling laxatives, and to use the warm bath twice a day for five, fix, or eight days, as it shall feem 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 refrain'd. And if the pox be complicated with any other violent disorder, a more laborious method of preparation is neces-fary, adapted to the state of the patient. But there are some ca-fes which will not even stay for the common preparatory method; to wit, if a carious bone in any of the limbs shall be fractur'd 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 imposshumation. In these cases bleeding and purging, at most, being only premis'd, the mercurial antion must be instantly us'd, and in large quantities for the first unction must be instantly us'd, and in large quantities for the first or fecond time, if the fymptoms shall seem to require a plentiful dose of mercury, to abate their fury. The violence of the disease being abated, we may then flacken our pace, and proceed more flowly, not only that the mercury by remaining in the blood may have the more force upon it, but also lest by too great haste fome 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 passage, 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 listen'd to, when in his Epistola responsivia de morbis venereis, he afterts 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 lower'd by bleeding, and giving a purge

or

Take of hogs lard, two ounces; quickfilver, an ounce; Amercurial mix them together.

I add no hot oil, or any thing elfe to it; because every addition hurts the ointment if it hinder its operation, if not, at least it is no improvement to it; and perhaps those ingredients which are added under the title of correctors, do the fame here (if indeed they act at all) as experience flews fuch things ordinarily do when added to cathartics, viz. occasion gripings and render their operation more difficult, from the struggle arising between the antidote and the purgative, the virtue whereof wholly confifts in being opposite to nature,

or two in fifteen days, that he should be unable to undergo the exhibition of mercury; fince on the contrary it is evident, that 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 lessen'd, (3) that the folid parts being relax'd, the way is made more easy for the mercury to perform its effects in the blood, for the artrition of the blood and humours. Lastly, for the excretion of the humours by the strainers of the mouth, intestines, skin and

He proceeds to deliver the rules to be observed in making the

ointment, which well deferve to be confulted.

See Astruc of the venereal disease, Vol. 2. book 4. Chap. 6.

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 folid parts, and thus causes violent symptoms in the nervous system, than by the glands of the skin; which are the best and 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 fervice, 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 falivate; 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, affifted by fudorific decoctions, the fymptoms have been abated for a feafon; but after a while unexpectedly returned, with greater violence, because the traint 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 feat of the nervous parts. See new experiments, 8cc. upon mineral waters, translated by Dr Shaw p. 184, 185.

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 arm-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. After the third unction the gums generally Iwell and the falivation rifes; but if it does not appear in three days after, 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 poffet-drink. When the falivation begins, the physician must attend with great exactness to the degree thereof, left by inconfiderately using too many medicines, it be raifed fo high as to endanger the life of the patient. When it is got to a proper height, in which flate the spitting generally amounts to two quarts in the space of twenty four hours; or if the fymptoms 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 fneets, for others that have been worn fome time fince they were washed; because those he lies in being fouled with the ointment, are apt to increase and keep up the falivation beyond the due time. But if the falivation abate before the fymptoms vanish, it must be quickened by exhibiting a feruple of mercurius duleis, at a time, occasionally.

A loose nets happening, how check'd.

27. Sometimes it happens, especially in such as are easily mov'd 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, but the cure of the disease is hindered thereby, which is us'd to yield only to falivation. 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 falivation rises well, must be stopped by liquid laudanum, increasing the dose and repeating it according to the urgency of the symptom; or a dram and half of diascordium must be given between whiles, occasionally. Upon the stoppage of the looseness, the faliva-

HOIL.

tion, which fcarce appear'd before, usually goes on in

a proper manner.

28. When the patient appears to be recovering in all other respects, only his mouth continuing ulcerated; (which is the genuine effect of a falivation) the spitting which abates now every day, must not be check'd 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 occafion fresh disturbance, unless that moderate spitting be permitted, which will cease as soon as the patient after his recovery, hath exposed himself for a time to the open air. For this reason I esteem it dangerous to put a stop to the remaining fallvation, which is upon the point of ceafing spontaneously, either by purging, or 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, having been at a large expence, and gone thro' a tedious course, earnestly long for health, and had certainly obtain'd it, if the falivation had been fuffered to terminate fpontaneously. 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 fometimes done for fome months) than to check it too foon (x).

29. But the I disapprove of purging at the declensi- Purging on of the falivation, for the abovementioned reasons, it sometimes may, neverthelefs, be indiffenfably necessary at the height necessary at

(x) Boerhaave calls this an excellent rule of our author, and a- vation. grees with him in condemning sudorific decoctions; observing that a relapse need not be apprehended, if sour, 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 But where the fallvation has been fufficiently copious and conti-

nucd 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 defirable fafety 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. Nei-should he venture into the open air too hastily, especially if it be the winter feafon.

thereof; of the fall-

thereof; that is when it hath been fo far raifed, by wrong managment, as to endanger life, in which case 'tis not only safe but requisite to lower it by a purge, to such a degree as is consistent with the strength of the patient, after which it is to be left to itself.

But not after it is over.

30. If it be demanded, whether we should be fatisfied with falivation only, without having recourse to cathartics, or any other medicines which are usually administer'd after it is over. I reply that besides what has been just mentioned, which reason and experience confirm, I would willingly learn how it comes to be more necessary to purge after a falivation, than to falivate after purging; fince purgatives, especially scammony and fuch acrid cathartics, leave fome remains of malignity behind them in the body, which notwithflanding 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 would gladly know the reasons why we endeavour to expel the remains of the mercury by cathartics, whilft we not only neglect, but check the falivation, which is the genuine and almost the sole method whereby nature ordinarily does and can effect it? But fuch errors are to be afcribed to our limited capacity, which hinders our coming at the truth, that lies too far out of our reach, fo 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 eastly borne by some subiests.

31. But tho' most persons may be cured by the abovementioned method, it must however be carefully noted, that some are posses'd of such an idyosincrasy, or peculiarity of constitution, both in respect of salivation and purging, (such as are not easily mov'd by cathartics, being likewise hard to salivate) that it will 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 carefully beware of endeavouring too obstinately to raise a salivation, as being directly opposite to nature; the process having prov'd satal to abundance of persons, thro' a neglect of this caution. For in case of such a disposition, the ob-

tinate

stinate exhibition either of external or internal medicines for this purpose, instead of answering the end, occasion gripings and bloody stools; nature endeavouring to carry off the poison of the mercury by this way; or otherwise a pain of the stomach, faintings, cold fweats, and other terrifying fymptoms enfue, fo that the patient is put in imminent danger of death, and perhaps destroy'd thereby (y).

32. In fuch cases, therefore, tho' it may not be amis How such to repeat the unction, and the turbith mineral again, are to be when the falivation does not rife in four or five days af- treated.

(y) Tho' it be a case that does not frequently happen, yet it is certain from undoubted experience, that mercury shall some-times 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 fuch as are cutaneous and flight; nor raile any falivation, or at least a very small one, and more like a spirting than a falivation. 'Tis 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 veffels, 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 the attenuated by the

mercury, fupply but a finall portion of lymph, and fuch as shall fearce suffice to keep up the salivation.

(3) If any other evacuation, for instance, by sweat, urine, stool, Oc. be more copious than usual, and the lymph be diverted another way, where it meets with a freer and eafier passage; in this case the salivation must be lessen'd, if not wholly suppress'd.

(4) If the falival glands be either naturally or difeafedly denfe, compact, hard, or schirrhous, and so give a difficult and slow passage to the falival lymph that is to flow thro' them.

(5) If thro' any natural or vitious constitution of the blood, the faliva flowing into the mouth be render'd fo thick, viscous and tough, as to be void of acrimony, and incapable of eroding the muciferous veffels 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 fmall a quantity, that it shall have little or no effect upon the receptacles of the mucus.

(7) If there be little or no fympathy between the inward parts of the mouth and the falival glands. For this, neither the irritafalivation. And if any one should be surprized at us for admitting this variation in fympathies, I would have him confider that fympathies 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. difeafe, vol. 1. p. 225, 226.

ter the last unction; (interposing some days between each unction) yet great care must be had not to be so refolutely bent to raife a falivation, as to continue to force it in opposition to nature. In my opinion therefore this method is to be followed: as foon as a fickness at stomach, or gripings succeed, medicines must be refrained, till these symptoms are gone off; for by the frequent repetition of powerful medicines to raife a flux, when nature opposes it, a dysentery will certainly follow the gripings, and the fickness at stomach terminate in death. Whereas on the contrary, if a milder and flower method be used, 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 loofeness, a cure will be obtained. For the falivation does not rife to the height, yet an extraordinary iputation will be occasioned, accompanied with a fetid fmell, which is the concomitant of a genuine falivation: 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 falivation. By this method all the fymptoms of the difease will be conquered, provided it be continued a proper time.

Salivation not curative of the pox, rohen it is join'd with a gonorrhoea.

33. It must however be observed that the a salivation excells every other remedy in curing a confirmed pox, yet it is not able to conquer a gonorrhæa, when join'd therewith, for this diforder continues after the former is perfectly cured, fo that from hence 'tis reafonable to conclude, that mercury is possessed of no specific virtue immediately curative of the pax, tho' perhaps it may be entitled a specific mediately, inasmuch as it cures the difease by the help of a salivation, which however is almost as absurd as to term a lancet, a specific for the

Pleurify.

The method inis cale.

34. But to refume our subject; when the pox and a to be used in gonorrhaed meet in the same person, the cure of the latter is to be attempted either before, or after the falivation, tho', in my opinion, it is effected with more fafety and eafe after the flux is over; for being joined with the pox it yields with greater difficulty, but having been in fome meafure conquered by the preceeding falivation, it is ordinarily cured with lefs trouble: purging, however, must absolutely be refrain'd as long

as the falivation continues in the fmallest degree. Upon this account, therefore, the cure is more fafely conducted by giving a dose of turbith mineral, once or twice a week, than by any other purgatives; as it will in fome meafure promote the flux, whilft the matter productive of the gonorrhæa will, in the mean time, be gra-

dually carried off (z).

35. It must likewise be noted, that if there be a tu- An exostomor, usually termed an exostosis, upon some bone, sis how to which has been of fo long standing as to render it cari- beremedied. ous; it will be in vain to attempt the cure of the difease by a falivation 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 (a).

36. If the ulceration of the mouth, which generally The ulceraaccompanies a falivation, be fo exceeding painful, or tion of the the mouth fo excoriated as to bleed continually, it must mouth, be often gargariz'd with rose-water, milk and water, or bow miti-

(z) Experience shews that a gonorrhan frequently continues after the venereal difease has been carried off by a falivation.

Boerhaave tells us that he has feen ulcers all over the body and the penis cur'd by falivation, whilft the gonorrhaea remain'd.

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 fo full and circumstantial we cannot do better than refer the reader thereto. See his treatise of the ven. disease, vol. 2. book 4. chap. 10. sett. 1. p. 159.

(a) Aftrue is of opinion, that those exostoses, which remain after the course of mercurial unction, are not to be meddled with, pro-

vided they give no pain.

But if an exostosis, fays he, which has relisted 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 taries 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 incition is to be made upon the skin, the four dependent corners should be taken off with the scillars, and the periofteum being scraped away, the exostosis is to be perforated with a trepan, in feveral places, and then to be entirely ftruck off with a faw or chiffel, and the bafis that it grew upon is to be brought to exfoliation with powder of myrrh, alces, or eupherbium, with tinctures from extracts of the fame 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 fame manner as ulcers which are joined with a caries of the Subjacent bone. See Aftruc of the ven. difease vol. 2. p. 189, 190.

a decoction of barley, marsh-mallow roots and quince feeds. This is the only troublesome symptom that I have met with in a falivation, when it was conducted in a proper manner; and in reality if the pain and ulceration of the mouth could be any way prevented, the cure of this disease would be effected with as little trouble, as is that of fome others, which are much lefs attended to (b).

The regimen in a falivation.

37. As to the diet and other regimen, I conceive they ought to be the fame in a falivation, 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 himfelf warm in his room, and eat fparingly of eafily digeftible food; fo I can fee no reafon why a person in a salivation should be kept constantly in bed, and forbid a slender diet, which may ftrengthen nature, ftruggling with the poison. For numbers have been destroyed, 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 fufficient spirits left to recover, finks thro' debility, or if he escapes 'tis with so much difficulty and pain, that life is not worth the purchase.

38. And here 'tis easy to obviate the objection, why fome that undergo fo much, in that state of the disease which we have just mentioned, are obliged to go to France, in order to obtain the cure? the reason of this I take to be, that in fuch perfons the constitution is broken and their strength exhausted, so that our thick and moift air hinders their recovery; whereas the air of the French climate which is more healthy and clear, is fuited to restore their strength and spirits; and not that the phyficians of that nation, however learned they may be, are acquainted with a better method of curing this difease, than those of our own country. But to return to the regimen.

39. I am therefore of opinion and experience confirms it, that besides water-gruel, panada, posset-drink,

(b) If the ulceration foreads and eats deep, detergent gargarifms should be us'd; and the ulcers are to be frequently touch'd with a mixture of honey and spirit of falt or vitriol, or the like; at the same time observing to lower the fallvation, if it be rifer too high.

Why Some are obliged to go to France to perfect she cure.

warm small beer, &c. veal and chicken broth and the like, may and ought to be indulg'd in a moderate quantity; and that as foon as the fwelling of the gums is fo much abated that the teeth can be closed, rabbits, pullets, lamb and fuch light meats may be permitted sparingly, and the patient likewise may fit by the fire, or lie in bed, as he likes best: for as the cure of this disease is to be effected by a falivation, and not by fweating; I fee no reason for overheating the patient unnecessarily.

40. This method is not only more expeditious, as not requiring so many days to be fruitlesly spent in pre- ges of this paring the body before falivation, nor fuch frequent method. purgation, nor the common decoctions, after the falivation is over; but I am well affured it is also easier and fafer and more preventive of a relapse; which any perfon, who has follow'd the other method, will experience upon making trial of this. At least it has fucceeded with me in feveral patients, fome whereof had already undergone more than one falivation, ineffectually, having always relapfed from the causes above enumera-

41. But I need not use many words to gain your The author esteem, who have long been convinced of my probity, apologizes and vouchfafed to advance my reputation. I forbear for himfelftherefore to add any thing further relating to this difease, 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 inconfiderable foever it be, either in point of value or bulk; because I wrote it principally for the public good, and to testify my regard for you. And tho' I have a fingular esteem for you, yet is it less than you merit both from me and all those to whom your great learning, affability, candour and other virtues are known. And indeed I do not flatter you, when I affure you, that I have always fet the highest value on your friendfhip; for amongst the observations I have made during the short period of my life, this is well worth notice, and I would likewise particularly recommend it to my fon, namely, that an acquaintance with men of eminent probity and virtue hath always been of fervice to me; whereas, contrariwife, an intercourse with vicious men, (if such a friendship, as is not founded on virtue, does not rather deferve to be stilled a combination or

conspiray) tho' they never injured me by their words or aspect, hath at length, I know not how, sometimes proved prejudicial to my person, or interest. I conclude with entreating you to continue your friendship to

SIR

Your most obedient servant,

THO. SYDENHAM.

## An EPISTLE of Dr WILLIAM COLE to Dr SYDENHAM.

Worthy Sir,

OU will perhaps wonder what impertinent perfon it is that breaks in upon your ferious studies; but I hope for your pardon, when I assure you that 'tis chiefly to express my acknowledgment, for the singular advantages which I have received from your elaborate essays on acute diseases. For you have specified all the constitutions of years and of the air, which you undertook to treat of, with great accuracy, and in a new method, and have intimated such genuine and readily obvious indications, for the cure of 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 design'd to treat, that I can scarce forbear praising you for every particular, yet I chiefly thank you for your method of treating the small-pax, by which that, hitherto, satal 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 to be esteemed the guardian of mankind, and a sure guide to the sick in the extremest danger, leading them to health, in case

they follow your directions.

For my part, tho' I somewhat distrusted my judgment, yet I have long been of opinion that the eruption of the puftules in the small-pox is not the effential difease, but the crisis of the sever; and, accordingly, that like other crififes, it required a regimen, in which, by the unanimous confent of phylicians, the whole bufiness is to be left to nature, provided all things go on in a proper manner; which generally happens in this difease, unless the blood be immoderately agitated in the beginning. But, after having perused your excellent treatife, I found that those fears which had so long possessed me and others were groundless; and I ventur'd to treat my patients according to your method, (tho' fometimes not only the common people, but phyficians condemned it) which prov'd fo fuccefsful in those that complied with it, that, whatever others think, I shall always esteem myself happy in the

possession of fo valuable a treasure.

And moreover, when I was called to persons afflicted with the confluent small-pox, which, however, feldom happened, I fcrupled not, upon your authority, to have recourse to opiates though they seemed to be expiring, and have had great fuccefs. And, in reality, you feem'd to have given us fo compleat a treatife on this difease, that I should easily have imagined that the fubject was exhausted, had I not lately been informed by my intimate friend Mr Kendrick, who highly extols your civility, that you had fome new observations relating thereto, which I cannot but think must needs be eminently useful in practice, because they are the fruits of your labour; fo that unless you communicate them to the publick you will injure mankind and obstruct 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 fame gentleman, that you have fome curious observations concerning hysteric diseases; which, have exercised and fatigued the minds of the ablest physicians of all ages, and often yield not to the methods of cure delivered; demonftrating firating by this how nnfafe it is to truft to our reason in philosophical matters, except in such things, as are manifest from the testimony of the senses. therefore, doubtless, greatly oblige both the present age and posterity by publishing your fentiments of these difeases. At least I beg you will not be offended at the request which I, tho' unknown to you, have ventur'd to make both for my own and public good, and that you will reckon amongst the number of those who are most devoted to you,

Your obedient fervant

Worcester, Nov. 17, 1681.

WILLIAM COLE.

EPISTLE from Dr THOMAS SYDEN-HAM to Dr WILLIAM COLE; treating of the Small-pox and hysteric Diseases.

Worthy Sir,

modesty.

1. TITERE I fo excessively vain as to appropriate to myfelf the praises which I have no right to. it would be difficult for me not to fhew fome pride, being fo highly commended by an eminent 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' undeferving it, proceeds from your civility; for men of merit are fo formed by nature that they are not only favourable to fuch as err in trivial matters, but are always ready to commend those who come far short of perfection. And 'tis with gratitude I acknowledge that you have given me a remarkable instance of this generous disposition, by praifing my flender endeavours, which were intended to benefit mankind.

His reasons of the hyfteric paffi-On.

2. You have here what you requested, namely, my for treating late observations on the small-pox, and my new treatife of the hysteric passion. I begin with the former that what fhould feem to have been wanting in it hitherto, may be fupplied by fuch remarks, as are the refult of a longer experience. But I have undertaken to treat of hyfteric

diseases, because, except fevers, they happen most frequently, and likewise because I conceive my observations may be of fome advantage to practice. But I own I had ftill another reason for prosecuting these studies belides the hope of ferving the public, which was to employ my leifure hours well and fpend the long winter evenings in an ufeful manner, being prevented by age now from going abroad to pick up companions. But whatever it was that first induced me, I do not find my felf so fit for the undertaking, as I hoped to be, for that continued feries of thought which requires a fixt attention, has for many years past been prejudicial to my gouty conftitution, and must needs be more so, now old age approaches. Yet as I have received your obliging letter, I will in answer to it, treat of these matters, tho' with more brevity, than I at first defigned.

3. Previous to my treating of the small-pox I must inform you, that the same species of intermitting fevers, merates the which as we have faid in another place (a), arose first then reignin 1677, still prevails, viz. in 1681, the time of my ders. writing this epiftle. 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 feafon yielded to fuch epidemics, as that feafon 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 univerfally during the autumn, the [mall-pox fucceeded them in the winter and spread much. But in 1681, the intermittents returned, tho' they did not spread for epidemically, their violence being abated, fo that the [mall-pox appeared along with them in a few places. But at the beginning of fummer the small-pox increased every day and at length became epidemic, deftroying abundance of persons.

4. What reason seem'd to intimate formerly, appear- The patient ed manifest to me this year, 1681, namely, that it was why not to improper to confine the patient constantly in bed, be- be kept in fore the total eruption of the pustules; for the spring bed, before the total and fummer having been the drieft feafons that any per- eruption of

First enui

son the pustules.

Why more or less en-

dangered

from the

paucity or number of the eruptifon living could remember to have happened, fo that the grafs was burnt up in most places, the blood was by this means deprived of the greater part of the humidity, which the air otherwife ufually communicated thereto; whence the then reigning finall-pox was accompanied with a more confiderable inflammation than ordinary, and the other fymptoms thence arifing were more violent (b). And 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 diffolving the texture of the blood, fuddenly destroy'd the patient before the due expulsion of the morbific matter. And the difease proved so much the more destructive, because the eruptions so readily ran together, for the reason above intimated; the intemperature of the air, now, doing the fame mischief fpontaneously, which ignorant practitioners ordinarily occasion, by using a hot regimen and cardiacs, at the beginning of the diftemper. For 'tis a remark well worth noting, and the refult of the most careful observation, that the small-pox is least dangerous, when the eruptions are few, and most so, when they are numerous; and accordingly as they do, or do not abound, the patient lives, or dies. It must, however, be acknowledged, that the bloody urine and purple spots, which so certainly prognosticate death, do sometimes happen, when there is little fign of the appearance of the fmall-pox, or only a very few eruptions coming out; but thefe, as they generally accompanied the confluent fmall-pox, fo they fometimes came fo early, as to defroy the patient before the total eruption of the puftules; as we observed above (c).

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 im-

(b) 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 driness are found to dry and crisp the fibres of the body, quicken the circulation, exhale the ballamic, thin and aqueous parts of the sluids, and leave the remainder thick and acrimonious, whence it circulates with difficulty, and is much more disposed to obstructions and inflammations.

(c) See page 104, 105. par. 24, 25, 26.

impostumates, fo the fecondary fever, which depends on the matter hereafter to be produced, must needs be 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 species of the confluent small-pox on the eleventh day, in the middle fort on the fourteenth, and the worst on the seventeenth day. For it must be observed, that as the confluent species, exceeds the diffinct in point of danger, as much as it is itself exceeded by the plague, fo likewise, the abovementioned three species of the confluent small-pox, are comparatively more dangerous the one than the other; which respects also the fex, or age of the patient, it being generally known, that perfons in the prime of life are in greater danger in this difease, than women or children under fourteen .--- But this by way of digression.

6. Nor will it feem strange that the danger should be Further exfo great from a large number of eruptions, if it be con- plained. fidered 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 rife to the fever. But the phyfician has more reason to foretell death, on one of the abovementioned days, when the face, at the beginning of the difease, appears totally covered with fmall eruptions, refembling the filings of steel, on account of the extreme violence of the fucceeding fever, which necessarily rages in proportion to the quantity of matter thrown out of those innumerable impostumes into the blood. And 'tis easy to foresee the destruction of the patient some days before it happens, tho' he thinks himfelf in a fair way, and is reputed to be so by the attendants, who are unacquainted with the history of this disease.

7. Hence therefore, if the patient be not otherwise The number endangered than from the abundance of eruptions (fet- of eruptions ting afide the bloody-urine and purple foots for the prefent) whence. I confider well whence this proceeds, and if it can be done with fafety, use all my endeavours to repress them, which in reality is the principal thing to be effected, and the way to relieve the patient; every thing being doubtful and dangerous when this species of the disease

is confirmed: fo that if the patient should escape, it is not fo much owing to my care as to some confiderable bleeding at the nofe, or other accidental alteration happening in the course of the disease. Now such an extraordinary eruption of pustules, in my opinion, proceeds from the too fudden affimilation of the variolous matter; which feems chiefly to arife either from the over-hot and spirituous constitution of the patient, or from his having raifed the fermentation too high, by a too early confinement in bed, the use of hot cardiacs or any spirituous liquor; by which means the blood is disposed to receive the impressions of the disease, more intimately, and nature, being greatly diffurbed by the vast quantity of the variolous matter, endeavours to change almost all the folids and fluids into pustules.

Most chiefly occasioned the patient day.

8. The immoderate affimilation of the variolous matter however, cannot be more effectually promoted, by confining than by the patient's confining himself in bed unseasonably, namely, before the fixth day from the beginning fore the 6th of the illness, or the fourth inclusive from the eruption; when all the puftules 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 the rife of the delirium, watching and other fymptoms, yet these are of such a nature, that they readily yield to proper remedies; whilft the imminent danger of death that happened on the eleventh day, from the great abundance of the pultules, cannot be prevented, or removed by medicine.

This therevoided.

9. The patient therefore is here to be diligently adfore is to be monished, by no means to keep his bed in the day-time, carefully a- till towards the evening of the fixth day, whereby the eruptions will be fewer, and he will be greatly refreshed (d). 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 arifing, and a greater disposition to fainting upon fitting up; so that having frequently remarked this, it came into my mind that nature, in the common course of the disease, first pointed out the time, when a total confinement in bed be-10. But comes necessary.

<sup>(</sup>d) An excellent practitioner tells us, that he never could find that the fick could bear being kept out of bed to long, unless the diftemper was very mild, and the pultules few. See Dr Hillary on the small pox, 2d edit. p. 79.

10. But in order to confirm this practical rule, The nature which is fo highly ferviceable in leffening the impend- and progress ing danger from the small-pox, and in treating of it, at ease to be the fame time, to deliver our history thereof from the investigabeginning, to the end, it will be proper to draw up a ted, in order kind of plan of the whole difease, and make a strict to confirm fearch into the nature and progress thereof; so that we may at length be enabled to afcertain the matter clearly, from the unerring reason of those who make use of the justest observations, and not from opinion founded

on the flippery basis of fancy.

11. In the first place, therefore, its effence, so far as It seems to we can trace the effences of things, feenis to confift in a be a pecupeculiar inflammation of the blood; in the course of liar inflammation of which, nature is employed for fome days, in the begin- the blood. ning, in preparing and moulding the inflamed particles, for their readier expulsion to the external parts; at which time the blood being diffurbed, a fever must needs be occasioned; for, the agitated particles, hurrying in a tumultuary manner thro' the veffels, necessarily cause a sickness at stomach, sharp pains in the head, and all the other fymptoms 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 feat of the difease; 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 impostumation. 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 foon impostumate. Hence it is, that when these particles are lodged in the flesh, they at first occasion very small phlegmons, wherein they lie concealed; which encreafing 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 feverwhich 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

The Barare

ought always to accompany the confluent small-pox, is stopt too foon, whence immediate death ensues. But threaded him if only a small quantity of the purulent matter be received into the blood, the violence of the fecondary fever is eafily checked by the encreasing strength of nature, and the pultules drying away gradually, the patient foon recovers.

Failure or Succest depends upon the procedure in the beginning.

12. Now allowing this to be the genuine and just history of this disease, 'tis manifest, that the failure or fuccess, on either hand, depends upon laying a good or bad foundation for the cure in the beginning: for if these hot and spirituous particles be quickened by hot medicines, and especially by a constant confinement in bed, the affimilating virtue, which they already possess in too great a degree, will necessarily be heightened and encreased. And, besides, the blood and other juices being hereby heated, yield more readily to the ftronger 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 likewife thicken and strengthen the juices; whence they are better enabled to refift the morbific spirits and fupport their violence; and hence no greater quantity of variolous matter is prepared, than is natural in this difeafe.

Difadvantages of too early confinement in bed.

13. But the only inconvenience arising from a too early confinement in bed, is not from the affimilation of too large a quantity of the morbific matter, and the immoderate exaltation of the ferment of the difeafe; for the same cause frequently produces bloody-urine and purple-spots, especially in summer, and in persons in the vigour of life. I conceive that both these symptoms proceed from the heat and commotion raised in the blood, by hot and spirituous particles; by which it is agitated and confiderably attenuated, fo that it burfts the veffels, cauling 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 extravalated blood is coagulated (e). And tho' both these symptoms might ealily

(e) These terrible symptoms should seem to proceed from the acrimony,

eafily 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 himfelf 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.

14. But to acknowledge the truth upon this occasi- The patient on, how little foever it may be liked by the dogmati- fometimes cal, and fuch as are unacquainted with this matter, and to be exposed therefore incompentent judges, 'tis not only unfafe to air, at the keep the patient always in bed the first days of the ill- beginning of ness, but sometimes necessary to expose him to the open the disease. air; viz. if it be the fummer feafon, and he not past the prime of life, or that he has been accustomed to spirituous liquors, and especially if the disease be owing to hard drinking. Now in these cases I conceive, that the too hafty eruption of the pustules cannot befufficiently check'd by refraining from bed, and taking no cardiacs; for the blood unaffifted by thefe, is fo overstocked with hot spirits, of a like kind with the difease, that a kind of violent explosion thereof must necessarily happen; and moreover such a plenitude of humours will refolve into puffules, that the patient, being quite oppressed by the copious matter returning into the blood, must inevitably perish at the close of the difeafe.

15. But the immoderate exaltation of the ferment, How dedoes frequently encrease the force of the variolous mat- stroyed at ter fo much, that the patient finks at the beginning of this time; the difease; viz. when the morbific matter cannot difentangle itself and come out, by reason of the consused and irregular motion raifed in the blood; but bloodyurine and purple-spots succeed instead thereof, and close the catastrophe (f). And these likewise often happen

acrimony, putrefaction and diffolution 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 fuch, alas! is the prefent imperfect state of medicine, as to aff rd little hopes of a cure in these calamitous circumstances; which for

the most part terminate in the destruction of the patient. (f) When the blood is moved with too great velocity, no fecretion 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, confequently, encrease the fever and oc-casion ill-condition'd symptoms.

to the open

in the measles and scarlet fever, if the eruption be unsea-

fonably promoted by forcing medicines.

Bleeding able now than the admiffion of fresh air.

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16. Nor have I hitherto found that bleeding, tho' life service- it be used early, does so effectually check the overhalty affimilation 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 injured 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 politively 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 women foon after her recovery from a rheumatism, by the usual method of copious and repeated bleeding (g). And from this inftance I first learned, that bleeding did not contribute fo much to keep the fmall-pox within its due limits, as I heretofore imagined; tho' I have frequently observed that repeated purging, whilst the blood remains uninfected, generally renders the fublequent fmall-pox of a mild and diffinct kind (h).

(g) The death of this patient, which, the author feems to infinuate, happened from the previous repeated bleeding, should, per-haps, rather be ascribed to the inflammatory and very tenacious state of the blood, which the rheumatism always leaves behind it.

(b) Dr Hillary recommends an excellent preventive method for the small pox, which consists in taking several doses of proper antiphlegistic 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 siquors, 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 fanguine habit, bleeding will be requifite, 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 always observed that the longer the method above recommended was continued, before the person was infected, the more mild and favourable the discase was rendered, the symptoms more moderate and the pultules fewer. I never faw the confluent small pox follow the use of it, even when the persons were infected from fuch as had that fort of pox, and in some families to whom this disease had been frequently fatal. It is the chief if not the fole advantage, which inoculation has above the common way of infection, that the body by this, or fome fuch-

17. I am well aware that feveral objections may be Objections made to this opinion of ours, of permitting the patient may be to fit up in the day time; which may have great weight made to the with the common people, and fuch as are little skill'd fitting up in in this difease, to whom the lower rank of all fitting up in in this difease, to whom the lower rank of physicians the daygenerally appeal as proper judges in the case, that they time. may fupport their ill-grounded reasonings by their authority: fuch reasonings being in reality better adapted to their capacities, than those that are the result of deliberate confideration 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, fo these pretenders to learning eafily acquire a superiority over the more intelligent, who are often exposed to calumny, but without being discouraged thereby, because they have truth, and the men of found judgment on their fide.

18. 'Tis objected first, that fitting up in the first Some of days of the disease hinders the eruption of the pustules, them aeand of course, prolongs the fickness, and other sym- livered and ptoms proceeding therefrom; which indeed I own, and answered. much 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 fickness occasioned by keeping back the eruption, or (2) to urge the ferment of the difease, and assimilate so large a quantity of variolous matter as to endanger the life of the patient, by the fecondary fever on the eleventh Day. I conceive it will appear, upon duly confidering the matter, that very few have died merely because the fmall-pox did not come out fooner 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 fufficient time for the morbific matter to be expelled flowly; which is an argument in favour of my opinion.

19. For

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 difease; and if the person thus prepared should escape the infection, such gentle cathartics and temperate way of living, the continued for sometime, when the small-pox reigns in the neighbourhood, will be far from injuring the constitution. See his practical effay on the [mall-pox, p. 59, et feq.

19. For we may be affured, tho' we do nothing at all, that the variolous matter, (how much foever 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, neverthelefs, at length be conquered by nature and driven to the fkin; 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 fymptoms enfue as often as the eruption is unfeafonably promoted? It would take up too much time to particularife them; fo that we shall at present only mention the chief, which are, (1) the number of eruptions too much augmented, whereto the fever which comes at the close of the disease is proportional, whence accordingly the danger is more: (2) the bloodyurine and purple-spots, both proceeding from the extravafated blood, which being too much inflamed and attenuated, by immoderate heat, burfts thro' the veffels, where it meets with least refistance. (3) As we have already remarked, a total stoppage of the eruption, occafioned by endeavouring too follicitously to promote it, which greatly obstructs the cure.

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 a-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 remarkable, I next enquire, which of these 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, and according as he deviates more or less from

21. But

this end, he will affift or injure his patient (i).

<sup>(</sup>i) It must be acknowledged that it is oftener necessary to depress the sever, 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 morbisic matter to be expelled flowly, as it ought to be. See above

21. But what has chiefly imposed upon the unat- The fever tentive in this case, is their having observed a tendency why to be in the patient to spontaneous sweats, which continual the beginly flowing whilft he remains in bed, greatly abated the ing. feverish heats, otherwise than in those who did not Iweat. Let us therefore first, consider why we so sollicitoufly endeavour to check the fever, fince 'tis the inftrument which nature ordinarily and chiefly uses in preparing and expelling all kinds of noxious matter which lurk in the blood. For 'tis evident, that whilst we carefully promote fweat, in order to leffen the fever, we by this means drive out a crude and indigefted humour, like unripe fruit, and afterwards cause a fever; the serum of the blood, herewith the blood itself, and those newly generated hot variolous particles are diluted, being hereby driven out whilst these particles being freed from the ferum, wasted by the sweat, have their violence and activity encreased. In short the abatement of the fever and other fymptoms by fweat, and the too hafty expulfion of the puftules hereby occasioned, have succeeded ill in abundance of perfons, who have perished on the eleventh day from this caufe.

22. But it is to be observed, that I enjoin the pati- Needful to ent to refrain from bed, on supposition only that the refrain

par. 18 towards the end. But before attempting any evacuation, ning only, in let the state of the patient be maturely considered, because a sti- the conflumulus is fometimes proper, and indispensably required. See p. 108. ent small-

One of the best writers 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 fide 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 pultules and other lymptoms, that they may be kept regular and moderate; and whenever they are not fo, nature mult be affilted, accordingly as thefe indicate and require; either by the use of antiphlogistics and evacuations, &cc. as before directed, or by gentle cardiac, and alexipharmic medicines, &c. But the latter are scarce ever required in the first state, and not near to often in the fecond, as the antiphlogifties are; besides as Dr Sydenham observes, the over-officious perticoat doctors prevent this, by giving fack and faffron, 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. effay on the [mall-pox, p. 79, 80.

approach- from bed at the begin-

approaching small-pox is of the confluent kind : for with respect to the distinct species, provided it can be certainly foreseen, the patient need not be kept always in bed, or enjoined to fit up, as the paucity of the erup-

tions prevents all danger either way.

The author's opinion founded on observation.

23. However I am not so attached to my own opinion, as to think, that what I have here delivered should be credited upon the authority of my flender 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 also be upon my guard in this case, if my reasonings were not unanimously supported by practical observations. For setting aside thefe, 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 danger ous it is, for persons of the acutest understanding, to make a strict search into any art or science, unless matter of fact be constituted the judge and test of truth and falfity. For, to use Cicero's phrase, those who are fo ftrongly prepoffeffed 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 foon be fet right, by bringing their ideas to this touchstone. For instance in the present case, cannot I certify myself by observation, what method is most productive of a favourable or fevere kind of fmall-pox; and fo form a judgment thereof, fuitable to the clearness of the fact? and if others would follow this way of reasoning, I should be fatisfied with their conduct, but 'tis most unjust to accuse me of advancing falsities, without having once experienced, whether the method, fo often 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 one would have fought after fuch things as, when found, might be ufeful to mankind. But why should I give myself so much trouble, if a long course of experience did not manifest

manifest this method to be much fafer than the common one: for I am not fo fenfeless as to endeavour to acquire reputation, by exploding the opinions of those, whom I ought to flatter, if I fought after 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 (k).

24. However it be, I have followed this method in He followed my own children, my nearest relations, and all those I this method. have attended; and am confcious of no error, unless in his chilin yielding fometimes to persons of a contrary opinion, dren and to avoid the imputation of moroseness and obstinacy; and for the truth of this I appeal to my intimate acquaintance. But this has not been my fole 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 severely (1). Hence, I could not help thinking, confidering the infuperable prepossession of the multitude, that it would be of service to me, never to be called again to attend any person in this disease.

25. I own, indeed, that the fmall-pox, in what man- The method ner foever it be treated, will fometimes prove highly defended. confluent; whence this difease is never void of danger, tho' the best method and medicines be used to prevent it. But this I affirm, which is fufficient for my purpose, that 'tis manifest from frequent experience, that

(k) The candour and integrity of our judicious author are fo generally acknowledged, that he is frequently entitled the candid, the honest Sydenham; and whoever peruses his works with attention, will, I may venture to fay, be abundantly convinced that he deferved these appellations; and, consequently, that he must be very far from being guilty of a crime which all good men have in abhorrence,

(1) This is too often the hard fate of the most experienced and honest physicians; allowances being seidom made for the perverseness, or irregularity of the patient, and the mismanagement of the attendants. But how unjust, how ungenerous is it to charge them with the faults of others; and impute to them a misfortune which comes purely from a neglect of their wholefome advice and cautions?

he, that refrains from bed in the day time at the beginning of the difease, abstains entirely from flesh, and drinks only finall liquors, is abundantly fafer than he that confines himfelf immediately in bed, and takes hot cardiacs. For this method, as abovementioned (m), generally occasions only few eruptions, and confequently checks the excessive effervescence of the secondary fever, which not only proves destructive of itself, but by thickening the faliva too foon, endangers the patient in the declenfion of the difease. Moreover, this method is preventive of the purple-spots and bloody-urine; both which fymptoms feize at the beginning of the difeafe, and often before any fign of the eruption appears, which ordinarily happens, also in the measles, fearlet fever, and other acute difeases proceeding from a violent inflammation. Not to mention the fingular 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 fpirits from breathing a freer air (n).

The inclinations of the patient to

Exemplified.

26. Hence I have been induced to reflect, how much more frequently we are deceived, by the specious apbe gratified. pearance of reason, than by sense, of which we have the furest knowledge; whence it should feem, that regard is to be had to the appetites and longings of the patient, in case 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 perfon in a burning fever, earneftly defires to drink freely of fome small liquor to refresh him; but the rules of art, which are built upon fome hypothesis, having a different defign in view, oppose the appetite of the patient, and, instead thereof, order a cordial. In the mean time, the patient not being fuffered to drink fmall liquor, naufeates all kind of aliment; but art, especially that which is professed by the patients friends and attendants, earnestly requires he should eat. Another, after a long illness from the same cause, begs hard for fome uncommon, and, perhaps, pernicious eatable; and

> (m) See above, Par. 9. (n) Great caution should be had in this respect in tender and delicate subjects, otherwise fatal effects may ensue.

here again, impertinent art thwarts the inclination of the patient, and threatens him with death if he difobey: unless, perhaps, the artist thoroughly understands this excellent aphorism of the sagacious Hippocrates. viz. Such food as is most grateful, the not so wholesome. is to be preferred to that which is better, but disagreeable(0).

27. Now, he that is but little versed in the practice Proved to of physic, will readily grant, after due consideration, answer the that in all these deviations of nature, several patients best ends. have found themselves better, upon departing from the directions of their physician, and indulging their own inclinations. Nor will this feem strange, if it be confidered, that the all-wife creator has formed the whole with fuch exquifite order, that as all the evils of nature eminently confpire to compleat the harmony of the whole work; fo every being is endowed with a divine direction, which is in a manner, interwoven with its proper effence, whereby it removes those ills from itself. And this is manifest, in the natural termination of many acute difeases, (which 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 wholly confined within the strait limits of Greece, which bears almost as little proportion to the whole world, as a small village does to our own nation. And even at prefent, what must be the fate of the inhabi-

(o) That this is true, most physicians can testify from their own experience. We have known feveral persons recover from very desperate and deplorable diseases, after having gratified their appetites, whether by flealth, or the indulgence of the physician, how feemingly irregular soever they were. In effect, however noxious the quality of the thing coveted appears to be, the patient can generally err only in quantity, by 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 rational and satisfactory manner, is what I shall leave to those who are delighted with the pursuit of such curious and subtile speculations. Our author in the following paragraph seems to refolve 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 philofophy fubfervient.

tants of fo many other countries, fince all Afia, 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 (p)? But as an elegant comic writer, diffinguishing 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, fays, they are men, if they behave as men: fo likewife the art of medicine, if it be a real art, and not barely a name, is the best gift that mortals are possessed of, and fo much more valuable than all others, as life, is preferable to all the enjoyments it brings with it (q).

Sometimes necessary to confine the patient in bed before the erupti-

28. But, to return to our subject; how advantageous foever it be in general, to keep the patient from bed at the beginning of the difease; 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 fuddenly feized with convulfions, we are to confider that probably this arises from the endeavour of nature, to drive out the eruptions of the fmall-pox, measles, or scarlet fever, tho' they yet lie concealed in the skin. In order, therefore, to guard fufficiently against this dangerous symptom, a blifter must be immediately applied to the neck, and the child put to bed, and a cordial exhibited with a fmall quantity of an opiate; whereby, the cause of the disease may be more forcibly expelled, and the disturbance also quieted, which gave rife to the fit. For instance, for

(p) This will perhaps, appear to be alledged without fufficient foundation, unless it be understood in a qualified degree. Medicine, confidered as an art, might have been confined within these narrow limits in our author's time : but remedies had been univerfally fought 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 felf-prefervation; and in this fense it may be afferted that no nation, however barbarous, was without fome knowledge of it; as being poffeffed of feveral experienced remedies for particular diforders.

(q) I could willingly expatiate here in the praises of an art, fo very beneficial to mankind; which nevertheless is too often made the fubject of ridicule and contempt by fuperficially learned perfons, and even by those, who upon the least occasion are glad to have recourse to it, and so teach us by their practice, how little credit is to be given to their raillery and invectives. But I shall refift my inclinations at prefent, intending hereafter to publish a treatife, which I have by me, proving the excellence, necessity, eertainty, and utility of the art of medicine at large, not in an

oratorial manner, but from undeniable facts.

a child of three years of age, I prescribe five drops of liquid laudanum, in a spoonful of plague water, or the like. And in reality, I much fuspect, not to affirm it, that fome thousands of children, and some grown perfons, have been destroyed for want of confidering, that these convulsions are only the fore-runners of the abovementioned diseases: whereas, inconsiderate practitioners taking these fits, which are really symptomatic, for effential diseases, and attempting the cure, by a frequent repetition of glyfters and other evacuations, hinder the eruption of the small-pox, and prolong the fits, which they fo follicitoufly endeavour to conquer; and which would, otherwise, affuredly vanish spontaneoufly, upon the appearance of the puftules. Befides, the fmall-pox that is preceded by convulfions in children (as we have elsewhere intimated) (r), is generally pretty distinct, so that the patient may be put to bed, with much less danger in the beginning of the disease.

29. But I have observed, that the small-pox, which The smallimmediately fucceeds comatous diforders proves very pox which confluent, in which case, I rather order a blister, and succeeds the opiate, described above, than to let the patient comatous keep his bed before the eruption. For fometimes, tho' proves very very rarely, I have known the fits of intermittents confluent. preceded by fuch convulsions, and have often feen them begun and terminated by comatous diforders, both in children, and grown persons; but both these symptoms require no particular treatment, it being only necessary to oppose the fever, which is the primary and effential difease. For, if I were to attend chiefly to these comatous disorders, accompanying the fever, and accordingly endeavour to conquer them by bleeding, purging, and repeated glyfters; I should heighten the fever, and of course encrease the coma, so as to convert it to a fatal lethargy; whereas if I use all my efforts to cure the fever, the other fymptoms proceeding therefrom, will eafily go off. And this observation deferves to be attended to, because very fatal errors often happen in this point. But I have treated amply of this in another place.

30. I must proceed next to observe, that the' the Bleeding patient may fometimes refrain from bed in the day and a vomit time, yet in case of extreme sickness, a high sever, sometimes

enormous requisite.

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enormous vomiting, a vertigo, rheumatic pains of the limbs, and the like diforders; he cannot be indulged this refreshment, these symptoms indicating the contrary; which if they be violent, especially in the young and fanguine, foreshew that a large quantity of the variolous matter is generated in the body, and threaten great danger from the tumultuary eruption of the puffules, 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; 'tis indispensably necessary to bleed first in the arm, and a few hours after, give a vomit of the infusion of crocus metallorum, which not only expells the matter occasioning this unusual sickness, but refreshes the patient so considerably, that being now in a manner well, he is able to refrain from bed. Neither are we to endeavour to weaken the force of the ferment by this method only, but in order to put the patient further out of danger, besides the evacuations just mentioned, it is proper to give him a large dose of spirit of vitriol in every draught of small beer till the eruption be over. And notwithstanding these evacuations, and the use of the cooling drink, the patient must refrain from bed in the day time, if he can bear to fit 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 fymptomatic fickness, abovementioned, as I have fometimes experienced. But this unufual method, is not necessary unless in 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 [mall-pox ftruggle with the abovementioned violent fymptoms. For where the blood is less inflamed, and the symptoms milder, as there is much less danger of assimilating the variolous matter too haftily, fo of course, neither the abovementioned evacuations, nor the fpirit of vitriol need be used. THE PROPERTY. 31. 1

31. I have treated this fubject in an ample manner & When and because I am well affured that success or failure in how long this disease, chiefly, if not entirely depends on the the patient procedure in the beginning. But now the committee is to be conprocedure in the beginning. But now the eruption fined in being over, (which is compleated on the fixth day, bed. from the beginning of the illness, and on the fourth inclufive, 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 indulged before this day, so the condition of the patient, will fcarce admit of its being longer delayed, if the fmall-pox be of the confluent kind, And let it be remembered, that this is the only species I have or have be remembered. hitherto treated of; for if the eruptions be few, and munchus diffinct, it matters not which method be used, provided the physician hath a tolerable degree of skill; for want of which (tho' this species is naturally void of danger,) abundance have died, who unfortunately fell into the hands of those who, placing all their hopes in promoting the heat, ignorantly affifted the difease to destroy the patient.

32. From this time the eruptions encrease in magnitude, and inflame, the whole body, especially the to be relievhead, fo that the patient, if not a child, grows rest - ed by opiless and cannot sleep readily, which is next to be care- ates. fully attended to in this difease; for the calmer the motion of the blood is, the better the eruptions fill, and come to their due fize; and on the contrary, the more violent it is the more the eruptions fink, their farther progress being checked; so that the expulsion of the peccant matter, is not only obstructed, but the order and natural progress of every particular phlegmon is also disturbed, whence the eruptions either do not come to separation in due time, or instead of pus an ichar is at length generated, and instead of the yellow matter, refembling the colour of an honey-comb, fome black or other præternatural humour, unlike the genuine eruptions of the small-pox, is discharged. I conceive, therefore, that opiates are as much indicated in the small-pox, as any particular remedy in any other difease; 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 quieting the tumultuary motion of the blood and

Seh tudar to be given.

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spirits, which always accompanies the confluent smallpox, and chiefly demands their use. He therefore, is not enough acquainted with the nature of this disease who esteems these symptoms to proceed only from the watchings: for tho' it may fometimes happen, in cafe of watchings, that the patient's spirits may be composed and calm, (which frequently proceeds from taking laudanum) fo likewise the spirits, being sometimes in violent motion, check the laudable eruption of the puffules, tho' the patient fleeps much; which is well worth observation.

Diacodium and in what dose

33. To treat now of the kinds of opiates: tho' I preferred to have given liquid laudanum, several years successfully, in laudanum this case, yet I give the preference to firm of pathirs this case, yet I give the preference to fyrup of poppies, because I efteem laudanum more heating: but both to be given. may be used for the same purpose. As to the dose of this fyrup, it is to be proportioned to the age of the patient and the urgency of the symptoms; for what might be to much for one whose spirits are composed, would be too little for another, whose spirits are greatly agitated. For instance, suppose in general that fix drams is a fufficient dose, yet in the fmall pox when this medicine is required, near an ounce must be given, in order to obtain the defired effect: and as much must be prescribed for a dose, throughout the course of the difeafe. We fpeak of grown persons now, for in giving it to children, the dofe must be lessened in proportion to their age. Children, however, have not the fame occasion for opiates in this disease as grown perfons, because they are more disposed to sleep during the courfe thereof; yet when they are much endangered thereby, I should be afraid to refrain from opiates. But, I was going to observe, that 'tis difficult to settle the dose of opiates where they are required; for whether it be (1) in a tumultuary motion of the spirits; (2) a violent vomiting and purging, or (3) fevere pain; thefe being the three diforders wherein opiates are chiefly indicated, they are to be exhibited in fuch a manner, that if the first dose avails not, it is to be repeated at proper intervals, till it answers the intention of the physician; having lefs regard to the quantity taken, than to the effect it should produce; which being answered, it is to be administered less frequently and copiously. Nor must we forget to interpose such a space between every dose

dofe that we may be able to learn whether the last has aken effect, before prescribing another; which being obtained, the dose is to be diminished in the course of

the difease, as there shall be occasion. 34. I have feveral observations by me to confirm Acase, exwhat I have hitherto laid down, but at present will on- emplifying ly fet down one. On the 13th of April, 1681, Mrs the author's Cross, a neighbour of mine came to me in tears, and method. earnestly begged I would visit her fon, a youth of ten years of age, who having been ill four days, the apprehended the *small-pox*. As I was confined with a fit of the gout, I defired 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 fome woman; given him the Countess of Kent's powder, and other hot medicines; and had befides, in a manner, buried him under the cloths, in order to raife a fweat by the weight thereof; which the women have recourse to in this disease, as an affured remedy. She had also given him a large quantity of posset drink, wherein marigold flowers and barts-born had been boiled, which encreased the fever, and caused such a disturbance of the spirits, that the child was very delirious and could fcarce be kept in bed by the attendants. The puftules did not yet appear, at least very visibly, but lay very thick in the skin, the eruption being manifeftly 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 fixth 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 unfuccefsfully; for the blood was fo violently agitated, that it could not be quieted before he had taken two ounces and an half: but fuch 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 difease, which proved fufficient to preferve the calm, that had already been obtained by a more frequent use thereof: and by this means the patient recovered.

35. And here I must inform you, that in case the Restlesness heat and motion of the blood and spirits, be extremely sometimes is moved by an opiate

not to be re- violent in the beginning, an opiate, tho' 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 render it necessary to exhibit 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, whilft 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 fometimes, likewife, if the fever only remits, it is so encreased thereby, as 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 difease; I would have it first exhibited, in the evening when the patient is wholly confined to his bed; (viz. the fixth from the beginning of the illness) and repeated afterwards every evening till the feventeenth day, or at least till the danger is over. For on the fixth day the fleshy parts are inflamed, whence the head begins to be diffurbed by the humours, which are also inflamed from this cause.

To be given other difenses.

37. But great care must be had to give the opiate earlier in this, than in other diseases; because a kind this than in of fit of heat and restlesness, always comes here towards evening; and fometimes it happens, unless it be given early at the decline of the difease, that the patient becoming fuddenly fomewhat heavier, immediately grows hot, and afterwards complains of fickness, which foon terminates in death; to the aftonishment, 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 fix o'clock in the afternoon, and a fecond dose to be kept in readiness, in case sickness fhould come on fuddenly. For I am thoroughly perfuaded that fome of my acquaintance have died, for want of taking this medicine, when the cafe required it; so that if opportunity be quick in any case, it is chiefly fo in this.

38. Since

38. Since therefore, 'tis fo dangerous, either to And at a omit giving an opiate foon enough, or contrariwise to set hour give it so early, that its quieting virtue be spent before and night. the time comes for repeating it; 'tis fafeft in this uncertainty, to order an opiate to be taken at a fet hour, every morning and night, at the declention of the difeafe, when there is most danger. Nor is an ounce of diacodium always a fufficient 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 fpirits, than half an ounce, in a milder difeafe. For I have learnt from repeated experience, that an ounce and half is required in the young and fanguine, to mitigate the violence of the symptoms wherewith they are feized; and in fuch fubjects, this dofe may be repeated with fafety and great advantage at fuch times, morning and night, till the patient recovers.

39. Moreover, I own, that I have fometimes found And some it necessary at the decline of a bad species of the con-times thrice fluent small-pox, to exhibit an opiate thrice in the space in twenty of twenty four hours; viz. every eighth hour, on ac- four hours. count of the violent motion, or disturbance of the fpirits, occasioning some sickness, which required it to be repeated more frequently. But it is to be observed, that if the exhibiting diacodium with fuch frequency, be naufeous to the patient, (which often happens on the abovementioned days,) liquid laudanum must be prescribed instead of it; fixteen drops of which are equivalent to an ounce of diacodium, in case it be prepared according to our method, already delivered (s).

40. I am well aware, that it will be objected by An objecthose of a different opinion, that the peccant matter tion to fo will be fixed, and the falivation diminished by repeat- frequent a ing the opiate with such frequency in so large a dose. repetition of But to this I answer, that the indeed the ptyalism will it answered. be in some measure abated, it will not however cease fo entirely, as not to rife again in some degree, after the opiate has been taken a confiderable time, and its virtue is nearly fpent, and befides will be attended with this double advantage. (1) The patient being frengthened by the opiate will be better able to expectorate the phlegm, and the faliva, tho' less copious, be better concocted. (2) The want of sputation is abundantly ed som on as sufupplied Z 2

CORNE CONVENTION

under my objectystion.

fupplied by the fwelling of the hands and face, which happpens more certainly, and rifes 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 puffules upon these parts be entirely ripe. And I positively asfert, (which every one who is thoroughly acquainted with this difease must acknowledge) that the want of either of these swellings, when they ought to appear, threatens more danger than the stoppage of the falivation. For my own part, I efteem it much fafer to risque the danger of checking the ptyalism than to refrain from opiates, which are fo very requifite in this difeafe, that whoever deprives his patient of fo great a help, betrays much neglect and unfkilfulnefs.

Not to be ten in young children, unless in cases of great danger.

41. But what I have hitherto delivered, is not to be given for of understood as if I would advise the daily use of diacodium, tho' in a fuitable dose, in young children afflicted with the confluent [mall-pox, unless it threatens great danger; and this for two reasons; (1) because children are not fo hot as perfons 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 tedioufnefs thereof; yet, neverthelefs, 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 fpirits (t).

The chief curativue indications specified.

42. These two particulars, which we have treated at large, viz. (1) the method of preventing the overhafty affimilation, 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 difease consists; inasmuch as the ill accidents which fucceed, for want of preventing these two dangers, sufficiently occasion these fatal fymptoms, which destroy the patient in this difeafe.

<sup>(</sup>t) Children are fometimes so freeful and tedious in this disease, that opiates can no more be dispensed with, than in grown perfons, and do equal fervice: many infrances of which have fallen under my observation.

difeafe. These, therefore, being the chief curative indications, when I have fufficiently answered them according to the method just delivered, I have discharged my duty as a phyfician, and not a prescriber of medicinal formulæ; which two arts, talents, or provinces, as you please to term them, differ greatly from each other.

43. To mention one thing more, if there be occasi- Ablister on for a blifter, it should be made very large and suffici- when to be ently sharp, and applied to the neck, but neither too necessary. early, that it may not cease running before the eleventh day, which is attended with most danger, nor deferred to that day, fo as to prove prejudicial, at this time, from being laid on too late, by encreasing the heat of the blood, which is then fcarce able to struggle with the fecondary fever. The fittest time, therefore, to apply a blister, is the evening preceding the great criss 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 (u). For now the fwelling

(a) 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 difeafe, fays Dr Hillary, and the effects of blifters, 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 fecond, and oftener are applied, than advantage reaped from them, in this third stage of the disease, except as revellents,

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 depressed, and the fever insufficient for the expulsion and suppuration of the pultules, 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 flage, rife not at the proper time, or too fuddenly subfide, and nature finks under the load, or where the ptyalism suddenly stops before its usual period, or 2 coma, or comatous delirium from a viscidity of the fluids appears, or an afflux of these to the brain; or if the sever 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, ex-

fwelling of the face first begins to fink, and the falivation, which had hitherto been copious, to abate; the humour, which occasioned it, being thickened and difficultly raifed. Not to mention that the blifter fupplies, in some measure, the finking of the swelling of the face and the abatement of the falivation, and, likewife, contributes formewhat to check the fecondary fever, which is then very high, the blood being in a manner oppressed and totally infected with the abunneecfary. dance of pus absorbed from such a multitude of little impostumes, so that in most of the patients I have treated in this disease, I have observed, that the pulse in the wrift, could scarce be felt at this time, tho' it was eafily felt the preceding, and following day.

Efficacy of garlick applied to the foles of the feet.

A biller

nibers to be applied, if

> 44. But amongst all the remedies that occasion a derivation, or a revulfion from the head, none, in my opinion, feems to operate fo efficacioufly as garlick applied to the foles of the feet. That it does really revell, is manifest by the blisters it frequently raises, and the intolerable pain it fometimes, tho' rarely, occafions, by inviting the humours to those parts, even without railing bliffers; fo that to eafe 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 perfons, therefore, afflicted with the confinent small-pox, I usually apply garlick fliced, and included in linnen, to the foles of the feet, from the eighth day, when the fwelling of the face first begins to link, and renew the application every day, till the danger be paft.

The regimen.

45. I must further observe, that the patient must be kept from flesh thoroughout the course of the difease, and only allowed small-beer for his common drink. In the mean time, it will be convenient for him to live on water-gruel, roaft 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,

cept, as we took notice before, they are used as revellents; it being evident from the stranguries, feverish heats, restleshess, and continual thirst, almost always attending the operation of vesicatories, that the active and correlive falts of the cantharides, when mixed with the blood in the course of circulation, certainly increase its velocity, and render the inflammation more violent. Set his practical effay on the small pex, p. 94, 95.

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every morning and night. As to the coverings of the bed they are to be precifely the same he made use of in health; and he is to be permitted to turn himfelf in bed as he pleases, whereby the symptomatic sweats may be prevented, which I conceive, have been fufficiently shewn to injure the patient; and by this means, the violent inflammation of the puftules, arifing from the excessive heat contracted by the sleshy parts, by lying always in the same place, will also be prevented. But I have treated of this at large in another place (x).

46. I will subjoin a late case, as a specimen of this Acaseexwhole procedure. I was fent for this winter by lady emplifying Dacres, to attend her nephew, Mr Thomas Chute, a the whole person of a very sanguine constitution, and in the procedure. prime of life. The day before I came he was feized with a high fever, vomited a confiderable 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 fpent a day to no purpose in endeavouring to force sweat, the great tendency to vomiting, and the purging tho' moderate, rendering the fudorifics 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 fweat, which, if the difease had happened in the fummer, would certainly have occasioned bloody-urine and purple-spots; but chiefly, because I have always observed, that in young persons attacked with excellive vomiting, fickness, and extraordinary pain, the fucceeding fmall-pox proved highly confluent. For this reason, judging it requisite to use all endeavours to prevent the too-hafty affimilation 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 fmall-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 miasm, 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

(x) See p. 115. par. 46. and p. 117. par. 50.

afternoon, I exhibited an ounce of the infusion of crocus metallorum; which operated well, carrying off his fickness, 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 fo copioufly; 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 to the fixth day, when, tho' he was not fick, but much refreshed by the fresh air. yet his belly was foluble between whiles; towards night he was obliged to go to bed, which is common in this case, and therefore, he continued therein, by my confent, during the whole course of the disease; the eruption being now over. Tho' the puffules were fewer, than I have observed in some that have died of this difeafe, yet they were more numerous, than they generally are in most that recover. I first, exhibited this evening, an ounce of diacodium in cowflip flower water. and directed it to be repeated every night; I likewife. advised, that he should have no more cloths laid on him, than he was accustomed to in health; and prescribed for his diet, water-gruel, barley-broth, and fometimes a roast apple, and for his drink, small-beer. On the eighth day, I ordered fliced garlick, folded in linnen, to be applied to the foles of his feet, and renewed every day, till the danger was past. After this the puftules 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 restlesness. Apprehending, therefore, the approaching danger, I immediately exhibited the opiate abovementioned, which quieted all the fymptoms, and the fame evening, I preferibed 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 fpent) he began to grow restless again; whereupon I gave him the fame 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. the ine all a tight of Change .

complied, and no dangerous symptom afterwards 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 falivation. tho' it was checked in some measure by the frequent repetition of opiates in fo large a dofe; yet at diffant intervals from the use of them, he expectorated concocted phlegm, and his face and hands swelled sufficienly at the proper time. On the eighteenth day he rose 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 twentyfirst day, eight ounces of blood was taken away from his arm, which refembled pleuritic blood, and differed little from pus. Lastly, he was purged four times, at proper intervals.

47. It is here to be noted, that as often as the day The day from the beginning of the illness is mentioned in these from the sheets, for instance, the fixth, the eleventh, &c. I beginning of would not be understood to infinuate that the confluent the illness fmall-pox always came out on the third day; because I waderstood. am well aware that fometimes, even in the worft fpecies thereof, 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 difeafe. 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 pre-

48. And I repeat it here once more, that these ob- These obserfervations relate only to the confluent small-pox, and are vations reno way useful, or required in the distinct kind. These, late only to therefore, who boast of curing this disease, when the the coneruptions are few and of the distinct kind, impose upon small-pox. themselves, as well as others. But if they have a mind to make trial of their knowledge, let it be in the confluent small-pox, especially in such subjects as are seized with it in the vigour of life, or have overheated themfelves by drinking wine too freely; left being exercifed only in light matters, they should be so far mistaken as to imagine they have faved those, whom they have not destroyed.

The history of a patient of Dr. Goodall's in a fever.

49. But I will not finish this short differtation, 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 discases, proceed entirely from a violent inflammation of the blood, and therefore indicate cooling remedies. The case is as follows.

of age, flender and of a hot conflitution, was feized in June 1681, with a violent continued fever, attended with a dryness and foulness of the tongue, extreme thirst, a quick pulse, pain in the parts contiguous to the ferobiculum cordis, but especially in the back, where it was continual, and fometimes bloody-urine, and numerous brownish foots in the neck, breast and wrists. The physician was called on the fixth day, he 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 mouths of the relaxed vellels of the kidneys.

"51. Bleeding, therefore, and a lenitive bolus being premifed, he earneftly advised the patient to refrain from bed, as much as he could, not doubting that the voiding bloody-urine was promoted by the continual warmth thereof. He also recommended him tather 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 sweeten'd with sugar. And he prescribed the following remedies.

An astringent, infusion.

49. 1900

Take of the leaves of red roses, six drams; the inner hark of oak, half an ounce; the seeds of plantain, three drams; spring water, two pints; spirits of vitriol, enough to give it a grateful tartness; insuse them together in a closed vessel with a gentle heat, four or six hours: to the strained liquor add three

ounces

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.

Take of distilled waters of cowship flowers, plantain and An anodyne cinnamon, of each half an ounce; distilled vinegar, draught. two drams; fyrup of white poppies, fix drams; mix them together.

52. " On the feventh day, the fymptoms abating " little, the glyfter just described was ordered to be in-" jected every day, and the following emulfion and " draught prescribed.

Take of the feeds of succory, endive, lettice, and purstain, A cooling each two drams; the feeds of quinces, and white pop- emulsion. pies, each a dram and half; four fweet almonds, blanched; beat them very well in a marble mortar; then pour on by degrees a pint and half of barleywater, sweeten the strained liquor with a sufficient quantity of fine sugar. Let twelve spoonfuls of this emulfion be taken every four hours.

Take of the distill'd waters of cowship flowers, water lil- An anodyne lies, aak-buds and plantain, each half an ounce; draught. distill'd vinegar and small cinnamon water, each three drams; confection of byacinth, balf a dram; diacodium, an ounce: mix them together for a draught to be taken at bed time.

" 53. On the eighth day, as the fever still conti-" nued, and the patient voided much bloody urine, and the spots likewise were numerous in the abovemenctioned parts, the phyfician, fuppofing these symof ptoms to proceed from the heat, thinness and acri-" mony of the blood, ordered bleeding to be repeated cc and allowed a freer use of small beer agreeably acidulated with spirits of vitriol. But when the pa-"tient began to have an aversion to this liquor, a " whey made of milk and juice of lemons was fub-" flituted in its flead, and he was likewise permitted to eat lemons thinly fliced, and enveloped with fugar and to these the following remedies were se added. Take

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tuary.

## Of the Small-pox

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; fyrup of Comfrey and mouse-ear, of each enough to make the whole into an Electuary; of which the Quantity of a hazle-nut is to be taken every fix hours, drinking after it a small Draught of whey, made with milk and juice of lemons and sweetened with fugar; or of the vulnerary decoction, acidulated with spirit of vitriol.

"Let the draught prescribed last night be re-

peated with ten drams of diacodium.

54. "On the ninth day the petechiæ vanish'd by degrees, the urine was not fo bloody, and the blood that was mixed with it feparated more eafily, and

- " fublided fooner to the bottom of the containing " veffel; for which reason the patient was advised to
- continue the use of these remedies; and in a few "days the following were added to the fame purse pose.

Arestrino gent electuary.

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Take of the conserve of roses, (driven thro' a sieve and acidulated with (pirit of vitriol) four ounces; Lucatellus's balfam, two ounces; armenian bole, dragon's blood, and the species of the electuary of coral, each a dram; fyrup 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 emulfion.

An incrassating ewulfion.

Take of the feeds of lettice and pursain, each three drams; quince feed, a dram and half; the feeds 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 strain'd liquor with fine sugar.

"The fever and the fatal fymptoms abovemention-" ed were carried off in three weeks by these remedies;

" and the fpots difappearing and the urine returning

" to its natural colour and confiftence, the patient by

" degrees recovered his health."

55. But tho' the fymptoms above enumerated only Bloodyaccompanied the continued fever, and not the small- urine and pox, yet, whenever they happen in either disease, they require the always proceed from a violent inflammation and an fame treatexcessive attenuation of the blood, whence it is forci-ment in iebly driven thro' the mouths of the veffels. And doubt- vers, and less the same method is to be used in such a similitude of causes, as far as the nature of the respective difeases will admit. And, for this reason, I ask'd Dr. Goodall's leave to communicate this cure here. Now Dr. Goodall if my greatest enemy, (tho' to judge of the disposi- commended tions of others by my own, I should hope I have none) had performed 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 zealoufly ought I to contend for truth, and his reputation? For this gentleman it was, who, at a time when few ventur'd to affert that I had made the least improvement in physic, defended my reputation against a multitude of opponents, with as much warmth as a fon would do that of his father. But tho' I am fo 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 fay, much lefs do, any thing to the prejudice of another. And how excellent a phylician he is will thortly appear, (provided his life be prolonged) as he hath with great judgment read the writings both of the ancient and modern phyficians, and, with fingular prudence and industry, investigated the nicest rules of practice, without a knowledge of which no man can practice the art with reputation; fo that his patients will find him an able and fuccessful practitioner, inferior to none.

56. And now I have delivered my fentiments on The author's this disease, which are deduced from practical observa- sentiments tion, and not from a groundless hypothesis; and in on the small reality I cannot conceive how a person should be mis- pox deriv'd

taken, vation.

taken, 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 fpend his life idly in deceiving both himself and others, who employs his time in fearthing after fuch things as have not the least relation to practice. And as he would be a dishonest and unsuccessful pilot, who were to apply himself with less industry to discover and avoid rocks and fands, than to fearch into the causes of the ebbing and flowing of the sea; which is well deferving the attention of a philosopher, but quite foreign to him, whose only business it is to secure the fhip; fo neither will a phyfician, whose province it is only to cure difeafes, 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 fuitable remedies thereto; than in curious and fubtile speculations, that do not at all contribute to fnatch the patient from imminent death, which is the intent of the healing art. And this delufory 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 phylic, rather the art of discoursing than of curing. And 'tis 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 inafmuch 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 the employs in her operations; yet the manner of its operating will always be a fecret to us. Nor is this strange; fince it is infinitely more probable, that we poor mortals who are thut out from the glorious regions of light and life, cannot possibly comprehend the method which the all-wife 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 tho' it evidently appears that the brain is the origin of fense and motion and the repository likewise of thought and memory, 'tis nevertheless impossible the mind should be so far enlightened by the most exact infpection and confideration thereof, as to understand how fo thick a fubstance, and a kind of sculp which seems not to be very artfully form'd, should fuffice for fo 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 fmall-pox; which together with what I have already published concerning this distemper, in my history of acute difeases, comprehends all that I have hitherto discovered and confidered, as attentively as I could, re-

lating thereto.

58. I proceed now, in compliance with your re- Theauthor's quest, to communicate the observations I have hither- observato made concerning hysteric disorders; which I own are hysteric neither fo eafily discoverable, nor fo readily curable disorders as other diseases. However I will endeavour to acquit deduced my felf herein to the best of my ability, and with that from his brevity which the compass of a letter requires; which ence. in reality I am oblig'd to on account of my ill health, particularly at this feafon 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 according to my usual method; which contists (1) in giving a short history of the disease, according to its genuine natural phænomena; and (2) fubjoining the method of cure which hath fucceeded best with me, and which I formerly learnt rather from my own experience than from reading.

59. It should feem that no chronic disease occurs so fre- Hysteric quently as this; and that, as fevers with their atten- diforders dants constitute two thirds of the diseases to which man- make a kind are liable upon comparing them with the whole tribe of chronic difchronic diftempers, so hysteric disorders, or at least such eases. as are fo called, make up half the remaining third part, that is they constitute one moiety of chronic distempers. For few women, (which fex makes one half of the grown persons) excepting such as work and fare hardly, are quite free from every species of this difor-

der, several men also, who lead a sedentary life and study hard, are afflicted with the same. And tho' 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 (a). But it must be own'd that women

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(a) The hysteric passion, says Hoffman, is falsely held by several modern writers to be the same with the hypochondriae disease, or to differ only with respect to the sex, and not in nature; the latter only feizing 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, Aretaus, Fernelius, Dinetus, Montanus, Ballonius, Hollerius, Mercurialis, and J. Heurnius, 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 effential fymptoms of this uterine diftemper. And, in effect, tho' both the hypochondriac and hysteric disease appear to have fome fymptoms in common, yet they have feveral 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 difease often attacks pregnant and lying in women with great severity, and also widows that are full of blood, after fome confiderable diffurbance of mind, and virgins upon a fudden stoppage of the menstrual difcharge, and yet they are frequently freed from it to effectually that it never returns again. Moreover this disease often seizes women of a fudden, so that they fall down directly without fense and motion; which is never observed to happen in the hypochondriac disease. And this is surther remarkable in hysteric paroxysms, that the symptoms, tho' they lie without sense and motion, will often abate forn, or go off entirely, upon holding burnt feathers, flaming under the nofe. 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 hypochendriac disorders the abdomen rather appears swell'd 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 zop of the head, which is confin'd within a small compass, and is usually entitled the clavus hystericus; and abundance of persons perceive a kind of globe to afcend from the lower belly towards the thorax: all which fymptoms never happen in the hypochondriac disease. Neither does fainting, and a difficult respiration, threatning suffication of a sudden, along with so violent a stranare oftner attack'd with these disorders than men; not indeed because the womb is more indisposed than any other part of the body, but for reasons hereaster to be explained.

60. This

gulation of the fauces occur so frequently in this distemper, as in the hysteric passion. And lastly, no hypochondrines were ever judg'd 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 hypochondriae disease are, vehement exercise, carminatives, spirituous and volatile medicines, stomachies, 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 hypothen-driac 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 essectival 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 consistend 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 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, dist lved, and discharged; that is, in the stomach and intestines; the peristakic motion whereof, which naturally consists in a reciprocal dilation and contraction, is plainly disturbed, or even inverted. And this chiefly proceeds from certain spalmodic, 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 statulencies, or windy vapours, generated, and pent up; so as to rise, and violen'y distend the smaller guts and the stemach. And thus all the retvous parts endowed with an exquisite sense, are, by what the

Appears undernumerous forms.

60. This disease is not more remarkable for its frequency, than for the numerous forms under which it appears, refembling most of the distempers wherewith mankind are afflicted. For in whatever part of the body it be feated, it immediately produces fuch fymptoms as are peculiar thereto; fo that unless the physician be a person of judgment and penetration he will be mistaken, and suppose such symptoms to arise from some effential disease of this or that particular part, and not from the hysteric passion.

The hytimes refembles an apoplexy.

61. To exemplify this remark. Sometimes it atfferic paf- tacks the head and caufes an apoplexy, which also Gon some- terminates in an hemiplegia; exactly refembling 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 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.

62. Sometimes

ancients call, consent, drawn into a fimilar spasmodic motion; whence proceed that numerous train of fymptoms which afflict acarly all the parts of the body. If this diforder has only a tanfient 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 masentery, and the coars of the intestines he lawred and the molentery; 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 diffemper vainly amuse and deceive themselves. From hence every physician will perceive, that of all remedies, none is fo efficacious as a warm, innocent fluid, properly ufed, both externally and internally, for reftoring the natural tone, or tenfion of the intestinal tube; easing and relaxing the spasmodic contractions of these parts; and re-instating the inverted peristaltic metion; or directing it to its natural tendency downwards. For thus, by its agreeable warmth, it gently mollines and relaxes the hardened and crifped fibres, recalls the blood and humours, that were before excluded, and causes a free circulation of the juices thro' the veffels of the intestines. See new exper. on min.

waters &c. p. 190, 191, 192. It may not be amils to observe that hysteric and hypochendriac diforders are fometimes complicated in the same subject; some tew instances whereof have fallen under my own observation, and others may be met with in practical writers; but this feldom, or

never happens in men.

62. Sometimes it causes terrible convulsions much like Sometimes the epileply, along with a rifing of the abdomen and an epileply. viscera towards the throat, and such strong convulsive motions, that tho' the patient be otherwise rather weak, the can fcarce be held by the attendants. And The talks wildly and unintelligibly, and beats her breaft. This species of the disease, which is commonly entitled the strangulation of the womb, or fits of the mother, happens most frequently to fuch women as are of a very fanguine and robust constitution.

63. Sometimes this difease attacks the external part of Sometimes the Head, between the pericranium and the cranium, avehement and occasions violent pain, which continues fixt in one head, with place, not exceeding the breadth of the thumb, and it excessive is likewife accompanied with enormous vomiting. I vomiting. call this species the clavus bystericus, which chiefly af-

fects fuch as have the green-fickness.

64. Sometimes it feizes the vital parts, and caufes Sometimes fo violent a palpitation of the Heart, that the patient it causes a is perfuaded, those about her must needs hear the palpiratiheart strike against the ribs. Slender and weakly wo- heart. men, that feem confumptive, and girls that have the green-sickness are chiefly subject to this species.

65. Sometimes it affects the lungs, caufing an al- Sometimes most perpetual dry cough; and tho' it does not a dry shake the breast so violently yet the fits are more cough. frequent, and the patient's fenses are also disordered. But this species of the hysteric cough is very rare, and chiefly happens to women of a phlegmatic conftitu-

66. Sometimes attacking the parts beneath the fcrobi- Sometimes culum-cordis in a violent manner, it occasions extreme a disorder pain, like the iliac passion; and is attended with a copi- resembling ous vomiting of a certain green matter, nearly refembling what is usually called porraceous bile, and sometimes the matter is of an uncommon colour. And frequently after the pain and vomiting have continued feveral days, and greatly debilitated the patient, the fit is at length terminated by an universal jaundice. Moreover, the patient is fo highly terrified, as to defpair 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

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women of a crude and lax texture of body, or those who have suffered much by being delivered of large children.

Sometimes. a disorder resembling ft.ne.

67. Sometimes this disease seizes one of the kidneys, where, by the violent pain it occasions, it entirely rea fit of the sembles 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 'tis hard to diftinguish, whether the symptoms arise from the stone or an hysteric disorder; unless, perhaps, fome misfortune having depress'd the woman's spirits, a little before the disorder came on, or the discharge of green matter by vomit, should shew that the fymptoms are rather to be afcrib'd to an hyfteric diforder than the stone. The bladder also is occafionally affected with this delufory Symptom, caufing pain and a suppression of urine, as in the case of an obstruction of the urinary passages from a stone. This last species rarely happens, but the former more frequently. Both are accustomed to attack such women, as are greatly debilitated by frequent hysteric

Sometimes purging.

68. Sometimes feizing the ftomach, it causes continual is occasions vomiting, and fometimes fixing in the intestines, occavomiting or fions 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.

Sometimes ders, Oc.

69. Moreover, as this difease affects most of the the external internal parts, fo likewise it sometimes attacks the parts, cau- external parts, and muscular flesh, sometimes caufing a pain, fing pain, and fometimes a tumour in the FAUCES. or tumour of shoulders, hands, legs, and ancles, in which kind CES, Shoul the fwelling which diftends the legs is most remarkable. But whereas in dropfical fwellings thefe two particulars may always be observed, namely (r) they encrease towards night, and (2) pit, and keep depress'd for fome time after the finger is forced against them; in this tumour the fwelling is largest in the morning, and does not yield to the finger, or leave any mark behind it, and it generally only fwells one of the legs. In other respects if the magnitude and surface of it be observed

observed, it differs so little from dropsical tumours that the patient can scarce be perfuaded to think it otherwise.

70. The teeth alfo (which one would fcarce believe) Sometimes are fubject to this difease; tho' free from the least cavity, and manifest defluxion that might cause pain, which nevertheless is not at all milder, of shorter duration, or more eafily curable. But the pains and fwellings that afflict the external parts, chiefly happen to fuch women, as are nearly worn out from the long continuance and violence of hysteric fits.

71. But the most frequent of all the tormenting Is generally symptoms of this disease is a pain of the back, which accompanigenerally accompanies even the flightest degree hereof. pain of the The abovementioned pains likewise have this effect in back. 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 feverely beaten; but this ten-

derness wears away by degrees.

72. It is likewise well worth noting, that all these All its fymptoms are preceded by a remarkable coldness of the symptoms external parts, which feldom goes off, before the fit preceded by ceases. And I have observed that this coldens are a remarkceases. And I have observed, that this coldness refem- able coldbles that which is perceiv'd in dead bodies, the pulse, ness of the notwithstanding, continuing regular. Whereto may outward be added, that most of the hysteric women that I have parts. hitherto treated, have complained of a lowness, and (to use their expression) a sinking of the spirits; which, by their pointing to the region of the lungs to mark the part affected, feem'd to be feated there. Lastly, 'tis generally known that hysteric women fometimes laugh, and fometimes cry without the least apparent provocation.

73. But amongst the symptoms accompanying this This disease disease, the most peculiar and general one is, the generally voiding a copious limpid transparent urine; which upon attended diligent enquiry, I find to be the distinguishing fign pious disof those disorders which we call hypochondriac in men, charge of and bysteric in women. And I have sometimes ob- limpid ferved in men, that foon after having made urine of urine. an amber colour, being fuddenly feiz'd with fome extraordinary diffurbance of mind, they have evacuated a transparent urine in plenty, with a continued violent

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with a co-

stream, and remained indisposed till the urine came to its former colour, when the fit went off.

And Somesimes with fotid and

74. Moreover in hysteric and hypochondriae subjects. when the difease has been of long standing, they have bigbly acid fetid and fometimes highly acid eructations, after eructations, eating, tho' they eat moderately, according to the appetite; the digeftive faculty being greatly impaired, and the juices vitiated.

And with a great difmind and lowness of spirits.

75. But their misfortune does not only proceed from great dif- a great indisposition of body, for the mind is still more turbance of 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 hopes of their recovery, eafily imagining that they are liable to all the miferies that can befall mankind; and prefaging the worst evils to themselves. Upon the least occasion also they indulge terror, anger, distrust, and other hateful passions; and are enemies to joy and hope; which if they accidentally arise, as they seldom do, quickly flie away, and yet diffurb the mind as much as the depressing passions do, so that they observe no mean in any thing, and are only fettled in inconstancy. They love the same persons extravagantly at one time, and foon after hate them without a cause; this inftant they propose doing one thing, and the next change their mind, and enter upon fomething contrary to it, but without finishing it; so unsettled is their mind, that they are never at reft. What the Roman orator afferts 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 reprefentation of the funerals and apparitions of their departed friends. And fo much are they diffempered in body and mind, that it feems 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 folidity of speech greatly excel those whose minds were never disturbed by these tormenting thoughts. So that the observation of Aristotle is just, who afferts that melancholy persons are the most ingenious.

76. But this very dreadful state of mind which I have Especially mention'd above, only attacks fuch as have been much when the and long afflicted with this difease, and are at length disease bath overcome thereby; especially if misfortunes, grief, flanding. care, hard fludy and the like, along with an ill habit of body, have contributed thereto.

77. It would take up too much time to enume- Hard to rate all the fymptoms belonging to hysteric diseases; enumerate fo much do they vary, and differ from each other. symptoms, Democritus therefore in writing to Hippocrates, feems to have had reason to affert, tho' he mistook the cause of the disease, that the womb was the origin of fix hundred evils, and innumerable calamities. Nor do they 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 diforderly train of fymptoms; fo that 'tis a difficult task to write the history of this dif-

ease. 78. The Procatarctic, or external causes thereof are The extereither violent motions of the body, or, more frequent- nal causes ly, fome great commotion of mind, occasioned by some fudden fit, either of anger, grief, terror, or the like passions. Upon this account, whenever I am confulted by women concerning any particular diforder, which cannot be accounted for on the common principles of investigating diseases, I always enquire, whether they are not chiefly attack'd with it after fretting, or any diffurbance of mind; and if they acknowledge this, I am well affured that the difcafe is to be ascrib'd to the tribe of disorders under consideration, especially if the diagnostic appears more evident by a copious discharge of limpid 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 profufely, or giving too ftrong emetics, or cathartics. (b) Aa4 79. Having

(b) This disease in general may be said to arise primarily from weak nerves, and poor thin watery juices, whence the circulation is languid and flow, and the fecretions and exertions imperfectly performed. Confequently whatever tends to debilitate the neryous fystem, and impoverish the juices may be enumerated amongst

## Of the Small-pox

Its internal

79. Having now given a full description of this and efficient difease, according to its common symptoms, we are gular mo next to confider the internal efficient causes thereof, tions of the fo far as these can be discovered from all the ciranimal spi- cumstances which we have described, taken together, And, in my opinion, diforders, 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 fensation; and destroying the functions of the respective organs which they enter into, and of those also whence they came; both being highly injur'd by this unequal distribution, which quite perverts the œconomy of nature.

And thefe proceed from their weak texture.

80. The origin and antecedent cause, of these irregular motions of the spirits, proceeds from their weak texture, whether it be natural or adventitious, whence they are easily dislipable 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 confifts in a regular frame or make of the fpirits, which is only the object of reason. And this being fo 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 they have receiv'd from nature a finer and more delicate constitution of body, being defigned for an eafier life and the pleafure of men, who were made robust, that they might be able to cultivate the earth, hunt and kill wild beafts for food, and undergo the like violent exercises.

This opinions illustrated and exemplifted by the Itran-

81. But that the irregular motion of the spirits is the cause of this, is fully manifest from the symptoms just enumerated; I will only mention the principal, beginning with that remarkable one, the ftrangulation gulation of of the womb, or fits of the mother. In this case the the womb. fpirits being copiously collected in the lower belly,

are

the external or manifest causes thereof; such as violent exercise, confiderable commotions of mind however occasioned, emptiness, long fasting, watching, all immoderate evacuations, &c. See above Par. 80.

are thence derived with violence to the fauces, occafioning convulfions in all the parts they pass through, and puffing up the belly like a ball; which however is only a kind of convolution of the convulsed parts. which 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 fo cold, both in this, and all the other species 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.

82. The fame may be faid of that violent species And the of this diforder, which in outward appearance re- diforder refembles the bilious colic, or iliac passion; wherein the sembling patient is afflicted with a very violent pain, in the parts colic or contiguous to the ferobiculum cordis, along with a co- iliac pafpious discharge of green matter, by vomit; which sion. fymptom proceeds only from a forcible impulse of the spirits stagnating in those parts, occasioning the pain,

convulsion, and loss of their functions.

83. For it is not immediately to be concluded, be- Whence the cause the discharges upwards and downwards, in this green colour disorder are sometimes green, that it is feated in the ters diffluids, or that the violent pain proceeds from the charged upacrimony of fome humour vellicating the parts to wards, and which it adheres, which for this reason we should downwards 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 fickness, which feizes those who go to sea, occasioned by the agitation of the animal spirits from the violent and uneven motion of the ship, is attended in healthy subjects with vomiting of green matter, tho' but half an hour before no fuch bile as we term porraceous existed in the body. Again, do not children in convulfive fits, in which the animal spirits are principally disordered, evacuate a matter of the fame colour upwards and downwards? whereto must be subjoined, what is manifest from daily experience, viz. that the fuch women children should be thoroughly cleansed by repeated purgatives; yet the greenness would still appear in the difcharges upwards and downwards. Moreover the green

matter

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 thro' the violence of the convultions forces fome juice of a foreign 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 a better fet of remedies, than may be obtained from pharmacy, are, however, able to gratify our curiofity, by exhibiting two equally clear transparent liquors, which upon mixture immediately become of fome deep colour, as if there were conjuration in the cafe. In reality, the confideration of colours, is fo infignificant and variable, that no certainty can be had from them, with respect to the nature of those bodies 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 and ejection of green matter, in the hysteric colic, proceed entirely from the tumultuary translation of the spirits to the parts (c) beneath the Scrobiculum cordis, and their contraction by convulfions,

84. To

(c) The bile, fays 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.

gall-bladder and biliary conduits.

Experience confirms this reasoning, without which the most plausible theory is vain. Thus I have often been assonished 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 excoriated 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 con-

84. To the irregular motion of the spirits the clavus The CLAbystericus is to be ascrib'd, in which all the spirits are vus Hyscollected in a certain point of the perior anium, oc- cau'd by casioning such a kind of pain, as if a nail were driven the irreguinto the head, and attended with a copious discharge of lar motion green matter by vomit. And this contraction of all of the [pithe fpirits, into a kind of point, differs little from the collection of the rays of the fun by a means of a burning-

vulfions and a delirium, vomited a large quantity of deep green, and fometimes a very black and acid bile. The atten-dants having introduced a filver spoon into his mouth, during his convultions, that he might not bite his tongue, it in a moment turn'd as black, as if it had been stain'd 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 diforder in the stomach, occasioned by a corroding, and very pungent acid. I remember about fifteen years fince that having ordered a young gentleman to be blooded, who was a great lover of acids and cyder, and on this account frequently feized with colic and rheumatic pains, I was amaz'd to find the ferum as green, as the juice of leeks. See our fecond ob-

fervation in the phil-transactions. No. 382.

I am indeed well aware that the excellent Sydenham holds, that porraceous or green bile proceeds folely from the irregular motion of the fpirits: but if this were true, fuch bile would be generated upon every extraordinary commotion of mind, or vehement agiration of the fpirits, which however feldom happens. The passions of the mind do indeed agirate and force out the bile into the vilcera, where, if it meets with an acid humour, it turns green, in which state it is often vo-mited up, in great commotions of mind. But the same person who from a vehement commotion of mind now vomits green bile, will perhaps foon after, from a more violent diffurbance, yomit an entirely yellow bile. And thus a person at sea throws up a very green bile one day, who, nevertheless, the next day may eject a yellow one, and vice versa. The bile when out of the body, does not turn green with violent shaking, and therefore fearce 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 greenness 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. damnon. p. 19, 20, 21, 22.

That human bile, and the bile of animals turns green and afterwards black, by mixing and digefting it with acids, is verified from fome experiments of Baglivi, which tend to confirm what has been advanced above. See Baglivi. op. p. 436, & feg.

glass; for as these burn by their united force, so those for the same reason cause pain, by tearing the membranes with united violence.

Alfo the copious difcharge of limpid urine.

85. And from the fame inordinate motion of the fpirits which diffurbs the mixture of the blood, arifes the voiding of a copious limpid urine; which is a frequent fymptom in hysteric and hypochondriac disorders; for, when the due circulation of the blood is often diffurbed. the ferum is hurried to the urinary passages before it has remained long enough in the body, to be impregnated with those faline particles that render it of a straw colour. (d) We have frequent inftances of this, in those who drink too freely, especially of thin and attenuating liquors, whose urine immediately becomes transparent thereupon: in which case the blood being oppressed by the proportion of ferum, 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 fince a nobleman fent for me, who feemed to be afflicted with an hypochondriac colic, differing little from an iliac passion, attended with pain and immoderate vomiting, which he had feverely and long laboured under, fo that he was in a manner worn out. During the whole course of the difeafe, whenever he was worst, I observed that he always voided limpid colourless urine, but upon the abatement of the diforder, 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 a craving appetite, and thought of eating fomething of eafy digestion; but some person coming in at that instant, and putting him into a violent passion, he immediately thereupon made a very large quantity of limpid urine.

The sputation in hysteric subjects from the same cause.

87. Possibly the sputation which is so common a symptom in hysteric subjects, arises from the spirits, disturbing the mixture of the blood: they spit a thin saliva

(d) This fymptom 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 impersed mixture of the constituent parts of the blood, or a poor and watery state thereof.

for many weeks, as if it were produced by a mercurial unction; for, during this alteration of the blood, which renders it unfit to perform the excretions in the natural way, the ferum accidentally taking this contrary courfe, 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 it felf by the falival ducts in the form of faliva. The fame may be faid of those profuse night sweats, which sometimes feize hyfteric 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.

88. It is manifest also that the coldness of the external And the parts which often happens in hyfteric diforders, arifes coldness of from the spirits for sking their station, and crowding the outtoo much to fome 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.

89. And by the way, I must observe that men are Men some. fometimes subject to such crying fits, tho' rarely. I times subwas called not long fince to an ingenious gentleman, jest to fits of who had recovered of a fever only a few days before; exemplified he employed another physician who had blooded and in a case purged him thrice, and forbid him the use of flesh. likewise. When I came, and found him up and heard him talk fenfibly on some subjects, I ask'd why I was fent for; to which one of his friends replied, that if I would make a fhort flay I should be fatisfied by the circumstances. Accordingly, fitting 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 fucceeded by the most violent fit of crying I had ever feen, attended with deep and almost convulsive fighs; but it soon went off. I conceived that this diforder proceeded from an irregular motion of the spirits, occasioned in part by the long continuance of the difeafe, and partly by the evacuations that were required in order to the cure; partly also by inanition and the abstinence from slesh; which the physician had ordered to be continued for some

days after his recovery, to prevent a relapfe. I maintained that he was in no danger of a fever, and that his diforder proceeded wholly from inanition; and therefore ordered him a roaft chicken for dinner, and advised him to drink wine moderately at meals; which being complied with, and he continuing to eat flesh sparingly, his diforder left him.

The other Symptoms of the hylar motion of the spi-

90. To conclude (not to mention the other concomitant fymptoms of this difease) the diffurbance and variable indisposition of body and mind, which ease, caus'd prevail in hysteric and hypochondriac subjects, arise from likewise by the same inordinate motion of the spirits : for such perthe irregu- fons not having that firmness of spirits which the robuft, and those who never want vigorous spirits, always possess, cannot bear misfortunes, but being moved by paffion or fudden pain, are as much affected as those whose minds are originally weak, or rendered so by numerous diforders, or their long duration. For the ftrength and fteadiness of the mind, during its union with the body, chiefly depends on the firmness of the fpirits which are fubservient thereto, (e) and 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 confifting in an harmony of the most excellent and almost divine faculties; so confequently if any diforder arises herein, the evil must be fo 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 perfons we have described, which the positive command of the proudest Stoic would not sooner relieve, than the tooth-ach would be prevented by a firm refolution

> (e) '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, infomuch that fome 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 folids, which being fufficiently elaftic and open, the operations of the mind, in which confilts its strength, will be performed with vigour and alertness.

folution not to fuffer the teeth to be feized with pain. 91. I conceive now that it is sufficiently manifest And not by that all the kinds of this disease are to be ascrib'd to a malignant disorder of the animal spirits; and not to the ascent of effluvia malignant effluvia from corrupted femen, or men- from corfirmous blood, to the parts affected, as fome authors rupted Sehave afferted; or as others affirm, to a latent depravi- menstruous ty of the juices, or a collection of acrid humours. blood, &c. For, that the cause of this disease does not lie conceal'd in any morbific matter, appears evident from this fingle 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 feized with fome one of the concomitant fymptoms of this difease; which would rather have been carried off than occasioned thereby, if the cause thereof had been contained in an humour. The fame may be faid 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 productive 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.

92. But tho' it abundantly appears that the original cause of this disease is not seated in the fluids; it must The originevertheless be owned, which indeed is fact, that the nal cause irregular motion of the spirits, whence it proceeds, inthe fluids generates putrid humours in the body; because the tho' it corfunction both of those parts which suffer from the rupts them violent action of the spirits upon them, and those in time. which are deprived thereof, are quite destroyed. And most of these being a kind of separatory organs or strainners, defigned for the reception of the excrementitious parts of the blood; it follows that if their functions be any way injured, abundance of impurities, must needs be collected in the body, which had been expelled, and confequently 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 fupply of spirits. To this cause I ascribe remarkable cachenies, loss of appetite, and the green-sickness in young women, (which

latter

the womb.

latter is doubtless a species of hysteric disorders) and all the evils which trouble those who have been long afflicted with this difease; for all these proceed from corrupt juices collected in the blood, and derived thence Instanced in to various organs. Of this kind is a dropsy of the womb a dropfy of in women who have long laboured under hysteric diforders, 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 fanies and ferum are generated, which not only diffend the ovaries and ova confiderably, but infinuating themselves into the interstices of the teguments, fwell them, as appears upon diffecting the bodies of fuch as perish by this disease. In the mean time the hyfteric disposition is the primary cause of these and other fimilar humours, tho' they are in themselves foreign to it.

And a quartan.

93. In the fame manner in a quartan, wherewith a perfon in perfect health may be feized, by refiding two or three days in moist and marshy places; first a certain spirituous miasm of this disease is communicated to the blood, which remaining a confiderable 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 diforders, which fucceed inveterate intermittents. And yet these intermittents are not to be cured by those remedies which are adapted to purge off fuch humours, but by fuch specifies as are immediately curative of these disorders.

The chief curative indication is to itrengthen

04. From what has been advanced, it feems evident to me, that the chief curative indication in this difease, is that which directs the strengthening the blood, which is the fource and origin of the spirits; this the blood. being effected, the invigorated spirits may preserve that order which fuits the due order of the whole and every part of the body. But as this diforder of the spirits may by its long duration 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, fo long as we are obstructed by abundance of foul

Bleeding and purging when to be premi fed.

foul humours lying in the way. But as the pain, vomiting and purging are sometimes so violent, that they When an cannot fafely be neglected, till we have answered the opiate is to primary intention of strengthening the blood, we are to be exhibited difregard the cause for a time, and begin the cure by quieting the fymptoms, for that purpose exhibiting an opiate; after which we must endeavour to restore the spirits to their due firmness, the weakness whereof is the cause of the disease. And as experience Fetid medishews that there are many fetid medicines, which are cines exceladapted to compose the tumultuary motion of the lent here. ipirits, and keep them in their proper places, which for this reason are intitled bysterics, recourse must be had thereto, whenever such intentions are to be answered.

95. With this view, I first bleed in the arm and af- Whence terwards give a cathartic for three or four mornings bleeding fuccessively. During these evacuations the patient feems and purgto grow rather worse than better; because they increase ing inthe diforder by the tumult they raise; which I take care diforder. to inform her of at first, that she may not be dejected; it being the nature of this difease to fink the spirits. (f) However, it be, 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 difeafe.

96, After these evacuations, in order to strengthen somechalythe blood and the spirits proceeding therefrom, I prescribe beate to be some chalybeate medicine to be taken for thirty days; this taken afterbeing as effectual a remedy as can be given in this case: wards for for it impregnates the vanid and languid made of black thirty days. for it impregnates the vapid and languid mass of blood with a certain volatile ferment, whereby the drooping fpirits are rouzed and revived. And this is manifest upon administering steel in the green-sickness; for it

(f) 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 exhaustion and debility, 'tis manifest that neither bleeding nor purging should be used: but if there be a sulness of blood, and the fits be violent, recourse may be had to them with advantage. 'Tis observable that some hysteric women cannot hear 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 tonclusion of par. 96.

Bleeding and purging not always to be us'd before exhibiting chalybeates.

Steel best given in substance. 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 premifed to chalybeates; for in case the patient be extremely debilitated and almost worn out by the continuance of the difease they may and ought to be omitted, and we are to begin with steel. This is a caution well worth obferving.

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, fo, much experience hath convinced me that it cures with more expedition and certainty than any of the common preparations thereof (g). 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 strengethen our affertion) 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'dof 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 admirable medicine may be productive of furprizing effects, by its native goodness and efficacy in whatever form it be taken, we instance in the bark and opium: nor does the skill of a physician appear fo manifest in preparing, as in chusing and adapting those remedies which nature hath prepared with her own fire, and abundantly fupplies. have to do, therefore, is to reduce medicines to fuch a form, that their fubstance, or virtues may be more effectually communicated to the body, which we are fufficiently able to perform. Next to fteel in fubstance, I prefer the fyrup thereof which is prepared by infufing fi-

(g) Of this fentiment is Baglivi, Hoffman, and many other great men. The operation of fteel 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, O'c, upon mineral waters. Translated by Dr. Shaw. p. 195.

lings of steel or iron in rhenish wine without fire, till it be fufficiently impregnated therewith; and afterwards straining it off, and with a fufficient quantity of fugar

boiling it to the confistence of a syrup. (h)

98. I do not interpose cathartics at set times during Purgativer a course of chalybeates, because they seem to destroy why not to the effects of steel, both in hysteric and hypochen-during a driac disorders. For when I chiefly propose to quiet course of the spirits, and restore and strengthen their frame, the challbeates gentlest purgative does, in one day, undo all that I had in this distance able to perform by the use of shall for making ease. 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 my felf 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 fome perfons 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 phylician: for if purgatives had been omitted the cure would have been fooner compleated. (i)

99. Moreover,

(b) Dr. Quincy in his dispensatory, under the article of syrup of iteel, 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 clog it, and render it disa-greeable to some palates, and too heavy for some stomachs. How-ever as it may be an affishant occasionally in prescription we shall

give the manner of making it to the best advantage, as 'tis delivered by Fuller in his pharmacopæia 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 saces 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.

(i) Our author is doubtless in the right in condemning purgatives 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 aditional alterative remedies of different kinds, suited to the case, may frequently be used with advantage as affiftants in the cure-

Mischief of frequent purging in other diseases like-wise.

99. Moreover, I cannot conceive what benefit can accrue from fo frequent a repetition of cathartics, in feveral other difeases belides that under confideration: for tho' it must be own'd that they clear the intestines of foul matters, and fometimes also in some measure expell ill humours contained in the blood: yet, on the contrary, it is as certain, that a frequent repetition of them in weak perfons, 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 arife 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) readily waste and putrify. And sometimes also the functions of the viscera, being destroyed by the causes just mentioned, hard tumours, resembling the king's evil, and fwellings of this kind arife in the mefentery, and at length occasion death. For these reasons, I judge it safest in children, after a few general evacuations, to endeavour to strengthen the blood and viscera; which may be effected by canary alone, or by infufing ftrengthening 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 eafily penetrate the tender bodies of children, and confequently communicate all their virtue to the blood, whatever it be it is proper in fwellings of the abdomen, whether they proceed from scrophulous diforders, 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 leffer centory, white hore-hound, germander, ground-pine, scordium, common calamint, feversew, 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, of each one handful; hogslard, four pounds; sheeps-suit, two pounds; claret, a quart; insuse them together in an earthen vessel upon hot ashes for sixteen hours; then boil them till

the aqueous moisture is exhaled, and press out the ointment. Let the abdomen, hypochondria, and armbits be anointed therewith morning and night,

for thirty or forty days running.

100. But it must be further observed with respect to Repeated the rickets, that in such swellings as formerly affected requisite in the abdomen in children, after inveterate intermittents, swellings of and refembled the true rickets, repeated purging feem'd the abdo-to be indicated; for before the use of the bark inter-children, mittents continued a long time and depolited a fedi- after invement, which occasions such swellings, and hence they terate incould only be removed by frequent purging. But in termittents the genuine rickets purging must not be repeated more But not in than once or twice at most, before beginning a course the genuine of alteratives : and whilft the parts affected are anointed let the wine abovementioned be taken, or, if it can be done, let the child use beer for his common drink, wherein a fufficient quantity of all, or part the aforcmentioned herbs are fuffered to fland in infusion. Lastly, this observation deserves to be carefully noted, because I am well affured that many children have been destroyed by the frequent repetition of cathartics, which perhaps the fwelling of the belly feem'd to demand. (k) But this by way of digref-

> IOI. If Bb 3

(k) 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 from 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 figns.

It appears first in the ninth month of the child's age, or later, and by degrees feveral 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, the bones too weak to support the body, and frequently crooked, along with the spine; whence the child walks with difficulty, and ofeen looses the use of his seet 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 ordinarily 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 increasing, it is accompanied with

An objectianswered.

101. If it be objected that the filings of fleel may flick to the bowels and do mischief, unless cathartics lings of fieel be exhibited at proper intervals. I answer, first, that I

with a flow fever, a cough, difficult respiration, and other fymptoms which continue during life. It should however be carefully remember'd that there are different species of the tickets, and that it lasts longer, or goes off sooner, not producing the same symptoms in all subjects, but afflicting some

more, and others less severely.

Upon diffecting 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 scirrhous, and adhering to the diaphragm, the glands of the melentery indurated, and the pancreas obstructed: in others, the lungs have been found sticking to the pleurs, and back, and either livid, or much impostumated: and in others the pericardium has been found full of water. But several curious anatomists, as Glisson, and Bonetus, and Heister, amongst 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 juice into the fpinal 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. This anatomy shews that the head of a ricketty child receives more nourishment, because the nutritious lymph cannot enter the spinal marrow and therefore not only increases in bulk, but oc-

cations the face to be fresh-coloured and florid.

The bones come to be incurvated, and deformed with knotty excreleencies about their epiphyles, 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 foft, or eartilaginous and yielding texture in children, are dittended from the small refistance they make, and become knotty. And when the aliment continues to be fo irregularly applied, the bones increase continually in bulk, and the muscles, on the contrary, wear away and grow shorter, whence their exten-fion is obstructed by the connecting muscles, and they grow bow'd or crooked, and the more so, by reason of their sost-

ness and flexibility at this age.

The differtion of the spine is occasioned folely by the laxness and and weak tone of the bony processes, cartilages, ligaments, and muscles, which join the bones together; whence these parts by an incurvated fituation seperate so much from each other respectively, and are so much distended, that they cannot come together

again, and be reftored 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 fub-

and hysteric Diseases.

never observed this ill effect in any of my patients; and besides 'tis more probable that the steel being enveloped in the mucus and excrementitious humours of those

tile 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 furrounds the bodies of children is principally productive of this diftemper, 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 smooth

Moreover I fcruple not to affert, that the ill custom which some women have of carrying their children often in their arms, contributes to the stagnation of the sluids in the spinal marrow, and not only keeps the spine in an incurvated stuation a long time, but also bends the feet unequally, so that they grow crooked and gibbous, and this distemper is occasioned.

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 shuids in the spinal marrow, and consequently hinder the free course of

the nervous juice.

If this diffemper 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 remov'd 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 heetic fever, a dropsical swelling, an assume, 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 diffolve 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 cleaning the first passages in order to carry off what feeds the disease, for which purpose gentie laxatives are servicable, and emics, (if requir'd, and the constitution can bear them)

nafmuch

parts, will at length be evacuated therewith, than when they are agitated by purgatives, which occasion unufual costiveness, gripings and contractions of the intestines, whence the particles of the steel which adhere to their coats, may be more thoroughly fix'd

Hysteric medicines with chalybeates.

102. During a course of chalybeates, in order to strengthen the blood and animal spirits, hysteric medito be join'd cines are to be administred in such manner and form,

> inalmuch as these kinds of remedies admirably evacuate the vifcous impurities collected in the stomach and intestines, and by their ffimulating property diffolve the viscid humours, and open the obstructed vessels. But these medicines must not be given to those who are very much exhausted, have unsound viscera, or the melentery extremely obstructed; aperient and saponaceous medicines, especially neutral falts 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 from 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, balm, &c. boil'd in soft-water; and afterwards anointing the spine, and limbs, with a nervous liniment, fuch, for inftance, as the fol-

Take of human fat and oil of mace, of each half an ounce; balsam of Peru, one dram; the chemical oils of cloves, laven-der and rue, each thirty drops; mix them well together.

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 fmall chicken and veal broth, wherein opening roots and craw-fish have been boiled. His drink should be thin liquors, and whilft he fucks, good thin milk, not neglecting proper exercife 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 fome disorder of the nurse, the same medicines should be administer'd to her, which we have advis'd in a less dose for

To conclude: the application of fuitable bandages and bolfters 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. of physic p. 554 & seq. where the reader will meet with a concide history of this disease, and the best methods of cure. — See alle feet. I. chap. V. and par. 49, 50, 51. of our authors works.

as are most agreeable to the patient; tho' if they can be taken in a folid form, they will more effectually keep the spirits in their function and place, than in a liquid one, viz. in decoction, or insusion; for the substance itself affects the stomach longer with its taste, and communicates its Virtue more intimately to the body.

indications above enumerated, I usually direct the described. following few common and simple remedies with success. Let eight ounces of blood be taken from the right arm.

Take of galbanum, dissolv'd in tineture of castor, and Afetid strain'd, three drams; tacamahac, two drams; plaister. mix them together, for a plaister to be applied to the navel. Next morning let the patient begin the following pills.

Take the greater pil. cochiæ, two scruples; castor purging powder'd, two grains; balsam of Peru, four drops; pills. 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.

Take of the distilled waters of black cherries, rue and An hysteric briony, each three ounces; castor, tied up in a piece julap. 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 sive spoonfuls be taken when the patient is faint, or low-spirited, dropping into the first dose, if the sit be violent, twenty drops of spirit of hartsborn.

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 Opening wormwood, enough to make it into two pills; to be pills. 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.

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,

An opening electuary to be divided into bolusses.

Take of the conserve of roman wormwood, and orangepeel, 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 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.

Petid hyften

Take of the finest myrrh and galbanum, each a dram and balf; 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 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 byferic pills. Take of easter, 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 Differbance caufed by chalybeates, how to be remedied. 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 bysteric water.

106. But when the disease is gentle, and does not How to profeem to require the use of steel, I judge it sufficient to ceed when bleed once, and purge three or four times, and then feel is not to exhibit the alterative hysteric pills, above describ'd every morning and night, for ten days. This method feldom fails of curing, when the diffemper is not fevere; and the pills alone often do great fervice, with-

out bleeding or purging.

107. It is however carefully to be noted, that some Hysteric mewomen by reason of a certain peculiarity of constitu- dicines do tion, have so great an aversion to hysteric medicines, not suit all which are fo generally ferviceable in this difease, that constitutiinstead of being reliev'd, they are injured thereby. In ons. fuch 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 fo remarkable and fo 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 prefent produce only a fingle inftance. Thus, fome women in the fmallpox, cannot bear diacodium, because it occasions giddiness, vomiting, and other hysteric symptoms, whilst liquid laudanum agrees with them very well. I experienc'd this, whilft I was writing this epiftle, in a young lady in the small-pox, to whom I had given diacodium on the fixth and feventh night, and she was seized on both nights with the above-mentioned fymptoms, and the inflamation of the puftules 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 puftules fill'd every day, and the restlesness and anxiety (which made a kind of fit of the fmall-pox) were wholly removed every time this opiate was exhibited; the patient being strengthened and revived thereby. --- This by way of digreffion.

108. And in this manner hysteric diseases and most If seel fails kinds of obstructions, but especially the green-fickness, of curing, and all suppressions of the menses, are generally cured. the chaly-But if the blood be so weak, and the irregular motion of ters are to the spirits so considerable, that the disorder will not yield be drank. to a course of chalybeates as above directed; the patient must drink some steel water, such as that of Tunbridge, or fome 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 difeases, than the choicest preparations of iron, however magnified by chemists.

A caution ed in drinking them.

109. But this caution must particularly be observed to be observe 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 fymptom goes off, which would otherwise hinder the water from pasfing off freely. For tho' these waters are not so apt to move the humours, and caufe a diforder of the spirits, as the gentlest officinal cathartics, yet they in some measure move the humours, inasmuch as they are diuretic, and, belides, they frequently purge. But if the waters themselves obstruct their own passage, by diflurbing 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 abfurd to mix purgatives therewith; which occasion both these and other mineral waters to pass more flowly and difficultly.

Their nature explained.

110. I must here acquaint you, that the' some are of opinion, that these waters contain a folution of the principles or elements of iron, which is the same thing as supposing liquid iron; yet, I doubt not that they are only fimple 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 fome gallons of water upon a fufficient quantity of rufty nails, letting them fland fome time together in infusion; and afterwards adding to a small quantity thereof, a little powder of galls, a few leaves of green tea, or fomething of the like kind; for thus it will be tinged in the fame manner, as mineral waters are by fuch ad-mixtures (1). Moreover, these natural, or artificial waters (which name foever you give them) being drank in the fummer time, and in a healthful air, are productive of the fame effects.

III. But,

<sup>(1) &#</sup>x27;Tis certain, fays Hoffman, and abundantly confirmed by chemical experiments, that no metals are foluble, or can possibly enter the composition of waters, unless the metal be first dissolved, orturned to a falt or vitriol. — Of all the metals there is none that disfolves so readily in all kinds of acids as iron. And thus, pure water itself, on account of the atherial principle and the

III. But however this be, if the diforder proves foin- If the chaveterate, as not to yield to the steel waters; the patient lybeate wamust be sent to drink some hot sulphureous waters; as sulphureous those of Bath; and after having drank them for three mor-kind is to be nings fucceffively, the must bath in them the fourth, and tried.

univer fal falt it lodges, will foon prey upon, and diffolve 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 moiflure of the air, rain, &cc. corrodes iron, turns it into ruft, 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 spring-

head. And accordingly the waters of fuch springs, all over Ex-rope, are called by the name of chalybeate, steel, or irony waters. The external signs of these chalybeate waters are derivable from the aftringent 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 salammoniae, into slowers, that afford a most bright and perfect tinesture of iron. Other concurring marks of their chalybeate native strong stron ture are likewise afforded by the purple colour, or inky blackness they make with powdered galls, the yellow colour wherewith they stain an egg put into the spring, and the iron-mould they cause on limen: which are all certain characteristics of 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 fomewhat of an irony nature; which being joined with a fulphureous 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 effablished to be contested; however it may not be amiss to observe that our Author is rather too halty in advancing, that an infusion of rufty 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 to deep a colour as the natural ones do, and differing likewife confiderably in some other known properties, as levity, purity, subtility, spiritaousness, &c. Hence the former should seem a priori to differ greatly from the latter, and confequently cannot produce the same effects in drinking. And in reality it seems not likely

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 the perfectly recovers, fo as to be in no danger of a fudden relapse (m).

VENICE treacle exvellent in this and many other di fea fes.

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 others proceeding from a want of heat and digeftion: it is perhaps the most effectual medicine hitherto known, how much foever 'tis contemn'd by most persons, because 'tis common and of ancient date.

Bittersvery constituti-8775.

113. If the patient be not of a flender and biligood in some ous habit of body, an insusion of gentian, angelica, wormwood, centory, orange-peel, and other strengthening fimples in canary, does great fervice a few spoonfuls of it being taken thrice a day.

> that art should of a sudden prepare a medicine of this kind equal in excellence and fubtility, to fuch 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, of feq; and to Dr. Shaw's chem. lectures p. 89 or seq; where he

will be abundantly fatisfied as to this point.

(m) 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 not be liable to various exceptions; fo that in these cases much must be left to the judgment of the physician, who ought to be endowed with no little difcern-

ment, to make a fuitable application.

Steel-waters, as Hoffman observes, are posses'd of an aperitive and firengthening property; fo 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 confiderable, for strengthening and cherishing benumb'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 gently 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. from the bath to bed. See new exper. on min. waters. p. 85.

In reality, I have advised some hysteric women to And canadrink a large draught of canary by itself at bed time, for 7. fome nights running, and they have been eminently reliev'd; the whole body having been much strengthen'd, and fuch as were before cachectic becoming fresh coloured, and brisk thereby.

114. Moreover, the cortex is formetimes found to The bark strengthen the blood and spirits in a wonderful manner; a great and I have known feveral hysteric women and hypo-firengthener chondriac men recovered, who were reduced to great and spirits. weakness thro' the long continuance of their respective difeases, 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 breafts: It must however be owned, that this medicine does not fo certainly and frequently cure this distemper, as intermittents (n). But to mention this by the way, tho' the bark is so Disesteem'd effectual in curing intermittents, and we use it freely by some. our felves, 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.

115. But when any of the remedies above directed Advando not agree with the patient, as it frequently happens tages of a milk diet in thin and bilious habits, recourse may then be had to in thin and a milk diet. For some women, which may seem strange bilious haat first view, have been cured of long and obstinate bits. hyfteric diforders, which had baffled all the endeavours of the phyficians, by living on milk only for fome time, and especially of an bysteric colic, which can on-

(n) The bark cannot be enough commended in this and most diseases where the blood is impoverish'd, the spirits low, and the sone of the solids considerably debilitated. To make it more effeetual in this case it may be join'd with hysteric and chalybeate medicines.

ly be relieved by opiates, and therefore women are accustomed to repeat them at intervals, the pain returning as foon as the effect of the anodyne ceases. But what is most surprizing in this method of cure is that milk, which yields only a cold and crude nourishment, should, nevertheless by use, strengthen the spirits; and yet this will not feem at all repugnant to reason, if it be considered that milk affording only a simple aliment, does not give nature fo much trouble in digefting it, as food and liquors of a more heterogeneous kind do: and that an equal mixture of the blood and spirits neceffarily follows this perfect digeftion. For it must likewife be observed, that 'tis not the bare weakness of the fpirits confidered feparately, but as compared with the state of the blood, that is the cause of those disorders which afflict fuch patients: for a child may have fufficiently 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 flender aliment) renders the blood more foft and balfamic; if the fpirits thence generated be but adequate thereto, the cure goes on well. But notwithstanding the advantages that might accrue from fuch a diet, there are fome who cannot fupport the inconveniencies that generally accompany it in the beginning; because it is apt to coagulate in the stomach and does not afford sufficient nourishment to keep up the ordinary strength of body (0).

But it difagrees with Jome Subjects.

116. But

(o) 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 gouty 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 confiderable time.

Breast-milk is the sostest and lightest, and best adapted to the nature of the human species: the writers of observations relate some wonderful cures that have been essected by the use thereof. The next in goodness to this is assess, and then goat's milk; cow's milk being by most authors rank'd in the last place. the extraordinary virtues of assessmilk, 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 Hossman in a dissertation on the subject, entitled de mirabili lastis assining in medendo usu, to which therefore we refer the reader for surther information in this matter.

Riding

116. But the best thing I have hitherto found for frengthening and cheering the spirits, is riding on borfe- the best back often, and continuing this practice for a confiderable of the spitime. For, as this kind of exercise gives a great shock to rits. the lower belly, which is the feat of the excretory veffels, appointed by nature to carry offall the excrementitious parts of the blood; it should seem that every disorder of the functions, or natural weakness of the organs, must be relieved by the often repeated agitation of the body, hereby occasioned in the open air. Neither can any person have the innate heat so extinguished, as not to be rouz'd afresh by this exercise. Nor can there be any præternatural substance, or vitiated juice fo intimately lodged in any cavity of these parts, which cannot, by the use thereof, either be reduced to tuch a state as is agreeable to nature, or diffipated and expelled. And by this motion the blood, being continually agitated and mixed, is purified and ftrengthened likewise. And in reality, though this exercise does not agree so well with women, who lead an eafy and fedentary life, as they may be injured by motion, especially in the beginning; it is nevertheless very proper for men, and foonest recovers their health (p).

117. To produce an instance of its efficacy, a reve- Exemplified rend and learned prelate having applied himself too in- in a case. tenfely to his studies for a long time, was at length feized with an hypochondriac diforder, which, by its long standing, depray'd all the ferments of the body, and deftroy'd the digestions. He had gone through fome courses of chalybeates and tried most mineral waters, with repeated purgation, all kinds of antifcorbutic medicines, and abundance of testaceous powders, which bid fair for fweetening the blood. Being thus in a manner worn out, partly by the difease, and partly by the continued use of remedies for so many years; he was at length attack'd with a colliquative loofeness, 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 there was no further place

for medicine, as he had taken fo many ineffectually; and therefore advised riding on horseback; directing him to take only fuch fhort journeys at first, as might best fuit his weak condition. Had he not been a judicious and confiderate person, he could not have been perfuaded to try this kind of exercife. I intreated him to continue it every day till he found himfelf 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 fuch accommodations as were to be met with upon the road, like a traveller. In fhort he continued this method till at length he rode twenty or thirty miles a day, and finding himself much amended in a few days, he was encouraged by this wonderful fuccess 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 diforder, but became strong and brisk.

Excellent in consumpti-

Exception

118. Further, this kind of exercise is not more beneficial to hypochondriac than to confumptive fubjects, of which diftemper feveral of my relations have been cured by riding long journeys by my advice. For I was well affured that no other method or medicines were more effectual. Nor is riding on horseback only proper in flight indifpolitions accompanied with a frequent cough and wasting, but even in confirmed confumptions, wherein the loofeness is succeeded by night sweats, which are the general fore-runners of death, in those who perish by this disease. In fine, how desperate spever a Consumption may, or is esteem'd to be, two thirds of fuch as die of chronic difeases being deftroy'd thereby, yet I folemnly affirm, that riding is as effectual a remedy in this diforder, 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 fufficiently 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 fuch as are not yet arrived at that age; which I have learnt from much experience, that fcarce ever failed me; and tho' riding on horseback does most service in

confumptive cases; yet riding in a coach does some-

times produce furprifing effects. (q)

119. But to refume our subject. This is the gene- What is to ral method of curing this diforder, which removes the be done in original cause, confisting 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 abovementioned fymptoms, and the diforder be fo 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 ftrong fetid finell compel the difordered fpirits to return to their deferted flations, being either taken inwardly, held to the note, or outwardly applied: fuch are afa fætida, galbanum, caftor, spirit of fal-ammoniac, and all fuch medicines as have a very offenfive fmell. (r)

120. And in effect, whatever has a disagreeable o- Fetid medidour, whether it be naturally fetid, or render'd fo by cines proper 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 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 fimilar parts of animals. For all the parts of animals have this property in common, that they emit a fetid vapour or fume whilft they are burning, which being condens'd by diffillation is converted into those kinds of liquors, entitled volatile spirits, which obtain fuch properties as did not originally exist in the subjects; as being only creatures of fire : and their virtues are ma.

nifeftly

(9) Riding on horseback, as the learned Hoffman observes, is much extolled in a consumption and heelic, by the most eminent phyficians, both ancient 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 confiderably tainted and impostimated, inafmuch as too much motion of 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. 111. p. 294,
(r) Here the caution above inculcated should be remembered.

See above. par. 107,

nifeftly the fame from whatever animal fubstance they be gained.

Laudanum | fometimes necessary.

121. It is next to be observed that when the paroxysm 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 confiderable a plenitude of blood and juices in the body, (especially in fanguine and robust women) as to render the frequent repetition of the most powerful opiate ineffectual. In fuch therefore bleeding in the arm is indifpenfably 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 had been accustomed by degrees to laudanum, and proper evacuations had not been previously made, that she was compell'd, on account of the return of the pain, fo foon as the virtue of the opiate vanish'd, to repeat it every day for some years, gradually augmenting the dose; so that in time the patient cannot possibly 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 injure the brain, nerves, or animal faculties.

122. Therefore I judge it necessary from experience to make evacuations, before exhibiting opiates: for inflance, in every robust and also plethoric woman, 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 sour quarts of posset drink, and, after the operation, to prescribe a large dose of Venice treacle, or orvietan, and a few spoonfuls of some grate-

Bleeding andparging when to be used before exhibiting it. ful spirituous liquor, with a few drops of liquid laudanum to be taken immediately after it.

123. But if the Patient has been long afflicted with a When lauvomiting before the physician was called; so that there danum must is reason to apprehend that a vomit might greatly disturb ately given. the spirits, and weaken her too much, laudanum must immediately be exhibited in fuch a dofe, and repeated with fuch frequency, as the continuance and urgency of the fymptom demand; fo that it may be able to conquerit.

124. But here two cautions are to be particularly ob- Cautions to ferved. (1.) When, after necessary evacuations, the be observed use of laudanum is once begun, it must be taken in a in giving use of laudanum is once begun, it must be taken in a it. fufficiently large dose, and so frequently repeated, that all the fymptoms may be removed; only allowing fuch 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. (2.) When we endeavour to cure this diftemper 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.

125. But the' the pains above-mentioned, as we Violent vohave already intimated, eminently require opiates, yet miting rea violent vomiting indicates much the largest dose of quires the them, and their frequent Repetition. For, in this and afrecase, the peristaltic motion of the stomach being in- quent repeverted, the medicine is ejected by vomit, before it can tition of the produce any effect; unless it be exhibited anew after opiates, every vomiting, and particularly in a folid 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, fo that it may be prevented by the fmallness 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 fleady as may be: for nothing promotes vomiting fo 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

Cc3

(3) die autre tie. he chap. 7. par. 13.

morning

morning and night, for fome days, in order to prevent a relapse: and this should be observed in hysteric pains, or a loofeness, which have been cured by an opiate.

The pain ing here often impole on physici-

126. By this method the symptomatic pain and voand vomit- viting may be eafily cured, which, because they often refemble other difeafes, deceive the phyfician more than any other fymptoms that require their affiftance : concerning which I will fubjoin a few remarks. For instance, in that kind of hysteric disorder just described, which refembles 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 fame part in both diforders, 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. (5) For where the stone, or the gravel, corrodes the kidneys, occasions pain, and a vomiting also by confent of parts, nothing does fo much fervice as a copious and frequent revulsion of the antecedent cause by bleeding, and dilating and relaxing the veffels thro' which the stone is to pass, by the frequent repetition of emollient glysters, and internals of the same kind, along with diureties, and stone-dissolving medicines. But when these symptoms do not proceed from the stone, but from a too copious derivation of the animal fpirits to the kidneys, (in which case only opiates are indicated, and the gentleft glyfter cannot be fafely injected, after the first evacuations) I need not observe that a different method of procedure must needs be extremely hazardous.

And also of that diforder which resembles the bilious

colic.

Danger of mistaking

the cause

thereof.

127. The same may be affirmed of that hysteric diforder, which refembles the bilious colic, or the iliac paffion: for when it is held to be the bilious colic, (tho' it is of a quite contrary nature, and occasioned by the feparation 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 confiderate, may be eafily led into, from the violent pain, and the green colour of the matter difcharged upwards and downwards; the best method of cure confilts in fmoothing the acrimony of the humours by cooling and thickening mdeicines, and giving

purgatives frequently, befides glyfters 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 difease, which is taken for the bilious colic be in reality a hysteric or hypochondriac fymptom, 'tis clear, that this method must needs be wrong and very hazardous, fince 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 be done than to quiet the tumultuous spirits till the fymptoms vanish; after which it is proper to administer chalybeates, or any other remedy, which may eradicate the difeafe, by ftrengthening and warming the blood. It is not my defign to enumerate the many ill accidents which I have known happen to women, when this bysteric colic has been esteemed to proceed from bile: Nevertheless, I scruple not to affert, 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 difease being prolonged for fome months, terminates in convulsions, from a fudden translation of the morbific cause to the brain, which foon deftroys 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 im- This disease minent danger to which hysteric women are exposed to sometimes on account of the mistakes already enumerated; there the bad is another, which is equally fatal to numbers thus af symptoms flicted, when this difease, tho' it is not naturally mor- succeeding tal, proves fo from the bad fymptoms which fucceed it. To exemplify this, let us suppose that a woman of a flender and weakly conftitution, is happily delivered, and a few days after the midwife, either thro' Igno-

(t) See above fect. iv. chap. 7. par. 16. O feg;

A Stoppage of the Lo-CHIA in child-bed whence.

rance, or vanity, in order to shew how well she has performed her office, perfuades her to rife from bed and fit up a while; which being complied with, the patient is immediately seized with an hysteric disorder, and, as it encreases, the lochia are first diminished, and then entirely suppressed, and their unseasonable stoppage fucceeded by a numerous train of fymptoms, which foon prove fatal, unless great skill and diligence be used to prevent it. And fometimes a delirium proceeds from the fame cause, which, augmenting continually, occasions convulfions, and then death: or, if the patient escapes, she loofes her fenfes, and continues mad for the remainder of life. Sometimes a suppression of the lochia is followed with a fever, which becomes nearly, or perhaps entirely, fimilar to the then reigning epidemic: moreover the same hysteric disorders that first occasioned the fuppression of the lochia, rage more violently now, thus, as it were, generating themselves afresh.

129. I have long been of opinion, that scarce a

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 for-

merly been subject to vapours. For the rest they

have in bed not only preserves them from the symp-

toms fo 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 cafe, and likewise strengthens nature, and carries off those crudities that were col-

Mischief of rafing too Soon after delivery.

tenth person of such as die in child-bed, perishes either for want of fufficient strength to bring forth the child, or from the pains accompanying a difficult birth, but chiefly from rifing too foon after delivery, hysteric paroxyims being hereby occasioned, which, when the lochia

Weak wo. men ought fered to rife till the tenth day.

Method of

of the Lo-

curing a *suppreffion* 

CHIA.

not to be fuf-

130. But if any one of the fymptoms above enumerated happen from fuch an error, the curative indications are to endeavour (1.) to compose the spirits diflurb'd by this motion, and (2.) to remove the fuppression of the lochia; this being the immediate cause of these symptoms. This method, however, must not of those remedies, for some time, which ordinarily succeed

lected during the time of pregnancy.

be obstinately purfued; but having continued the use

in this case, and they fail, we are to leave them off; for, as forcing medicines are not to be administered here, so neither ought we to perfist 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, it appears, that as foon as the lochia are suppress'd, it is proper to put the woman to bed, and apply an hysteric plaister to the navel, and prefcribe the following electuary to be exhibited with all convenient expedition:

- Take of the conserve of Roman wormwood and of rue, An opening each an ounce; troches of myrrh, two drams; castor, electuary. lin faffron, volatile sal-ammoniac, and asa fatida, each balf a dram; fyrup of the five opening roots, a fufficient 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.

Take of the distilled water of rue, and compound briony Acordial water, each three ounces; fine sugar enough to sweeten julap. it; mix them for a julap.

If these medicines be given as soon as the suppression Laudanum of the lochia appears, they generally effect a cure: but when to be if the diforder continues after the whole quantity here given in directed is taken; we must exhibit at least a single dose of laudanum; which, tho' it be naturally aftringent, yet, by allaying the hurry of the spirits, whereby the usual flowing of the lochia is check'd, it does great fervice, and may fometimes remove the suppression, when emenagogues avail not: but opiates are most commodiously exhibited, along with hysterics and emenagogues: e.g. fourteen drops of liquid laudanum in compound briony water; or a grain and half of folid laudanum, and half a scruple of asa fætida made into two pills.

131. It must, however, be carefully observed, that in Not to be case the lochia do not flow asresh by giving a single dose, repeated. the opium is by no means to be repeated, as is usual and requilite 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 affured of its effects, we find it fail,

we must return to emenagogues, 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 dose 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. (u)

But best to wait, and see what effest Time will produce.

132. This method having been us'd, with the caution above directed, it is fafeft, and incumbent on a prudent physician, to wait and fee 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 respite, and recovered some degree of strength, she will be able to bear the properest method of removing that 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 inessectual, the disease, and the hurry of the spirits occasioning it, may be encreased; which deserves particular attention.

Illustrated by a case.

Landanum

20/12 8/10

Indiana to

133. I was fent for not long fince 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 re-

(a) As the lechia 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 sluids, whence the lochia cease to flow, the curative indication is to allay the commotion, which may be accomplish'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 siquors warm, taking a few spoonsuls 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 myrib borax, suffron; sperma ceti, volatile salt of amber, wild valerian root, volatile spirits, and the like.

cover if I did nothing at all, I judged that the cure might be left to time, the best physician. And my advice fucceeded well till the fourteenth day; for vifiting her every day, I never found her one day worse than The was the day before. But after this, her attendants, whom I had hitherto prevented from injuring her, under the appearance of affifting 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 foon proved fatal.

134. And indeed, if I may speak my sentiments The equity freely, I have long been of opinion, that I act the of this manpart 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 often as I refrain entirely from medicine, when upon vifiting 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 itself; nor will he so eafily escape two dangers as one. For tho' at present there appears no manifest fign 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 favourable opportunity, of conquering the difease, than he had before. And this may truly be affirmed of most difeafes, but chiefly of fuch as are peculiar to women in child-bed, wherein the least error may prove fatal, and we find it fo difficult to govern that natural evacuation, from the suppression whereof the diseases we have been treating of proceed.

135. But as hysteric diseases do not always originally a- Hysteric rife from the primary cause, which is the natural weakness disorders of the spirits, but sometimes from an adventitious weakness sometimes thereof; I intend, therefore, before I finish this epistle, immodeto treat of this kind of cause, which is frequently pro- rate flux of ductive of what are entitled vapours: and this is an im- the menses.

ner of pro-

.....

moderate

The first Species of it described, delivered.

moderate flux of the menses, either in child-bed, or at other times. 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 and the me. troublefome in the beginning, so it soon goes off; bethed of cure ing eafily remedied by an incrassating diet, wherewith the following drink may be joined. (x)

An astringent drink.

THE EQUIES

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.

of chirmon-In the mean time some sufficiently weak hysteric ju-- 270 to 2915 lap may be exhibited at times, and the following composition held to the nose.

A fetid palte.

Take of galbanum and afa fætida, each two drams; cafter, a dram and half; volatile salt of amber, half a dram; mix them together.

Volatile drops.

Take spirit of sal-ammoniac, two drams; and let the patient smell to it often.

The fecond described. and the method of cure partioulariz'd.

136. But as to an immoderate flux of the menses, which feizes 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, if they began early, or about fifty, if they began late. In fuch fubjects 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 loft. Now tho' hysteric medicines are to be us'd in this case both internally and externally, avoiding the ftronger kind, for fear of promoting the flux, yet the chief step towards the cure consists in checking the menstrual

- (x) Should not this rather be entitled an immoderate flux of the lochia or violent flooding, the mentrual 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 fleep and rest, using restringents internally and externally, especially applying linnen cloths dip'd in vinegar to the regions of the abdomen and loins. A small kind of punch prepared with the flyptic tineture of Helvetius, instead of brandy, is a very proper drink in this case.

menstrual discharge, which may be soon effected in the following manner.

137. Take away eight ounces of blood from the arm, and the The process. 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 bedtime during the course of the disease.

Take of the conserve of dried roses, two ounces; troches An astrinof lemnian earth, a dram and half; pomegranate gent electubark, and red coral prepared, each two fcruples; aryblood-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 fix spoonfuls of the following julap.

Take of the distilled waters of oak-buds and plantain, An astrineach three ounces; small cinnamon water, and sy- gent julap. rup of dried roses, each an ounce; spirit of vitriol enough to give it an agreeable sharpness.

Take of the leaves of plantain and nettles, each a fuf- Incraffatficient quantity: bruife them well together in a marble ing juices. mortar, and prefs out the juice, and lastly clarify it. Let fix spoonfuls of it betaken cold three or four times a-day.

After the first purge, let the following plaister be applied to the region of the loins.

Take of diapalma, and rupture-plaister, each equal Astrengthparts; melt them down together, and spread the mass eming plaion leather.

gents internally, along water fanable regimen.

138. A cooling and thickening diet must be pre- The regifcribed, only it will be convenient to allow the patient men to be a small draught of claret once or twice a day; which, "Jea. tho' it be not altogether fo proper, inafmuch as it is apt to raise an ebullition, may be indulged in order to repair the strength. And this method is not only very ferviceable in these disorders of the sex, but is equally ufeful where there is danger of a mifcarriage; only niverbone; the parient recretors

indular an horizontal ficuation, and ofe cardiars and gentle affrin-

in this case the purgatives and juices must be omitted. (y)

Hyfieric diforders fometimes caused by a bearing down of the womb. How to be cur'd.

A restringent sometime.

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.

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 somentation, to be applied with stannels 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. (2)

The conclu-

140. And now, worthy fir, 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 entreat you to excuse any inaccuracy, I may have committed in the description thereof, and likewise to accept this short differtation, which was wrote expresly to return you thanks for your approbation of my other works. And in reality, I fo rarely meet with fuch 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 fo 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 difeafes, to the best of my ability, and to in-

(y) 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 somentation 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 essection remedy.

(z) 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 its frequently not removeable without; the patient therefore should reirain from motion, and indulge an horizontal situation, and use cardiacs and gentle astringents internally, along with a suitable regimen.

ftruct fuch practitioners, as have less experience than myself. For, upon deliberate and equitable reflection, I find it is better to affift 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. But if the wealth that is gained by fuch an eminent name should by some be thought to be of a more folid 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 fuperior to brutes, who make the best provision they can for themselves and their issue. For if we except fuch good actions as proceed from choice and a virtuous disposition, (which brutes are naturally incapable of) they are manifeftly upon the footing of an equality with thefe, and all other men, who have not the welfare of mankind at heart .--- Pray give my fervice to our learned friend Mr Kendrick, who informed me of your affection for me, which I will endeayour to return in the best manner I am able, who am,

Worthy Sir,

of charge enter importance; to that, if my oblevamen

Your protestion, joined with a large and extensive

refreem you have sequired. If the following fleets be

affect from their opinions, relating to diff stusy and the

profitee, which have you miled you with an observe

London, Jan. 20. 1681-2. Your most obliged

And affectionate found your genius well adapted to the profire of pity-

Humble fervant, nature has rather blonded you forms account planti-

THO. SYDENHAM.

## ATREATISE

OF THE modified foul fourt

## GOUT and DROPSY.

The Dedicatory Epistle of the Author, to Dr. Tho. Short, Fellow of the College of Physicians.

Worthy Sir, the myeline and mend your lin toton ob I

415

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 oftenest 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 desist from my undertaking, tho' with reluctance, and consult my health, resting satisfied with having finish'd my essay on these two diseases: for the gout constantly return'd, as often as I

attempted to go on with the work.

Be pleas'd therefore, to accept this performance with all its faults, which is addres'd to you for two capital reasons. First, because you have upon all occasions readily acknowledged and afferted the usefulness of the observations I formerly publish'd, which some persons set little value upon: 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 the you excell in all kinds of literature; yet nature has rather intended you for an accurate 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 hath furnished you with an opportunity of making experiments, hath placed you at the head of the faculty, and your affability will be a means of preferving 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 of others, who asperse me, purely because I dissent from their opinions, relating to diseases, and the

methods of cure. And this I cannot possibly help, because my natural disposition inclines me to spend that time in thinking, which others employ in reading; and am more follicitous, that all I deliver should be agreeable to truth, than to the fentiments of others; as fetting 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 therefrom? For upon due confideration, my endeavouring to fecure a character, who am now advanced in years, will, in a little time, be like providing for a non-existence. For of what fervice will it be to me after my decease, 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 predeceffors, and will perhaps have a different language and other cuftoms, according to the changes and unfettled condition of human affairs? To what purpose, therefore, should I concern myself about the opinions of others? For if I have improved the diagnostic and curative parts of medicine, and thereby entitled myfelf to fome praife, I cannot long enjoy it; and, on the contrary, if my writings are not relished by fome, I fcarce think I shall trouble the public with more, by reason of my ill state of health. In reality, my hand trembled fo, that I was not able to write this short treatife I now publish; but was affished 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 practice an art he is so well skill'd in. I conclude, with asking your pardon for the trouble I may have given you in the performance of my duty, and defiring you to believe that it proceeds from the regard and efteem I bear you, who am,

Your most obedient servant,

London.

May 21. 1683. THO. SYDENHAM.

methods of cure. And this I cannot politicly bein,

## A TREATISE of the GOUT.

The gout hard to be underflood.

Whom it chiefly at-

sacles.

HERE is no doubt, but men will conclude, either that the nature of the difease, which is my present subject, is in a manner incomprehensible, or that I, who have been afflicted with it for these thirty sour years past, am a person of slender abilities, inasmuch as my observations concerning the 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)

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, on account of the common inability to motion in old age, entirely lest off those exercises, which young persons generally use. (b) And surther, such as are liable to this disease have large heads, and are generally of a plethoric, moist, and lax habit of body, and withal of a strong and heal constitution, and possess'd of the best stamina vitæ.

aff i.g. er (which I gratefully acknowledge) by Mr.

(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 effential 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 folid foundation.

now publish; but was alisted in this

(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 sit.

3. The gout, however, not only feizes the grofs and corpulent, but fometimes, tho' lefs frequently, change of affects lean and flender persons: neither does it always wait till old-age comes, but fometimes attacks fuch as living difare in the prime of life, when they have received the poses to the feeds of it from gouty parents, or have otherwise oc- gour. cafioned it by an over-early use of venery, or the leaving off fuch exercises, as they formerly indulged to excess; and besides have had a voracious appetite, and used spirituous liquors immoderately, and afterwards quitted them, of a fudden, for those of a thin and cooling kind. (c)

Sudden the ordinary way of

4. When it seizes a person far advanced in years, for Differs in the first time, it never has such stated periods, nor its sympproves fo violent, as when it attacks a younger perfon; toms and because (1) he generally perithes before the different manner of because (1.) he generally perishes before the disease; seizure in accompanied with its natural symptoms, comes to its different height; and (2.) because the natural heat and vigour of Persons. the body being abated, it cannot be fo constantly and powerfully thrown off upon the joints. But when it comes on fooner, tho' it may not yet fix on one part, nor prove fo fevere, 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 then rages more violently in its progress, than in its beginning.

5. I will first treat of the regular gout, and next of How the rethe irregular one; whether occasioned by an unadvised gular gout use of improper remedies, or the weakness of the subproceeds.

The regular gout generally seizes in the following manner. It comes on a fudden towards the close of January, or the beginning of February, giving scarce any fign of its approach, except that the patient has been afflicted for fome weeks previous thereto with a bad digestion, crudities of the stomach, and much sla-

Dd2 tulency

(6) So hafty a change from one extream to another, must needs weaken the constitution in a great degree in most persons, and confequently may dispose them to the gout, or other chronic difeases, according as they have a tendency to any particular diftemper; 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 flowly and gradually.

tulency 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 fort of descent of flatulencies thro' the fleshy parts thereof, along with convulfive motions; and the day preceding the fit the appetite is sharp, but præternatural. The patient goes to bed and fleeps quietly, till about two in the morning, when he is awakened by a pain which ufually feizes the great toe, but fometimes the heel, the calf of the leg, or the ankle. The pain refembles that of a diflocated bone, and is attended with a fenfation, as if warm water were poured upon the membranes of the part affected; and thefe fymptoms are immediately fucceeded by a chillness, shivering, and a flight fever. The chillness 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 itfelf to the numerous bones of the tarfus & metatarfus, the ligaments whereof it affects; fometimes refembling a tension or laceration of those ligaments, sometimes the gnawing of a dog, and fometimes a weight and constriction of the membranes of the parts affected, which becomes fo exquisitely painful, as not to abide the weight of the cloths, nor the flaking of the room from walking brifkly 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 reftlefness 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 fituation of the body and the part affected, which, notwithstanding, abates not till two or three o' clock in the morning, namely, twenty four hours from the first approach of the fit; when the patient is fuddenly relieved by means of a moderate digestion and some diffipation of the peccant matter; tho' he falfly judges the eafe to proceed from the last position of the part affected. And being now in a breathing fweat he falls afleep, and upon waking finds the pain much abated, and the part affected to be then fwell'd, whereas before, only a remarkable

markable swelling of the veins thereof appeared, as is usual in all gouty paroxysms. The next day, and perhaps twoor three days afterwards, if the gouty matter be copious, the part affected will be formewhat pained, and the pain encrease towards evening, and remit about break of day. In a few days it feizes the other foot in the fame manner; and if the pain be violent in this, and that which was first seized be quite easy, the weakness thereof foon 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 fometimes, when there is fo copious a peccant matter in the beginning of the fit, that one foot is unable to contain it, it affects both at the fame time with equal violence: but it generally attacks the feet fuccessively. as above remarked. When it has feized both feet, the following fits are irregular, both with respect to the time of feizure 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 fooner or later, according to the age of the patient, is made up of a number of these small fits. For when this difease lasts two or three months, it is not to be esteemed one continued fit, but rather a series or asfemblage of little fits, the last of which proves milder and fhorter, till the peccant matter being at length entirely expelled, the patient recovers his former health; which, in strong constitutions, and such as feldom have the gout, often happens in the space of 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 diffemper, it does not go off till fummer advances. which drives it away. During the first fourteen days the urine is high-coloured, and after feparation or standing, lets fall a 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 the lofs of appetite, a chillness of the whole body towards the evening, and a heaviness and uneafiness even of those parts that are not affected by the disease. When the fit is going off, a violent itching feizes the foot, espe-Dd3

cially between the toes, whence the skin peels off, as if the patient had taken poison. The disease being over, the appetite and strength returns sooner or later, according as the immediately preceding sit hath been more or less severe, and in consequence of this the following sit comes on in a shorter or longer space of time; for, if the last sit proved very violent, the next will not attack the patient till the same season of the year returns again. (d)

The symptoms of the irregular gout enumerated.

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, fo that the fubstance 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 defcribed. For, whereas the pain hitherto only affected the feet (which are the genuine feat 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 impair'd) it now seizes the hands, wrifts, elbows, knees, and other parts, no defs feverely than it did the feet before. For fometimes 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 fcarf-skin and skin of the joints, stones not unlike chalk or crabs eyes come in fight, 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 feems to fustain a great weight, yet without much pain; but thence gaining the knee, it attacks that part more violently, depriving it of motion, fo as to nail it in a manner to the fame place in bed. And when it is necessary to move the patient, either on account of the reftlefness of the whole body, which is

(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 Hossiman has inserted this history of the gout at length in his discourse on this discase, not being able to furnish out a better-

fo frequent in this difeafe, or some other urgent cause, it ought to be done with great caution, as the least contrary motion, or shock, may perhaps give pain, which is only tolerable for this reafon, because it foon 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.

7. As the gout formerly did not usually come on It continues till the decline of winter, and went off in two or three most part of months; in the prefent case, it continues all the year, 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, for likewise those particular fits of which the general one is made up, rage a longer time; for, whereas one of thefe 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, befides the pain, is afflicted with fickness, and a total loss of appetite.

- 8. In the last place, before the disease came to such The intera height, the patient not only enjoyed longer intervals vals shorter, between the fits, but likewise had no pain in the limbs and attendand the other parts of the body all the bod and the other parts of the body, all the bodily functions, great weakbeing duly performed; whereas now his limbs, during nefs. the intermission of the discase, are so contracted and difabled, that tho' he can fland, and perhaps walk a little, yet it is very flowly, and with great trouble and lameness, so that he scarce seems to move at all; and, if he endeavours to walk beyond his ftrength, in order to recover the use of his feet; the stronger they grow, and the less liable they are to pain upon this account, fo much more does the morbific matter, not wholly diffipated during this interval, threaten the bowels to the endangering the patient, as it cannot be fo freely thrown upon the feet, which at this state of the disease, are never quite free from pain.

9. Moreover, the patient is likewise afflicted with several And other other symptoms; as a pain in the hoemorrhoidal veins, bad symp. nauseous eructations, not unlike the taste of the aliment toms.

last taken in, corrupting in the stomach, happening always after eating any thing of difficult digeftion, or no more than is proper for a healthy person; together with a loss of appetite, and a debility of the whole body, for want of spirits; which render his life melancholy and uncomfortable. The urine, which was before highcoloured, especially in the fits, and voided in a small quantity, now refembles 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 difease is become inveterate, after yawning, especially in the morning, the ligament, of the bones of the metatarfus are violently stretched. and feem to be fqueez'd with great force by a strong hand. And fometimes, tho' no yawning has preceded, when the patient is disposing himself to sleep, he feels a blow of a fudden, as if the metatarfus were breaking in pieces by a large flick, fo that he wakes crying out The tendons of the muscles of the tibiæ with pain. are fometimes feiz'd with fo sharp and violent a convullion, or cramp, that if the pain it occasions were to last only ashort 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, fo as not to be able to propel it constantly and vigorously to the extremities; but instead of the usual external pain, a certain fickness, a pain in the belly, a spontaneous lassitude, and fometimes a tendency to a diarrhoea fucceed. When these symptoms are violent, they ease the pain of the limbs, which returns upon their going off; and the paroxyfms are much prolonged by this alternate fuccession of pain and fickness. 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 finks rather from the fickness than the pain; which in these fits, the' it be longer, is not near so violent as that which he usually suffered, when his firength was little impaired. But nevertheless this violence of the difease was ordinarily recompenced by longer intervals between the fits, and the good state of health the patient enjoyed during the intermission. In effect,

effect, pain in this disease is the disagreeable remedy of nature; and the more violent it proves, the fooner the fit terminates, and the longer and more perfect is the

intermission; and so on the contrary.

12. But befides the above-mentioned fymptoms, viz. The gout the pain, lameness, mability to motion of the parts generative affected, the fickness, and other symptoms above enu- of the stone in the kidmerated, the gout breeds the ftone in the kidneys in many neys. fubjects, either (1.) because the patient is obliged to lie long on his back, or (2.) because the secretory organs have ceafed performing their proper functions; or elfe (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 fometimes at a lofs to know whether the stone or the gout be most severe. And sometimes a suppression of urine, caused by the stone's flicking in the urinary pallages, destroys him without waiting for the flow advances of its concomitant the gout.

13. The patient is not only reduced to this helpless And of condition, but, to compleat his misery, his mind du- great disorring the fit sympathizes with his body, fo that 'tis not ders of eafy to determine which of the two is most afflicted. mind. For every paroxy im 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 difordered 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 alfo torment him till the declenfion of the difeafe, when the mind is reftor'd to health along with the body, having recovered its former tranquillity.

14. To conclude: the viscera in time are so much whence it injured, from the stagnation of the morbific matter proves mertherein, that the organs of fecretion no longer perform tal. their functions, whence the blood, overcharged with vitiated humours, stagnates, and the gouty matter ceases

to be thrown upon the extremities as formerly, fo that at length death frees him from his mifery.

15. But what is a confolation to me, and may be so more rich to other gouty persons of small fortunes and slender abi- than poor, lities, is, that kings, princes, generals, admirals, phi- and learned than illite-

losophers, rate persons.

The gout

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fophers, and feveral other great men, have thus lived and died. In short, it may in a more especial manner be affirmed of this disease, that it destroys more rich than poor persons, and more wise men than fools; which feems 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 his profusion to others with equal mixture of evil; fo that it appears to be univerfally and abfolutely decreed, that no man shall enjoy unmixed happiness or misery, but experience both: and this mixture of good and evil, fo adapted to our weakness and perishable condition, is perhaps admirably fuited to the present state.

Seldom feizes women, children, or very young per ons.

16. The gout seldom attacks women, and then only the aged, or fuch as are of a masculine habit of body; for lean and emaciated women, who, in their youth or riper age, are feized with fymptoms not unlike the gout, receive them from hysteric disorders, or fome preceding rheumatism, the morbific matter whereof was not fufficiently carried off in the beginning. Nor have I hitherto found children, or very young perfons, affected with the true gout. Yet I have known fome who have felt fome flight touches of it before they came to youth, but they were fuch as were begot by gouty parents (e). And let this fuffice for the the history of this disease. by the we

The gout a debilicated concoction.

17. Upon a thorough attention to the various fympoccasionedby toms of this disease. I judge it to proceed from a weakened concection both of the folids and fluids (f); for fuch as are subject to it, being either worn out by old age, or having haftened this period of life by living freely, labour under an universal paucity of animal spirits, wasted by the immoderate exercise of the vigorous functions, in the heat of youth. For instance, by a too early, or excessive use of venery, by taking imprudent and extravagant pains to gratify their paffions, and the like : whereto must be added the leaving

> (e) Boerhaave tells us that he has feen 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 gont, as it will to other diseases both of the acute and chronic kind, but cannot be said in a strict sense to be the fole cause of any one distemper more than another.

off fuch bodily exercises of a fudden as they had formerly used (whether thro' age or idleness) which ferved to invigorate the Blood, and strengthen the tone of the folids; 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 fuch exercises, lies concealed in the veffels to feed the difease. And sometimes the difease hath been encreased by a long continued application to fome ferious fludy; whereby the finer and more volatile spirits are called off from their proper function of affifting the concoctions.

18. Again, fuch as are fubject to the gout, befides 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 And drinkliving does not occasion the gout so often as the exces- ing wine too five use of wine, which destroys the ferments designed freely. for various concoctions, hurts the concoctions themfelves, and overcomes and diffipates 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 fame time, all the concections must needs be depraved, whilst all the viscera are so oppreffed; whence the spirits that have long been in a declining state, are now quite exhausted. For if this difease 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 robust constitutions are chiefly subject to it, but not before abundance of humours are collected in the body thro' the decay and wafte of the natural heat and fpirits, which in conjunction destroy the vitiated concoctions.

19. Again, as each of the causes we have enumerated Hence a promotes indigeftion, so most of them contribute in some laxity of the measure to introduce a laxity of the habit and muscles habit, and of the body; which makes way for the reception of muscular crude and indigested juices, as often as they are thrown System. upon the external parts. For when by lying long in the blood they are encreased in bulk, and have gained an illiquality, they at length acquire a putrefying heat,

ferenting:

vomiting. Beingua

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 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 out in motion.

are occasionally put in motion.

Bleeding, fweating, vomiting, purging improper in the gout,

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 indigeftion occasioning them, it should feem at first view, that the curative indications should principally tend (1.) to evacuate humours already generated, and (2.) to strengthen the concoction or digeflive powers, fo 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 feems to have the prerogative to expel peccant matter according to its own method, and throw it off upon the joints, there to be carried off by infenfible perspiration. Now there are only three ways proposed of expelling the morbific matter of the gout, namely, (1.) bleeding, (2.) purging, (3.) and fweating: but none of these will ever answer the end.

Bleeding, why improper.

21. (1.) Tho' bleeding feems to bid fair for evacuating the humours immediately to be translated, as well as those already seated in the joints; yet it manifestly clashes with that indication which the antecedent cause, indigestion, arising from a depravity or paucity of the spirits, demands, which bleeding further weakens and diminishes. For this reason bleeding is not to be used either by way of preventing an approaching, or eafing a prefent fit, especially in the aged: for tho' the blood that is taken away, generally refembles pleuritic or rheumatic blood, yet bleeding is found to do as much mischief in this disease, as it does good in those. And bieeding in the interval, tho' long after the paroxyim, 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 fymptoms than the former; the strength of the blood being impaired thereby, by means whereof the morbific matter should be power-

fully

fully and conftantly 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 prefent weakness of the blood, and nature's not having recovered its former strength, taken away by the difease) of debilitating nature fo much by the unfeafonble use thereof, as to make way for a dropfy. 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 fucceeding paroxyfms, it will foon render the gout inveterate, even in youth, and cause it to spread more univerfally in a few years than it otherwise would have

done in many. (g)

22. (2.) With respect to vomiting and purging, it Whyvomitshould be noted, that as it is a fixt law of nature, and ing and interwoven with the effence of this difeafe, that the purging. 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 fome of the vifcera, and fo endangers the life of the patient, who was quite fafe before. And this hath 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 pursuing her usual, fafest, and best method of translating the morbific matter to the joints, and the humours are forced inwards upon the bowels,

(g) Bleeding in the intervals in plethoric constitutions, is not only advantageous but necessary, and may be done with safety. Where the veffels are already confiderably 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 confequently be a means of weakening their tone still more. Befides, it often happens that gosty 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 preserv'd.

Dr. Hoffman recommends cupping the bottom of the foot every three months, and fays that he has known it highly ferviceable in many persons, and found great benefit from it himself. Hoff. oper.

tom. ii. p. 346.

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 nu-

merous train of irregular fymptoms,

23. For my own part, I am abundantly convinced from much experience, that purging either with mild or strong catharties 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 declenfion to carry off the remainder, or in a perfect intermission, or healthy state to prevent an approaching fit. For I have learn'd at my own peril, as well as that of others, that purgatives exhibited at any of these junctures, have, instead of doing service, hastened the mischief they were intended to prevent. (1.) Purging, therefore, during the fit, by diffurbing nature when the is feparating the gouty matter and throwing it off upon the joints, does fometimes eminently disturb the spirits, which renders the fit more violent, and likewise much endangers the life of the patient. (2.) Purgatives administred at the end of a fit, instead of expelling the remains of the difease, occasion a fresh fit, as severe as the former; and thus the patient being deceived by fruitless hopes, brings those mischiefs upon himself, which he had escaped if the humours had not been exasperated asresh. 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 interval, by way of prevention, tho' it must be owned that there is not fo 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 difease nevertheless will not go off entirely by taking any purge constantly at proper intervals. for I have known fome gouty persons, who, to recover their health, not only purged fpring and autumn, but monthly, and even weekly, and yet not one 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 the' fuch purging might carry off a part of the gouty

gonty matter, yet, as it does not at all contribute to frengthen 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 violently agitates 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 sollows the slightest evacuation. For the tone of the parts being destroy'd, which the simmess 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 empyrics, 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 seels 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 sit, the present sit will soon go off. But the patient will suffer greatly afterwards, by the sudden tumult occasioned by this agitation of the humours. (b)

26.

(h) Sydenham, fays Dr. Cheyne, otherwife a most accurate obferver 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 feafens, to wit, fpring and fall, when the periodical fits of regular gouts commonly happen; which I confider 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, flow, constant, and uniform perspiration and breathing sweat may be promoted, not only safely, but with great advantage) than in the monthly purgations of the fex. But in 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 fend thefe a going, to leffen the 1. 1111 CHAP. 3. PAT. 9.

Why fweat-

26. (3.) Finally, the carrying off the peccant mating is hurt- ter by fweat, is manifestly prejudicial, tho' in a less degree, than the above-mentioned evacuations; for tho it does not repel the morbific matter to the viscena. 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 fweat in the fit, throws and fixes the gouty matter too powerfully upon the part affected, at the fame 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 fome other parts, and thus raises a violent ebulition of the blood and other juices: and if the body abounds confiderably with a ferous matter generative of the gout, an apoplexy is hereby endangered.

27. Hence therefore, it is a very dangerous practice both in this and all other difeases, wherein a sweat is raifed by art to evacuate the morbid matter and 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. The excellent aphorism of Hippocrates, intimating that concocted and not crude matters are to be evacuated, relates to fiveating as well as purging; (i) as appears manifestly from that fweat which ordinarily terminates the paroxyims of intermittents; which, provided it be moderate and proportioned to the quantity of febrile matter,

con-

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 sit) is, to all intentions of medicines, the same as a well person. And all medicines levell'd against other difeases incident to human bodies, may be as safely administred to a gosty, (regard being had to his particular constitution) as to any other person. Wherefore, the general and dired methods of relieving the gout are, in the fits, a gentle, unit rm, continued perspiration, and breathing sweat; in the intervals, labour, or exercise, and gentle, stomachic purges. See his treatife on the gout, p. 22, 23.

Some authors commend glyffers to be thrown up occasionally in the fit; and certain it is, that if the fever be high, or the body costive, they may be used with safety, and all desirable advan-

tage.

(i) See feet. iii. chap. 3. par. 9.

concocted by the preceding fit, relieves the patient confiderably: but in case 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 fweat, that generally comes on spontaneously in the morning after each of the fmall fits, of which, as I have before observed, the cardinal fit is compounded, eafes the pain and restlesness, which tormented the patient fo much during the night; but contrariwife, if this gentle moisture, which is naturally of short duration, be violently forced, and continued longer than the quantity of the morbific matter concocted by the preceding fit requires, the difease is thereby encreased. In this therefore, and all other difeases 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 poffibly learn how much matter is already prepared for fuch a feparation, and confequently what method is to be taken in order to promote fweat. (i)

28. Since then it evidently appears from what has The indibeen delivered, that it is both a fruitless and a pernici- gestion and ous attempt to endeavour to cure the gout by evacu- heat of the ating medicines, we are next to enquire what other humours to be principurpose the curative indications are to be directed to pally reanswer. And from a thorough attention to the symperical ended in toms above enumerated we learn, that regard must be the cure. 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, or the heat and effervescence of these humours after the putrefaction and sharpness they have acquired by continuing too long in the body, occasioned by the indigeftion above-mentioned. Now these causes differ fo much from one another, that the medicines which

(i) 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 flews 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.

do fervice in the one, prove pernicious in the other; and hence it is that this disease is so difficult of cure. For at the fame 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 contrariwife, 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 prefent fit, but that also which still lies concealed in the blood, and is not yet prepared for separation. For all the morbific matter is feldom fo entirely expelled by the fit, how lasting and fevere foever it be, as to leave no remains of it in the body, after the fit is gone off; fo 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, fince nothing in the mean time can be done to cool the hot and sharp humours, without injuring the digestive powers, unless thing to be it be by avoiding a hot regimen and medicines, which inflame the humours; fo doubtless the chief curative intention is, after the indigestion is removed, to ftrengthen the digestive powers, which I shall now treat of; but in such manner however, that I may, in the course of this differtation, as occasion offers, likewise mention those remedies which tend to mitigate the heat of the humours, and blunt their acrimony.

This intention best an-(wered by a exercise.

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29. Whatever remedies, therefore, affift nature to perform her functions duly, either (1.) by strengthenproper regi- ing the stomach, so that the aliment may be well dimen, medi- gested, or (2.) the blood, that it may sufficiently affimilate the chyle received into the mass, or (3.) the folids, fo as to enable them the better to change the juices delign'd for their nutrition and growth into their proper fubitance, and (4.) laftly, whatever preferves the fecretory vessels, and the emunctories in such a state, that the excrementitious parts of the whole fystem may be carried off in due time and order. These, and all medicines of the same kind, contribute towards anfwering this intention, and are properly entitled digeftives, whether they be of the medicinal or dietetic kind,

exercile.

exercise, or any other of those things, which are called the fix non-naturals.

30. Such medicines in general are those which are The media moderately heating, bitter, or of a mild pungent tafte, cines enuinafmuch as they agree well with the stomach, purify merated. the blood, and strengthen the other parts. For instance, the roots of angelica and elecampane, the leaves of zuormwood, the leffer centory, germander, ground-pine, and the like: to which may be added, fuch 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 ferviceable foever they may be to the stomach, yet, as they agitate the morbid matter which has long been generated, and increase the heat, are to be used more sparingly than those which by their mild heat and bitterness both strengthen the stomach, and mend the blood.

31. And, in my opinion, a judicious mixture of Best given fome kinds of them answers the end of digesting the in a comhumours better than any fingle fimple of this class. pound mix-For tho' whenever we have occasion for a 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 fomething towards curing the difease; and in this case, the more fimples the medicine contains, the more powerfully it will operate. (k) 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 fimples together improves their virtues, and produces a third substance, which possesses greater virtues in the mixture, than any fingle ingredient in the fame quantity. But I freely leave the choice of fuch ingredients, and the forms in which they are to be given to the judicious phyfician; for I never thought myfelf obliged to write prescriptions, but rather to note the true curative indications.

Ee 2

Take

( k ) Whether a medicine be the better for a mixture of a multiplicity of fimilar ingredients may in many cases be doubted; but certain it is, that to answer the same end by a few, well choien, is a much greater proof of the ability of the preseriber.

A digeflive powder.

The media

cenes enu-

Take of the roots of angelica, fweet flag, master-wort, elecampane, the leaves of wormwood, the leffer centory, white hore-bound, germander, ground-pine, scordium, common calamint, feverfew, wild faxiherman with frage, St John's wort, golden rod, thyme, mint, Sage, holy thistle, pennyroyal, southern wood, the flowers of camomile, tanfey, lilly of the valley, English faffron, the feeds of treacle mustard, garden sourvy-grafs, carraway and juniper berries, of each a Sufficient quantity. Let the herbs, flowers, and roots be gather'd when they are in their utmost perfection; dry them in paper bags till they are reducible into fine powder. To fix ounces of each well mix'd 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.

- Or for want of this, let the following be used.

Befr groom A Romachie electuary.

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 fufficient quantity of the fyrup of oranges, mix them up into an electuary. Let two drams of it be taken twice a-day, with five or fix spoonfuls of the following difill'd water after every dofe.

An anti-Scorbutic distill'd was-

Take of the roots of borfe-radilly, fliced, three ounces; garden-scurvy-grass, twelve bandfuls; water-cresses, brook-time, fage and mint, of each four handfuls; the peel of two oranges ; two nutmegs bruised; Brunfwick beer, or mum, twelve pints; draw off only fix pints by the alembic.

Venice treacle a good one in this cafe, bat not lo good as the electuary ahove de-Scribed.

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 withall 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 fuch fimples, as are most agreeable to the patient's palate, because it must be continued a lorg time, namely, for

eff. is a much greater proof of the shillty of the preferiber.

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, ftrengthens and enlivens the blood. (1)

33. And in reality, thefe, and fuch-like medicines, Such mediwhich strengthen the blood, and quicken the circula- cines fertion (provided their heat be not owing to vinous spi- viceable in rits, for reasons hereafter to be given) do most service nic diseases. in this and most other chronic diseases; inasmuch as every difease of this kind 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 Proved light than the taking a view of the difference there is from the between acute and chronic diseases, it is hoped the rea- difference der will not be displeased, if I make a short digression sween acute from the present subject. As therefore those diseases and chroare generally deemed acute, which foon prove fatal, or nic difeafes. are brought to concoction foon; fo those 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 employ'd to express it; but the cause of the dissimilitude between these two kinds of difeases lies more concealed, and is not so eafily discoverable, I conceive, therefore, it will be worth while to fpend some time in a research of this nature; fince a clear and distinct notion of these particulars may greatly contribute towards discovering the genuine indications fuited to the cure of these diseases.

35. Now, whether the inmost bowels of the earth, Acute dito use this phrase, undergo various alterations, so as to seases, how infect the air by the vapours thence arifing, which cured. feems very probable to me; or whether the whole atmosphere be infected by means of an alteration, refulting from a peculiar conjunction of any of the planets; certain it is, that the air fometimes abounds with fuch particles as injure the human body: as at another time it becomes impregnated with fuch particles as

(1) Of the same opinon is Dr. Cheyne; among all the strengtheners of digestions I would recommend, says he, a strong infusion of the jessies bark in generous clarer, as being the coolest bitter, the most powerful strengthener of relax'd fibres in the instruments of digeftion, 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.

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prove pernicious to fome species of brutes. During this state of the air, as often as we receive into the blood by breathing the poisonous corpuscles which are prejudicial to the body, and contract fuch epidemic diseases, as such tainted air is apt to produce, nature raifes a fever, which is the ordinary instrument it employs to free the blood from any noxious matter therein contained. And these diseases are commonly esteem'd 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 fome peculiar inflammation of the blood, and which do not arise from any general cause depending on the air, but from some peculiar irregularity, or indisposition of particular persons. This kind of fevers, which happens in most years, I call intercurrent and Sporadic.

Whence chronic difeases.

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 for 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 fix non-naturals, especially with relation to food and drink; or if the fecretory veffels be fo far weakened, as to be no longer able to perform their appointed functions of cleanfing 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 veffels, undergo various fermentations, and putrefactions, and at length appear in a fpecies, occasioning different difeases, according as they are variously vitiated and depraved. And as these vitiated juices differ from one another, fo 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 fuch juices, and partly from the irregular motion excited in the parts affected: both which causes,

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in conjunction, conflitute that irregularity of nature, which is characteriz'd with the name of fome difeafe.

37. Now that most chronic difeafes chiefly proceed from fuch an inability of nature to concoct the humours, will manifeftly appear, if we reflect that aged perfons, 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 fubject to these diseases than young persons, whose vital warmth is greater, and diffipates those foul humours which are amaffed in the body, and whose fecretory veffels are poffess'd of fuch a constant natural heat, as may always enable them to perform their functions of purifying the blood, provided they be not burthen'd, and in a manner obstructed by an overfulness of humours. And further, that such an indigestion of the humours is the cause of most chronic diseases, is clear from hence, that winter is much more apt to generate them than fummer, notwithstanding that fome 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, debilitating nature, fo as to render her lefs able to perform the functions of the animal oeconomy.

38. Hence it is that fuch as enjoy a good state of health in fummer, do notwithstanding rarely escape those diseases in winter, which they are most subject to; 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 fruitlefsly attempted in a colder climate. The truth of what has been delivered with respect to the general cause of chronic diseases, will be still farther confirmed by the remarkable and almost incredible relief obtained by riding on horseback in most Eminently chronic difeases, but especially in a consumption. For this riding on kind of exercise strengthens the digestive powers, whilst horseback. it rouses the natural heat by the continual motion of the body, and enables the fecretory veffels to perform their function of purifying the blood in a proper manner; whence an amendment of the vitiated digestions must needs follow, and of course a healthy state.

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39. From the reasons therefore just alledged, it sufficiently appears that fuch warm herbs do great fervice. 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 fummer, even in the midst of winter: tho' if we accustom ourselves to use them in fummer, they will more effectually prevent fuch difeases, as are ordinarily occasioned by the contrary feafon. And in reality, if we defer, or neglect taking them till the approach of winter, at which time a confiderable quantity of humours is amaffed, it is to be apprehended it may then be too late to have recourse to this refuge.

Stomachics discontinued

40. But tho' (as I have already amply shewn) the gout when begun, is of fo peculiar a nature, as to be rendered worse by eatharties; yet in most other chronic diseases bleeding is to be repeated, as there is occasion, and purging to be ordered previous to the use of the strengthening and stomachic remedies here commended: but when the patient has begun to take these, they must be continued without any intermediate evacuations; for it is always to be remembered, that whenever the cure of any difeafe is attempted by means of strengthening remedies, all kinds of evacuations prove highly pernicious. (m) Lastly, I do not affert that the stomachic medicines just enumerated are the most excellent of the kind, but I maintain that whoever can discover the most effectual remedy to answer this intention, is able to do much more fervice in curing chronic diseases than he himself may imagine.

> 41. But amongst the remarks I proceed to communicate, relating to the cure of the gout, this is primarily and chiefly to be attended to, namely, that all flamachic or digestive remedies, whether they be medicinal, dietetic, or relate to exercise, are not to be

<sup>(</sup>m) This, without doubt, should be understood with some limitation; for it may not only be convenient, but even absolutely necessary to have recourse to gentle evacuants during a course of strengthening remedies, and they may be attended with confiderable 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 deserence 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 feparate?

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entered upon in a heedless manner but to be perfisted, in daily with great exactness. For fince the cause in this and most other chronic diftempers, is become habitual, and in a manner changed into a fecond nature; it cannot reasonably be imagined, that the cure can be accomplished by means of fome flight 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 fram'd anew. For it is otherwise here than in some acute diseases, where a person in full strength and good health is fuddenly feiz'd 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 debilitating his conftitution by idleness or an immoderate application to fludy, and other errors of life, does at length, in a manner purposely, injure the various ferments of the body and oppress the animal spirits, which are the principal instruments of digestion, whence the vitiated juices amass'd in the habit, break out as foon as they come to their worst state and do much mischief, relaxing the sleshy parts, and weakening the joints, fo 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 destroy'd. And those fits which engross the attention of indiscreet and injudicious phyficians are no more in effect than the fuccession and order of fymptoms, refulting 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 fince this habit is chiefly founded on and confifts 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 reftor'd and recover'd by degrees to the former healthy state of the body. But the it may feem impossible to compass this end effectually, not only because any particular habit cannot eafily be changed into a contrary one, but alfo, because old age, which ordinarily accompanies this difease, 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, in proportion to his advancement in

Digestive remedies to be us'debiefly in the the gout.

years. (n)
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 intervals of 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 vifcera to their due healthy state, cannot be speedily accomplish'd, and requires a continued use of medicine.

A suitable regimen to be join'd with them.

43. But tho' these and the like remedies 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 flomach can conveniently digeft, and of course increasing the disease thereby, and on the other hand defrauding the parts, by immoderate abstinence, of the degree of nourishment requifite to keep up the ftrength, which will weaken them still more: either of these extremes being equally prejudicial, as I have often experienc'd both in myoms, relating from that met

(n) This advice is founded on good fense, and the nature of things; for it would be preposterous to expect an inveterate and deeply-rooted difease 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 change them from a distemper'd to a found state, and restore the folids to their due tone and motion. Is it likely a discase, 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 thort time; because, in such a case there would be no proportion between the beginning, progress, declension, and termination of the diforder; 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 exercife of the rational faculties being an abundant recompense for a tedious and mortifying restraint, and health a valuable purchase at any rate.

felf and others. (2.) As to the quality of the food, tho' whatever is easy of digestion, fingly confidered, deferves 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, in case the stomach naufeates it; but for this reason indigestible aliment should be used more sparingly. (3.) I am of opinion the patient ought to eat only of one dish at a meal, because feeding on different forts of flesh injures the stomach more than eating an equal quantity of any one kind: but excepting flesh he may eat other things at pleafure, provided they be not sharp, falt, or spiced; because, tho' such food does not hurt digestion, it nevertheless does mischief by agitating the morbific matter.

44. As to the times of eating, only dining is ne- Only one ceffary; for as the night should seem peculiarly de- meal a day figned to digest the humours, it would be wrong to waste that time in digesting the aliment. For this reafon 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 confiderably obstructed by drinking such a liquor at this time, as it cools and cleanses the kidneys. (0)

45. A milk diet, or the drinking milk, either as it comes Amilk diet from the cow, or boiled, without adding any thing more burtto it, except perhaps a piece of bread once a day, hath ful than ferbeen used these twenty years past, and hath done more fervice in abundance of gouty subjects, whilst they perfifted 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 returned with much more violence than ever; for as this regimen weakens the constitution, the patient cannot fo well struggle with the diffemper, whence of course it proves more dangerous and lafting. Whoever, therefore, intends to begin and go on with this regimen, ought beforehand

(o) This may perhaps chill fome 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 chis purpofe.

hand to confider maturely, whether he be able to perfevere in it for life, which perhaps he will find too much for him, tho' he should be a person of great refolution. 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 conftrained to leave it off, because he grew costive on a fudden, the temper of his body altered, and his ftomach at length nauseated milk, tho' he had still a liking to it. Again, it is observable that some bypochondriac 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 fimplicity, whence I doubt not but water-gruel may have the fame effect, provided the stomach will bear it; but from its rendering the blood fofter entral a day and fmoother, by blunting the sharp particles contained in the mass: and moreover, which I esteem the principal thing, milk being an aliment that is abfolutely unfit for grown persons, represses that tumultuary motion of the humours which occasions the gout; and for this reason the few with whom it agrees, escape this difease, 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 sufficient attention to this particular, fome inconfiderate persons have fallen into gross and manifestly fatal errors; having, by attempting to attack the containing cause of the disease, namely, the heat and acrimony of the humours, destroyed the digestions, and all the natural functions. (p)

46. As

<sup>(</sup>p) Much has been faid for and against a milk diet in this and other chronic diseases by practical writers, so that it must be less to surther 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 acuracy, 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 orfailure, and accordingly been able to determine with some fort of certainty in what subjects it is to be used, and with what cautions, so as to answer the defired end it

46. As to liquors, those are best, in my opinion, Small-beer which are weaker than wine, and not fo weak as wa- the best liter; fuch as our London small-beer hop'd, or unhop'd, quor in the extremes on either hand being pernicious. For, (1.) as to wine, tho' the common proverb intimates that whether a person does, or does not drink wine, he will have the gout; yet it is certain and confirmed by the experience of abundance of gouty patients, that wine is in fact detrimental. For tho' it may be supposed to do fervice by ftrengthening 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 inflames and agitates the humours, which feed the difeafe. Neither do we grant that Wine conwine used by way of common drink helps digestion, but demned. rather affert, that it destroys it unless in such as have drank it for a long time. For tho' wine may in passing thro' the veffels, communicate fome heat to 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, palfey, dropfey, 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 fuch as have always drank fmallli-

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and, on the contrary, where it is absolutely improper, and likely to do mischief.

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 bypochendriae 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 other-wise, it may only tend to keep off the gout tor 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 confidered, whether in order to obtain a temporary relief, it be worth running the hazard of the dangerous confequences often attending it.

quors are rarely afflicted with the gout. It must further be noted, that those are chiefly subject to this difease, who, tho' they have naturally a weak digestion, do, notwithstanding, receive too much nourishment from a certain richness of the blood, and have their bulk encreased by a kind of indigested matter, inftead of a folid, wholfome fubftance. And the use of wine adds to this richness of the blood, and so not only amaffes 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 refembles that which is taken away in a pleurify, and other inflammatory difeafes, it is abfurd 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 fudden for small liquors, have soon destroyed themselves there. by. (9)

47. Gouty persons should therefore observe it as a rule in this particular, to drink fuch liquors as will not inebriate, if drank in a larger quantity, or injure the stomach by their chillness. Of this kind, as I before hinted, is our small beer; and in other countries a fimilar liquor may be made by diluting wine well with water. As to water alone, I efteem it crude and pernicious, and have found it fo to my cost; but young persons may drink it with fafety, 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 with which we are afflicted upon this account, as the stone, gout, apoplexy, palfy, &c. belides the injury done to the mind, in being forcibly acted upon contrary to its natural rectitude, by the disturbance which the preternatural spirits of such

Water bad for the aged, but may be safely drank by young persons.

(q) 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 advanced in years, have cold stomachs, or few spirits.

A dieseric

concoctions.

liquors, together with the animal spirits, which form thought, occasion, by volatilizing it too much, and fuggefting vain and idle notions, inflead of folid and weighty reasonings, and thus at length rendering us drolls and buffoons instead of wife men; between which the difference is almost as great, as between a substance and a

Ihadow .--- But enough of this.

48. But tho' a person who has the gout mildly and An inveteonly at intervals, need only use small-beer, or wine di- rate gout luted with water; this degree of the disease not re- incurable quiring a stricter regimen; yet when the whole sub- fraining stance of the body is in a manner degenerated into the from all gout, it cannot be conquered without a total abstinence kinds of ferfrom all kinds of fermented liquors, how small and foft mented lifoever they be; inafmuch 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 fame manner as yest 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 com- drink commonly known and used for this purpose; but it must not be too ftrong, 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 fuch 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 pollible to avoid entirely, will be in fome measure corrected and amended thereby. But the principal benefit derivable from it, is its being preventive of the frane, which is the general attendant of the gout; as tharp and attenuating liquors both contribute to breed the stone, and occasion a fit thereof. I prefer the following decoction for its agreeable colour and tafte.

concoction.

Take of far faparilla, fix ounces; fassafras 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; afterwards infuse them upon bot 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 up into bottles for use. (r)

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> 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 the intervals, during the remainder of life. For it is not fufficient at a time when the difeafeactually rages to fludy for new medicines, as nature, whilft the humours are in fuch commotion and disturbance, cannot well bear the exchange of fermented liquors, of an active and spirituous quality, for fuch as are small and without spirit. At the fame time the above-mentioned electuary must be used, taking it in like manner, both in the fit and the intervals, for the warmth of this will in some measure correct the fmallness of the diet-drink, as it will communicate a due degree of heat to the blood and viscera, without that agitation which is generally occafioned by the heat of fermented liquors. (5)

50. If it be objected, that a total abilinence from in favour of wine and other fermented liquors would render life in a manner infupportable, I answer, it must be considered, whether it be not much worse to be tortured dai-

Arguments a total abftinence from wine and fermented li-94075.

(r) Sarsaparilla is sudorific, and divides and attenuates gross and viscous humours, whence it comes to be accounted a specific

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 sarfa root (in the Bark the virtues of the plants 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 where 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 authe reasons assigned: as also because towards the end of the autumm, when roots are gathered, the cold has already driven the juices into their BARK. See his essay on the gout. p. 42.

ly by the pain accompanying an inveterate gout, (for when it is gentle there is no need of fo strict a regimen) than to be confined to this decoction; which, if the patient continues, he may indulge himfelf in most other eatables; not to repeat now, that this drink, like all other things, grows pleafant by custom. Doubtless, whoever hath had this disease, supposing him not void of reason, will not hefitate at all to which to

give the preference.

51. But notwithstanding, if the patient, either (1.) If wine be necessary, from a long continued and immoderate use of spiri- Spanish tuous liquors; (2.) from age; or lastly, (3.) from great wine is best, weakness, cannot digest his food, without wine, or fome other fermented liquor; 'tis certainly dangerous for him to leave off wine on a fudden; an error that has in reality destroyed abundance of people. Sucha perfon, 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 Rhanish, or French wine; these last being apt to exasperate the humours, and encrease the morbific matter, notwithstanding they are very grateful to the stomach. To which we may add, that as they are almost as crude and indigested as our cyder, they are confequently not fo warm and cardiac, as the cale demands. And these particulars shall suffice concerning the diet of gouty persons.

52. There is another caution to be inculcated, bedearly in which, tho' it may feem trifling, is of great moment, winter reboth in digesting the gouty matter during the fit, and commended preventing 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 fitting up late a-nights; which every valetudinarian can afterm 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 should feem to be no difference, betwixt going to bed earlier or later, provided a person lies in bed the

Going to

fame hours; as for inftance, whether he goes to bed at nine and rifes at five, or at eleven and rifes at feven; it is not an indifferent matter, and, I conceive, for this reason principally, namely, that in the day the spirits are dislipated, either by exercises of the body or mind, which are so weak, in fickly persons, that they require the affiftance of fleep earlier in the evening; and, as the approach of night occasions a kind of relaxation of the animal economy, which was preferved in the day by the heat of the fun, the heat of the bed becomes necessary to supply the place of the fun, especially during the winter season. fpirits being refreshed and invigorated in the morning by the preceding night's fleep, together with the warmth of the bed, and the enfuing day likewise strengthening the tone of the parts still more, the rifing early at this time, tho' it may take an hour or two from the morning fleep, hurts the conftitution less than fitting up an hour or two later in the evening. This being the cafe, I would advise such as are subject to the gout to go early to bed, especially in winter, and to rise betimes in the morning; tho' their having had less sleep than ufual may incline them to lie longer, in order to get it up. For the fleep which is got in the morning will rob them of as much the enfuing night; and thus at length, by doing violence to nature, and defpiling its wise lessons, 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, as all unbounded appetites and inordinate passions eminently tend to diffolve the texture of the spirits, which are the instruments commends of of digeftion, and so of course encrease the gout. fhould, therefore, wifely reflect on his mortality, and not vainly imagine he is to escape the evils that are neceffarily annexed to this ftate. For, whether any af-fliction of mind befalls 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 fingle person hitherto, how powerful and wife foever he hath been; nor will every thing always answer any one's expectations so exactly as he may have promised himself, but whilst he is studying how to regulate his affairs, of a fudden he becomes an example

of human frailty, and foolishly deprives himself of the transitory enjoyments of life. Too much application to fludy and bufiness is likewise equally pernicious; for as this difease is oftener accompanied with melancholy than any other, fuch 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, that the body cannot long preferve itself in a healthy state : and hence I conceive it is, that few fools

have had the gout.

54. But nothing fo effectually prevents the indigef- Exercise tion of the humours, (which I esteem the principal amirable cause of the gout) and consequently strengthens the in the gout. fluids and folids, 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. fo exercise, unless it be used daily, will do no service; for if it be intermitted at times, it will avail little towards changing the conftitution, now reduced to a lauguishing and effeminate condition by idleness and indulgence, and may perhaps do mischief by causing a fit, after leaving it off for a confiderable space of time. But exercise should be moderate, because the contrary in aged persons, who are chiefly subject to the gout, wastes the spirits too much, and consequently hurts the digestive faculties; which are strengthened by continued and gentle exercise. And tho' this may not be relished by one, who besides old age, inability to motion, and flothfulness, which are natural in this disease, is likewise tormented with pain, yet, if exercise be cmitted, all the remedies which have been hitherto discovered will not at all avail. And as the intervals between the fits cannot be long, without confrant exercife; fo the patient will likewise be more subject to the flone; which is a more dangerous and painful difeafe than the gout.

55. To these we subjoin another momentuous parti- The chalky cular, namely, that the chalky concretions are confi-concretions derably encreased in the joints, and especially in the without exfingers by long inaction; fo that at length these parts ercife. quite lose their motion. For however positively some may affert, that the matter of these concretions is only the tartar of the blood translated to the joints; it

will nevertheless readily appear, upon considering the matter with 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 affimilating property being destroyed, and partly from the obstruction caused therein by this fluggish humour, that this matter is generated; which is changed into this kind of fubstance by the heat and pain of the joint, and encreased every day in bulk, converting the skin and flesh of the joint into its own nature, and may be got out with a needle, and refembles chalk, crabs eyes, or fome fimilar fubstance. 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 attack a particular part; but it also dissolves old and indurated concretions, provided they be not come to fuch a degree of hardness, as to change the external fkin into their fubstance.

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 posses'd of as effectual a remedy as exercife is in this and most chronic diseases, and had the art likewise of concealing it, he might easily raise a confiderable fortune. But if riding on horseback cannot be used, frequent riding in a coach nearly answers the fame end; and in this respect at least, the generality of gouty persons have no cause for complaint, because their riches, which excited them to indulge those excesses that occasioned 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 wholesome air is vastly preferable to an unwholfome air 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 ufing exercise in the country, or in town, a gouty person will foon find upon trial.

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57. With respect to venery, if the gouty patient be Venery to in years, as he is unprovided now with a fufficent share be refrainof spirits to promote the digestions, and his joints and the neighbouring parts are confequently too much debilitated and relaxed, without any affiftance from this destructive quarter; in this case, I say, it is as imprudent for fuch a one, in my opinion, to indufge those pleafures, as it would be for a person, after having engaged to go a long journey, to spend all his stock of provisions before fetting out. Moreover, besides the mischief he does himself for want of restraining the languid inclinations of declining age, he loses the great privilege of enjoying that exquifite fatisfaction, which by the particular indulgence of nature is referved for the aged only, who, towards the period of their lives, are freed from the violence of those passions, which, like fo many favage beafts, prey'd upon them perpetually in youth: the gratification of them being by no means equivalent for the long train of evils, which either accompany, or follow it .--- And let this fuffice for the regimen.

58. But the a gouty person by carefully observing The gout these rules, relating to diet, and the rest of the non- not perfectnaturals, may prevent violent fits, and fo strengthen the blood and folid parts, as to free himfelf from that multitude of evils, which render the difease not only specified. intolerable, but in the end fatal; yet, notwithftanding, after fome intervals, he will fometimes be feized with the gout, especially towards the close of winter. For tho' in the fummer feafon, whilst the tone and strength of the blood are amended and preferved in that state by the heat of the fun, and perspiration goes on in a proper manner, the digeftions must needs be much better performed than in winter; yet, as the blood is weaken'd, and perspiration obstructed upon the approach of this feafon, 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 fymptoms, and giving a fit upon the first occafion, either by the humours being put into motion by the nearer approach of the fun, the use of wine, violent exercise, or any other apparent cause, and violate

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The cure to be attempted only in in the intervals of the fit.

59. 'Tis clear from what has been delivered, that whoever undertakes the cure of this difease, 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; fince it must be expelled by that method only which nature points out, and the bufiness is to be left entirely to her management. This practice obtains in the paroxyims of intermittents; which, for the fame reason, we do not attempt to remove till the heat be over. For it is equally abfurd to be follicitous 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 fymptoms, whereas the cure is by this means obstructed and prolonged. For the more the pain is eased, the more the concoction of the humours is 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 every degree of the symptoms accompanying this difease; which will be acknowledged by any person who has attentively considered what we have delivered above, in our history of this disease.

A stender diet to be used in the beginning of the fit.

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60. But tho' nothing confiderable 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 sorbear sless for a sew 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 morbisic matter, and give nature an opportunity of digesting it sooner. But as constitutions differ considerably, insomuch that some persons cannot bear to abstain from sless without being immediately seized with a disturbance of the spirits, faintings, and other symptoms of the byseric kind; such there-

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fore will receive hurt by refraining from flesh any longer than the stomach is fet 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 equally cautious both of eating more during the fit than is requifite 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 folids and 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 nonnaturals, of which we have difcourfed largely above; and tho' the pain and great inability to motion may feem to contra-indicate exercise, which I have chiefly extolled in this diftemper, the labour must nevertheless be undertaken; for tho' the patient may think himfelf utterly unable to bear to be carried into a coach in the beginning of the fit, and much more fo to abide the motion of it; yet, upon trial, he will foon 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 fome hours, another advantage attends it, namely, it causes him to rest a great part of the night, which he could not do when he kept conftantly within doors; for very moderate exercife fatigues a gouty person so much, that he falls afleep. Befides, this kind of exercise is in some degree preventive of the flone, which an idle and fedentary life generally occasions. But the principal advantage derivable from the constant use of exercise, is the preventing the loss of motion in the limbs, which feizes feveral persons after the first or second long fit, occafioned by the contraction of the tendons of the hamsand heels; for when the pain has been fo 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, thro' 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 morbisic indigestible matter; which cannot be assimilated, and destroys them like poison.

Exercise not to be used in the begiming of a very sewere fit.

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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 fink 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 exercife; for lying constantly in bed digests the morbid matter more effectually in a few days, than fitting up does in many, especially in the infancy of the difease, provided that the patient can forbear flesh without faintings, and other bad symptoms, and be contented only with water-gruel, fmall-bear, and the like. But it is well worth noting, that if the gout be inveterate, and disposes the patient to faintings, gripings, a loofness, and the like symptoms, he is in great danger of being destroyed by one of these fits, unless he uses exercise, in a free and open air: for abundance of gouty persons have been carried off by these fymptoms, which they have been fubject to from being confined within doors, and especially in bed, who had lived longer if they would have undergone the fatigue of riding in a coach a great 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 inflead of violent pain, is troubled with fickness, and the other fymptoms above enumerated, cannot do the fame without endangering his life. And, in effect, it is well for the patient, that there is no great need of motion, or exercife, as long as the pain continues fo fevere, that he cannot bear it; his life being fecured by the pain, which is the sharpest remedy in nature.

62. But as to the symptoms of the gout; we are to The dangerrelieve those which threaten life; the most frequent of our lympwhich are the weakness and faintness of the stomach, reliev'd. with gripings, as if occasioned by wind; and these happen either to those who have had the gout many years; or those, who, tho' they have not had it long, have nevertheless brought it on too hastily by quitting spirituous liquors of a fudden, for thin and very cooling liquors, or by applying repelling plaisters and other cooling topics to the parts affected, to eafe the pain; whence the morbific matter, which should have been deposited in the joints, is translated to the viscera. I have tried feveral remedies in my fits of late years to relieve these symptoms; but nothing did me so much fervice as a small draught of canary, taken occasionally, as the fickness and faintness required. Neither red French wine, Venice treacle, or any other of the cardiacs I am hitherto acquainted with, is fo efficacious. But we are not to imagine that canary, or any other cordial, can wholly fecure the patient without the use of exercise. (t)

63. But if some violent symptom comes on sud- The striking denly, from the striking in of the gouty matter, and in of the threatens death, we are not to truft to the wine, or gout, how exercife above commended; but here, provided only remedied. the natural or vital parts, and not the head, be affected, we must have immediate recourse to laudanum, exhibiting twenty drops of it in a fmall draught of plague water, and the patient must compose himself to

rest in bed. (u)

64. But

(t) 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, diambra, and Spirit of lavender, warm stomachics, and perspiratives, as camomile flowers, virginian snake root, powder of diambra, camphire, contrayerva root, zedeary, ginger, galengal, flowers of sal ammoniac, volatile salts of hartshorn and amber, Sir Walter Raleigh's cordial, mithridate, and the like, spirituous cordials, and strong wines, bliftering the arms and legs, the application of ftimulating 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.

(\*) The case may be so circumstanced, as to render it dangerous to have recourse to laudanum immediately, so that this direction feems to be a little too loofe and general. Neither is it

A loofuels. in the gout best carried

64. But, if the gouty matter occasions a loofness for want of being translated to the limbs, provided it be off by sweat. not the crisis of a particular fit, and yields not to laudanum and exercise of all kinds, (for this is to be tried first in the cure of a loofness) but continues, attended with fickness, gripings, and the like fymptoms, the only remedy I know in this case, is to raise a sweat by a fuitable 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 loofness, and forces the morbific matter to the limbs. To this method I owe my recovery from this difease some years fince (which I had imprudently occasioned by drinking cold water for my common drink) after having used cardiacs and aftringents of various kinds to no purpose. (w)

A translation of the gouty matter to the lungs how

to be taken

65. There is another fymptom which I have often feen, tho' it is not fo common, namely, a translation of the peccant matter to the lungs; by a cough in the winter feafon, 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 fwelling from the translation of the morbid matter to another part. In this fingle case, the curative indication is not to be levell'd at the gout, but this symptom is to be treated like a true peripneumony; namely, by repeated bleeding, and cooling and incraffating medicines and regimen, as the blood that is taken away, especially in this symptom, exactly refembles that of pleuritic perfons. The pa-· tient likewise should be gently purged in the intervals of bleeding, to carry off the matter that is lodged in the lungs. But fweating, how effectual foever it

> easy to lay down such rules for the treatment of an internal gont, or any other disorder, as may not admit of variation; the indi-cations therefore are best taken from the symptoms, which disfer exceedingly, according as it attacks various parts, and perfons of different constitutions, and therefore require very different management. In general, however, fome fort of evacuations should be made before exhibiting opiates, which are rather to be the last refuge than the leading medicine.

> (w) The gour 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 loofness, which requires a freer use of rhabarb, joined with moderate aftringents and a finall quantity of

opium or landamem, than in the former cafe.

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 proceeds fmall abfeeffes, and in the end certain death. (x)

66. It is further to be noted, that most gouty per- Nephritic fons, after the difease has been of long standing, be- painsduring come subject to the stone in the kidneys, and are gene- how mitirally feized with nephritic pains, either at the height, gated. or more frequently at the declenfion of the cardinal fit, which are very fevere, and weaken the patient confiderably, who was but too much debilitated and exhausted by the preceding distemper. In this case, omitting all other remedies, let him immedately drink a gallon of pollet drink, in which two ounces of marsh mallow roots have been boiled, and inject the following glyster.

Take of the roots of marshmallows and white lillies, of An emollieach an ounce; the leaves of mallows, pellitory of the ent glyfter. 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 balf; dissolve in the Strained liquor brown fugar, and syrup of marshmallows, of each two ounces: mix the whole for a glyfter.

As foon as the poffet drink is ejected by vomit, and the glyfter come away, exhibit twenty five drops of liquid laudanum, or fifteen grains of Matthew's pills. (v)

67. If outward applications be enquir'd after to eafe Topics un. the pain in the gout, I know of none, (tho' I have safe in the tried abundance both in myfelf and others) befides cool- gout. ers and repellents, which I have already shewn to be unfafe. 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 difeafe itself. But if

(x) In this case bleeding, gentle vomitives, blifters, and the medicines ordinarily prescrib'd in the Asthma are highly proper, and often effectual.

(y) Turpentine glysters given every twelve hours, and opiates administer'd occasionally in small quantities, will do service here : but aromaries, which are otherwise proper in an internal gout, must be exhibited very sparingly, for fear of inflaming the parts, and exasperating the symptoms.

(a) List in dispert feet in the

a person be desirous of trying the efficacy of such external medicines as are effeemed certain anodynes, to prevent being mistaken, instead of applying them at the declenfion of a particular fit, when the pain is just going off fpontaneously, let them be used in the beginning, and he will foon be convinced of their infignificancy, and the groundlefness of his expectations; as they fometimes do mischief, but can never do service. For this reason I have laid aside the use of topics for feveral years; but I found most benefit formerly from a cataplasm, made of white bread and saffron boiled in milk, with the addition afterwards of a small quantity of oil of roles; which, however, did not at all relieve me in the beginning of the fit. (2) If, therefore, the pain be extremely fevere, the patient had better keep in bed till it abates a little, than to have recourfe to anodynes, but notwithstanding it will be proper if the pain be very violent, to take a dose of laudanum in the evening, otherwise it were better omitted.

The burning of the part of little fervice.

68. But now I am treating of external applications, I must say something of a certain Indian moss, with mox2, entitled moxa; which is highly effecmed of late in the or raw flax, cure of the gout; the manner of using it being to burn a small quantity of it upon the part affected. Now, tho' this remedy is faid 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 confulting the writings of Hippocrates, compiled above two thousand years since. Treating of the Sciatica, he advises, " That 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 further, fpeaking of the gout in the feet, he fays; "The same things are proper here, that do ser-" vice 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." (a) Now I am of opinion,

(a) Lib. de adfect. fest. v. pag. \$24.

<sup>(2)</sup> Much mischief has been done in this disease by improper outward applications : fo 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. Warms fannel is perhaps the best universal topic.

that no one can imagine that 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 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 subtile and spirituous part of the morbific matter depolited in the part being by this means expelled. But the relief hereby obtained must needs be of fhort duration, because it does not at all amend the indigestion, which is the antecedent cause of the gout; and it may feem needless to observe, that it is to be used only in the beginning of this disease. For when the gout, either on account of its long continuance, or thro' wrong management, retreats to the internal parts, which fometimes happens, and, instead of pain causes sickness, gripings, and abundance of the like fymptoms, no judicious person will be for using fire.

69. And now I have delivered all that I have hi- The author therto discovered concerning the cure of this disease; unacquaintbut if it be objected, that there are many specific re-ed with any medies for the gout, I freely own I know none, and fpecifics for fear that those who boaft of fuch medicines are not at all wifer than I am. And, in effect, it is to be regretted, that the excellent art of medicine should be fo much difgrac'd by fuch trifles, which the credulous are deceived with, either thro' the ignorance or knavery of authors; remedies of this kind being extravagantly magnified in most diseases by those who offer them to fale. But what is more furprifing, 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 fome injury of the organs, or from an external cause, and it imposes upon perfons that in all other respects are men of judgment. We have fufficient proof of this in fuch 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 fafely and expeditioufly thefe accidents may be cured by bleeding and purging alternately, without having recourse to these infignisicant remedies, which are generally given after the first

bleeding.

bleeding, or to raifing a fweat, which ordinarily continues during the use of them, and heats the parts already disposed to an inflammation, so much as to endanger the life of the patient without necessity.

The foundation of the author's method.

70. To conclude; the method I have here laid down is founded upon a fearch into the above-mentioned figns 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 fecret, 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 treatife, by faithfully pointing out those rocks whereon myself and many others have split, fubjoining likewise the best method of cure which I have hitherto discovered, which is all I promise; tho' after long confideration I cannot help thinking that fuch 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 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 fuch 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 these humours; which succeeded ill with them is as manifest from their failure, but especially from the more fuccessful 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 feldom fails curing the patient, notwithstanding this inconvenience of the difease being increas'd by the warmth of the bed. In the mean time, till the radical cure of the gout be found out, which all physicians, and myfelf in particular, ought to wish for, it

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is hop'd the public will receive this differtation in a favourable manner; but if they 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 fo well that I shall not be discouraged thereat. And, if the racking pains, unfitness for motion, and other diforders which I have been afflicted with during the greatest part of my life, together with the loss I have fustained 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 fuffered in this life, now I am leaving it for another. refiduor of the lymph, which, by

## occasions a kind of continual fever and thirst. A TREATISE of the DROPSY.

ance in the body, grows hot and acrimonious, and

HE dropfy attacks persons of all ages, and of Whom the both fexes; but women are more subject to chiefly seiit than men: it chiefly happens to men when zes, and at they are advanced in years, and to women when they are what time past bearing children; tho' sometimes young women al- of life. fo, whilst they continue childless are seized with it. One of the first figns of the dropfy is the pitting of the leg when the finger is forced against it, especially towards night, which however is not fo certain a fign of a beginning dropfy in women as it is in men, as being frequently found in pregnancy, and a suppression of the menses; whatever the cause of that suppression be. Nor is the swelling of the legs, a certain fign of the dropfy in men; for when an antient person of a gross habit has had an afthma feveral years, and is fuddenly freed from it in the winter, a confiderable swelling soon arises in the legs, resembling a dropsical swelling, and like that, is larger in winter than in fummer, and in moift than in clear weather, and yet without caufing any remarkable inconvenience lasts the remainder of life. Nevertheless the swelling of the legs in men is generally fpeaking to be accounted a fign of an approaching dropfy, especially if it be attended with a difficulty of breathing; and it increases every day in magnitude, till the feet will receive no more water, and then the thighs fwell, and afterwards the belly fills with the ferum, which is continually feparated from

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the blood, and by degrees stretches it as much as it will bear; fo that it frequently contains feveral gallons of water, which falling upon the navel, formetimes occafions a navel-rupture.

Attended with three capital Graptoras.

2. This diftemper is accompanied with three fymptoms; (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 ferous parts of the blood being emptied into the belly, and other parts fitted to receive it, which should naturally have been evacuated by the urinary passages; (3.) great thirst, caus'd 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 fwelling increales, the other parts mafte.

3. In proportion as the fwelling of the parts affected increases, the other parts become more emaciated, and waste away, and at length, the quantity of the extravafated water growing too large to be contained in the belly, it is translated to the vital and noble parts, and the patient perifhes by a kind of deluge.

This disease the bloom.

4. This difease in general proceeds originally from caused by the the weakness of the blood, which being unable, in this weakness of state, to change the aliment into its own substance, neceffarily, throws it off upon the extremities, and depending parts of the body, and foon after also into the belly, where, fo long as the quantity is not confiderable, 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 proexeds.

5. Now the blood is most commonly debilitated by (1.) an immoderate evacuation of blood by blood letting, or (2.) any other way, (3.) a difease of long standing, or (4.) the deftructive custom of drinking spirituous liquors to excess, which destroys the natural ferments of the body, and wastes the spirits. (a) Hence great

(a) The immoderate use of spirituous liquors is attended with feveral 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 hyperal dropthis means contribute greatly to the generation of humeral drop-fies, and other chronic discases.

drinkers are most subject to the dropsy, notwithstanding its being a cold difease: and, on the contrary, waterdrinking in fuch as have been long accustomed to generous liquors, is equally prejudicial to the blood.

6. It must be noted, however, that in women this Issometimes disease does sometimes proceed from a different cause, produced by namely, from an obstruction of one of the ovaries, causein mowhich by degrees destroys its tone, whence its coat be- men. ing stretched in a wonderful manner by the lymph first deposited there, and ready to burst, nature forms some fmall 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 dropfy, which we have specified above. But I have already treated of this species of the dropsy. (b)

7. There are likewise two other kinds of swellings of the belly, resembling a dropsy, both which often swellings of affect women. The first is a preternatural fleshy ex- the belly, crefcence generated in the inner parts of the belly, refembling which swells it as much as water included therein does. a dropfy in (c) The other kind proceeds from flatus, and befides a fwelling causes the figns of pregnancy; and happens chiefly to widows, or women that did not marry till they were advanced in years. And fuch, in their own and midwife's opinion, feel the child move from the customary time, to the usual time of delivery, and withal are fick between times, as pregnant women commonly are, and their breafts fwell and have milk in them, infomuch that they frequently provide childbed-linen: but at length the fwelling of the belly diminishes in the same proportion it increased, and frustrates their hopes. (d) Neither of these disorders is to be referr'd to the diftemper under confideration.

Two other

8. The

(c) The author here should feem to mean what the writers in medicine term a mole, or false conception, which is apt to impole upon women for a time, fo as to make them believe they are pregnant. For a further account of this dif rder we refer the reader to Dr. Shaw's practice of physic, where he will find a fhort and fatisfactory account of it.

(d) This is that kind of dropfy, which authors diftinguish by the name of a Tympany, or flatulent dropfy, in which the belly fre-

quently contains only a small quantity of water.

The curative indications.

8. The genuine curative indications, in a manner naturally arifing from the fymptoms above enumerated, are either (1.) to carry off the water contained in the belly, and other parts, or (2.) to strengthen the blood, fo as to prevent a fresh drain of water into the parts affected.

Gentle purgatives more permi-

9. (1.) With respect to the evacuation of the water it is well worth observing, that weak purgatives do cious than more mischief than good in dropsical cases; for as all serviceable. 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 raifing a tumult in the blood, as appears manifeftly 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, infomuch as the cure depends entirely on this particular, and will accordingly be very eafy or difficult to effect. Hence, if bydragogues 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 fome 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 fenfible temperament of the body the standard in this case, will often endanger the patient's life; as it frequently happens that fome perfons of a strong constitution are easy to purge, whilst others of a weak one find the strongest purgatives of but little And in reality this caution respecting the unfiteffect. ness of the habit to bear purging is to be attended to in prescribing bydragogues, and all other purgatives; for I have frequently found a fuper-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 fervice in fome other distempers, ought by no means to be admitted here, inafmuch as mild purgatives rather increase than leffen

leffen the fwelling, 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.

10. Again, with respect to purging for the cure of The water the dropfy, great care must be had to carry off the water to be carrias speedily as the strength will permit: it being proper ed off, as fast to purge every day, unless great weakness or the too strength violent operation of the preceding purgative should will bear. require a day or two to be interpos'd. 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 that the bufiness was almost completed) instead of accomplishing the cure, leave it unfinished. Moreover, the bowels are in danger of putrefying from the long continuance of the water in the . belly; to which may be subjoin'd 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 whilft they remained 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 anabfolute necessity till the whole quantity is discharged.

II. It is further to be noted, and is verified by Hydrapractice, that bydragogues, if given alone to fuch as are gogues hard to purge, feldom answer our expectations; and their use, being taken in a large dose, instead of purging, raise a and how to disturbance in the blood; whence the swelling, which be given. diffurbance in the blood; whence the fwelling, 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.

12. For this reason, in such habits, syrup of buck- Syrup of thorn alone evacuates water plentifully and little elfe, buckthorn without disturbing the blood or rendering the urine a safe and high-colour'd, as other purgatives generally do, and effectual has only one bad quality, as occasioning great thirst during the operation. But if it be given in the largest dofe to fuch as are hard to purge, it will neither give many motions, nor carry off enough water.

Verified in a cale.

13. I remember well, for it was my first dropfical patient, that I was called about twenty feven years ago to Mrs. Saltmarsh in Westminster, who had the dropsy in the greatest degree I have yet seen, her belly being fwell'd to an incredible fize. I gave her an ounce of fyrup of buckthorn before dinner, according to the cuftom of that time, and it brought away an almost inconceivable quantity of water, without caufing any disturbance, or faintness. Encouraged by this success I gave it every day, only interpofing a day or two occaffonally, when the feemed weaker than ordinary. And the water being by these means carried off by degrees, the swelling of the belly diminished daily, and fhe recovered.

The author

14. And now, being young and unexperienced, I conceives too could not help thinking that I was posses'd of a mebighly of it. dicine, effectual for the cure of any kind of dropfy: but in a few weeks I discovered my error. For being called afterwards to another woman afflicted with the dropfy, which fucceeded an inveterate quartan, I gave this fyrup and repeated it frequently, increafing the dose by degrees; but having ineffectually attempted to evacuate the waters, inafmuch as the medicine did not operate, the fwelling of the belly increased, and fhe difmissed me; and, if my memory does not fail me, recovered by the affiftance of another phylician, who administer'd more efficacious remedies.

L'enient catharties failing, Aronger must be us'd.

15. When the constitution therefore appears such that lenient cathartics will not cure with eafe 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 fuch habits, for inftance, I have frequently ordered the following potion with fuccess: it must be given, however to none but strong persons, whom it purges when nothing elfe will, as I have learnt from a long courfe. of Experience.

Apurging petion.

Take of tamarinds, half an ounce; the leaves of senna, two drams; rhuharb, a dram and half; boil them together in enough water, so as to leave three ounces when strained off, in which dissolve manna and salutive 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 po-

Or,

Take of white wine, four ounces; jalap finely powder'd, Another. a dram; ginger, in powder, half a scruple; syrup 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. (e)

16. The following is another form of medicine which I frequently use, and may be commodiously given to fuch as cannot bear the repetition of other purges, inasmuch as it both warms and strengthens the patient during its operation.

Take of the roots of jalap and hermodactyls, bruis'd, Apurging each half an ounce; scammony, three drams; the leaves of fenna, two ounces; liquorice-root, and the feeds of anise and caraway, each balf an ounce; the tops of wormwood, and the leaves of sage, each one handful; infuse them together without heat, in

(e) There is not a better and more agreeable general purgative in all the materia medica than jalap: it is fcentiefs, not ill-tafted, nor bulky, works pleafantly and expeditiously, and particularly carries off watery humours. It is indeed impreper in acute fewers, and in rigid, warm, dry, and bilious habits, but may be fafely and advantageously given in lax, moist, and cencophlegmatic 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 rectives, 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 inflammation, 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 refinous 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, sounded on a comthan an absolute certainty of their usefulness, founded on a competent number of trials, duly verified?

three pints of common aqua vitæ, and strain off the tincture only when wanted. Let a spoonful of it be taken at bed-time, and two the next morning, increasing or diminishing the dose, in proportion to its operation.

Elaterium commended for fach as are hard to purge.

17. But the two best medicines, in my opinion, for fuch as are hard to purge, both which are stronger than any of those above specified, are elaterium, and the infusion of crocus metallorum. Elaterium, or the faces of the wild cucumber-juice, operates powerfully in a fmall quantity, and carries off abundance of foul and watery humours. Two grains of it is, generally speaking, a fufficient dose for most persons. I usually order this quantity to be mixed with a fcruple of pil. ex duobus, and made into three pills, to be taken in the morning. (f)

fusion of crocus metallorum.

And the in- 18. As to the infusion of crocus metallorum, if an ounce and half, or, to fuch 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 fhould only feem to evacuate the water contained in the stomach, it will, nevertheless, at length empty the belly. For belides its usually going downwards, after the vomiting stops, the considerable agitation and the shaking of the stomach and bowels, in a manner furrounded by a current of water, occasioned by so violent an effort, must needs be followed with an evacuation of the water, thro' fuch passages as naturally are not fufficiently open to fuffer it to run off that way. But if this emetic does not work enough downwards, I fometimes, 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.

> Take (f) The antients are faid to have given this from fix to thirty grains, but the moderns feldom exceed four or five. Dr Lifter indeed, in a differtation on the dropfy, tells us, that he has given it fuccessfully in the quantity of ten grains, once a week, for three months running; and has many curious particulars concerning. ing it. However, as it is univerfally 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 state consequences often result from purging too violently both in this and occurred diseases, where the torse of the result is so much injured. ther diseases, where the tone of the vessels is so much injured, and the fluids fo poor and spiritless.

petent dumber of trisis, daly's

Take of the distilled water of carduus benedictus, A strong three ounces; the infusion of crocus metallorum, purging poan ounce and half; fyrup of buckthorn, half an ounce; the electuary of the juice of roses, two drams: mix them together for a potion. (g)

19. Now, that there are fecret passages thro' which Secret pasthe waters are convey'd from the cavity of the belly to Jages for the the intestines is manifest; for daily experience shews pass from that bydragogues carry off as much water downwards, as the belly to if it were originally contained in the intestines them- the intesfelves. But as it is not easy to account for this fact, tines, prov'd it brings into my mind an excellent passage of Hist from fast. it brings into my mind an excellent passage of Hippocrates, who is univerfally esteemed the most knowing physician the world ever had. His words are these: "Some phyficians and pretenders to learning, hold it " impossible to understand physic, without being ac-" quainted with the nature of the human body, in the " manner of its formation; but, I am of opinion, that

concerning nature relates more to painting than to " the art of medicine. 20. But left this admirable author should be ac- Hippocracus'd of error, or empirics endeavour to patronize their tes defendignorance from this paffage, I freely own, that as far ed, and the as I am able to judge of practice, which ought to be use and nethe test of physicians, it is absolutely necessary a phy-natomy fician should be well acquainted with the structure of shewn. the human body, to enable them the better to form right conceptions of the nature and causes of some difeases. For without a knowledge of the structure of the kidneys, and urinary paffages, one cannot con-

" (b) what philosophers and physicians have delivered

(g) Dr Lifter, in a differtation on the dropfy, speaking of this remedy, feems to apprehend it will occasion great thrift, as being of a very drying nature; and attributes its working down-wards, after it has done operating upwards, to the vaft 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 fwoonings .-

jecture whence those symptoms arise, which proceed

The virtue of this medicine therefore feems to stand upon a very precarious foundation, and, like many others, wants to be fettled by well-conducted and competent experience.

(h) See lib. de prisc. med.

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 furely avoid those vessels, 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 skeleton.

Eafily ac-

21. Such a knowledge of the human body, therefore, is fo absolutely necessary, that whoever wants it will treat diseases hoodwinked. Besides, this science may be acquired without much trouble, and in a fhort time; for it may be fooner 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 some acute diseases, (which comprehend more than two thirds of diftempers) and most chronic ones, it must be owned, that there is fomething divine, or fome specific property, which is not discoverable by a fearch 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 principally on the diffection of dead bodies, as if the art of medicine might receive greater improvement from thence, than from an accurate observation of the natural fymptoms of diftempers and those things which do fervice 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 prefum'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 juices 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 in passing from the intestines to the chyliserous 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 where-

of is still more delicate, which no one yet has fo much as conceiv'd; fo deficient and gross is our knowledge, which is in a manner limited to the furface of things, but can by no means attain to discover their causes. However, notwithstanding this, there needs no very difficult enquiry to come at the knowledge of what is fufficient, (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 workmanthip in those things we are able to account for, and that excellent contrivance in others, which we do not

in the least comprehend.

23. And as Hippocrates censures such as spend more The use and time in fearching into the more curious and less use- and abuse ful parts of anatomy, than in making practical obtains ful parts of anatomy, than in making practical obser- ry hinted. vations, and confequently fludying nature; fo there is the fame reason in this age to censure those, who maintain that the art of medicine cannot be better improv'd, than by new discoveries in chemistry. For gratitude requires us to own the helps we have received from chemistry, whence we have been supplied with 10me good and well-adapted medicines to answer indications, amongst which the infusion of crocus metallorum the vomitive under confideration, is no contempible one; fo that for this reason chemistry is to be held a very useful art, provided it be restrained within the bounds of pharmacy. And nevertheless they are guilty of a fault, or at least a mistake, who work their imagination up to fuch 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 confiders the matter thoroughly will find, that the principal defect in the practical part of phylick proceeds, not from a fcarcity of medicines to answer particular intentions, but from the want of knowing the intentions to be answer'd. For an apothecarie's prentice is able to inform me, in a very short time, what medicine will purge, vomit, fweat or cool: but a man must be much conversant in practice to be able to indicate the properest time of administring any

particular remedy, in all the different stages of diseases, and throughout the course of the cure.

Medicine, how bestimproved.

24. And, in reality, I am fully perfuaded, that nothing tends more towards the forming a true judgment of this than an accurate observation of the natural fymptoms of difeafes, 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 diftemper 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. For the most curious disquisitions of this kind are only fuperficial reasonings, artfully deduced and cloath'd 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. (i)

25. But tho' all hypotheses founded on philosophical reasonings are quite useless, since no man is possess'd of intuitive knowledge, fo as to be able to lay down fuch principles as he may immediately build upon, yet when they refult from facts, and those observations only which practical and natural phoenomena afford, they will remain fixed and unfhaken: fo that though the practice of physic, in respect of the order of writing, may feem to flow from 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 bysteric diforders, (unless in some particular cases where I rather exhibit opiates) because I first took it for granted, that these complaints arose from the weakness of the animal spirits; but when I learnt from a constant obfervation of practical phænomena, that purgatives al-

<sup>(</sup>i) 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.

ways increas'd the fymptoms, and medicines of a contrary kind ordinarily quieted them, I deduced my hypothefis from this and other observations of the natural phænomena, fo as to make the philosopher in this case subservient to the empiric. Whereas to have set out with an hypothesis would have been as abfurd 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 pleafe.

26. But to resume our subject : whatever passages The infusion those are through which the water passes from the ca- of crocus vity of the belly into the intestines, I am fure that metallothe vomiting occasion'd by the above-mentioned eme-rum, an extic does powerfully evacuate it, both upwards and dragogue. downwards. For after the fecond or third puke, the waters do not feem to be forced out fo much by the fecretory virtue of the medicine, as to run with a full current, the obstruction being in a manner broken down, and the fluices opened, as manifestly appears by the frequent tumultuary evacuation of the waters in

the intermediate spaces of vomiting.

27. A poor woman, about fifty five years of age, Verified in begg'd my assistance in August last. She had long a case. been afflicted with an intermittent fever, and afterwards lain in prison three years: she had suffered much from cold, and her belly was more fwell'd than I had ever feen 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 ftrength would bear, till she had taken fix doses, The first puke occasioned a total suppression of urine, which she afterwards voided fometimes, 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 appear'd 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 computed she had voided feveral gallons of water. This enabled her to lay her head upon the pillow, and turn from fide to fide, as fhe pleas'd, whereas before fhe was constrained to fleep in an upright posture, for fear of being fuffo-

cated

cated by the weight of the waters. But the emetics by their violent operation raised the vapours so much, as to render their further use unsafe, whilft, notwithstanding, the remaining swelling of the belly, and the motion of the waters which the perceived upon turning herfelf in bed, and likewise the pits in the legs, which kept depressed after any thing was forced against them, fully manifested that there was still much water in the belly; for these reasons, I say, I was forc'd to finish the cure with purgatives. Accordingly, I afterwards prescrib'd either the above-mentioned purging potion, or some other hydragogue, as her strength and the vapours would permit; for purgatives do in fome measure cause hysteric disorders, tho' of a gentler kind than vomitives ordinarily do. I continued this method till she seem'd to be recovered.

Remarkable particulars happening during the course.

28. During the courfe the following remarkable particulars happened. (1.) On the intermediate days of purging, the fometimes voided water plentifully downwards, and, towards the latter end, by urine also, to the quantity of a gallon in a day, tho' I allow'd her only a pint and half, or a quart of liquor, during that space of time: fo that all the paffages feemed to be open. (2.) Towards the conclusion of the cure the purgatives rais'd the vapours, and the belly fwell'd much towards the breaft, as if it had been filled again with water, which notwithstanding I knew could not be, because she drank fo little, and confequently that the fwelling proceeded only from flatus, occasion'd by the hurry raised by the purges: and the event verified my opinion. For tho' fhe parted with a gallon of water in a day when fhe purged, yet her belly foon began to fwell upwards, caufing a difficulty of breathing, and did not fall till the diforder occasioned by the purgative was gone off, and the body had recovered its natural flate and reft; then the fwelling and other fymptoms vanished fuddenly, and return'd not till they were again occasioned by the fucceeding purge. (3.) Laftly, tho' this woman, who was about fifty years of age, had not had her menses for feveral years past, they now flow'd again violently, and this discharge, coming upon the preceding evacuations, greatly increased the number of hysteric symptoms: viz. the fevere pain in the back, in the region of the spleen, and in the head, join'd with a severe cough.

cough. And further, tho' it might feem highly probable that but little water remained in the body, after fo large a quantity had been discharged upwards and downwards, and by urine likewife, yet the belly continued as much fwell'd as it usually was before any evacuation had beeen attempted. In order therefore, to quiet these motions, which made her uneasy for a week after the last purge, I was constrain'd to give an ounce and half of diacodium, for four nights running, and to order the dofe to be repeated in three hours, in case she got no rest: and by this means these fymptoms were quieted, and the fwelling vanish'd.

29. In the mean time it must be noted, that if the In what belly be not much fwell'd, the waters are not fo readi- cafe purgaly evacuated by the infusion of crocus metallorum, as in best. case of a large swelling thereof: for the very bulk of the water whilst it is agitated and shaken by the operation of the vomitive, wonderfully promotes its own evacuation; fo that for this reason, unless the belly be confiderably fwell'd, it is best to rely entirely on cathar-

tics.

30. There is another pretty common and fimple me- A decoction dicine, which cures the dropfy in the fame manner as the of the inner emetic, it is made by boiling three handfuls of the inner bark of elbark of elder in a quart of milk and water to a pint, half of tive of the which is to be taken morning and night every day, till droply. 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 fervice; but if it operates effectually either way, and especially both ways, it proves an admirable medicine in the dropfy.

31. But, in reality, it is well worth noting, and a ftrengthencommon case, that water is deposited in the legs, ing medithighs, and even in the belly, which nevertheless cines are to must by no means be evacuated either upwards or be preferr'd downwards. As for instance; (1.) in case a swelling to evacuof this kind fucceeds a confumption of long flanding; or (2.) proceeds from the putrefaction and diforder of fome of the bowels; (3.) from poor weak blood; (4.) old fiftulas in the muscular parts, accompanied with a confiderable discharge; (5.) great weakness, and an

im-

immoderate evacuation of the juices, and fpirits by falivation; or (6.) from an over-flender diet in the cure of the venereal difeafe. In these and other diforders arifing from fuch causes, purging not only avails not, but increases the distemper by further weakening the tone of the blood; fo 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 reftored to their proper functions.

When diuretics.

32. There are other cases, likewise, where the waters are not to be discharged by vomiting nor purging; for inftance, in weak conflitutions 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 extoll'd in the writings of phyficians, but the most, if not the only efficacious ones, in my opinion, are those prepared from lixivial falts, from whatever plant the ashes be obtained. But as broom is easily procurable and much esteem'd in this difease, 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 conftantly every morning, and at five in the afternoon, and at night, till the fwelling difappears. 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.

The blood to ened after the waters are carried off.

33. (2.) To proceed now to the fecond intention: be firength- after the waters, whence this difease immediately proceeds, are wholly evacuated, in general only half the work is done, inafmuch 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 tho' young persons frequently recover, after the waters are sufficiently carried off without any other help, their na-

tural heat supplying the place of the abovementioned remedies, yet the antient and infirm, under these circumstances, must have immediate recourse to such

fimples as warm and ftrengthen the blood.

34. And here, besides those hereafter to be set down, The medirecourse may be had to such as I have commended cines proper above in treating of the gout, whether, of the medici- in this case. nal or dietetic kind, or belonging to the rest of the nonnaturals, inafmuch as these two diseases have this proproperty in common, namely, that the fame ftrengthening remedies tend to remove the original cause in both; only wine, which should be wholly refrained in the gout, may be advantageously used in the dropsy for common drink. It must, however, be own'd, that as we only learn from the apparent fymptoms, and the effects of whatever does good or harm, that both thefe and feveral other chronic difeases proceed from the weakness of the blood and indigestion, we have yet but a fuperficial knowledge of diftempers, and cannot find out their effential differences, and the specific ill qualities of the juices, arifing from fuch indigeftions, the common cause of all chronic diseases. Add to this, that we are utterly ignorant of the various peculiar alterations in acute difeases, 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 effential nature of difeafes, varying the procedure occafionally, conformably to the spontaneous indication used by nature in expelling diseases, or to experience, which teaches the best method of cure in every dif-

35. Again, in order to answer the intention under Wine to be confideration, viz. the strengthening the blood, whe- drank freether the evacuation of the water be procured by this by, after the diuretic medicine, or by purging, or vomiting, in the water bemanner above specified, the patient, if able to purchase off: 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 ftrong beer, because all small and cooling liquors, how agreeable foever they may be to the palate, on ac-

count of the thirst which generally accompanies this difease, render the patient more phlegmatic, and increase the water, and for this reason are seldom or never to be indulg'd. Whereas, contrariwife, ftrong liquors, excepting diftill'd fpirits, promote the recovery fo much, as fometimes to affect a cure alone, in the beginning of the difease, when there is but little water in the belly, and especially if they be impregnated with heating and strenghening 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, scurey-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 fufficiently answers this intention, and is much the best and strengthening medicine. (k)

Small liquors to be drank very sparingly.

36. But it is of great moment in this case to drink very fparingly of fmall liquors, inafmuch as all of this kind in fome measure increase the waters; and some perfons have been cured by refraining from potables entirely: for which reason, if small liquors be sometimes indulged, they are to be drank with great moderation. However, as this difease is generally attended with great thirst, which is further increased by forbearing fmall liquors, it may be proper to wash the Thirst, how mouth often with cold water, acidulated with spirit of vitriol, or to hold a few tamarinds in the mouth between whiles, or chew a flice of lemon: but none of these must be swallowed, by reason of their coldness, which is prejudicial in this cafe.

Steel and Arengthen-

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allay'd.

37. Steel is an excellent strengthener in the begingarlic good ning of the difease, inasmuch as it warms and strengthens the blood: and for the fame reason garlic is very ferviceable: I have known the dropfy cured by garlic alone, by the direction of other phylicians.

38. But

38. But it is to be observed, that that species of the Emetics & dropfy, in which only the legs or the belly fwell mo- cathartics derately, does not immediately require the affiftance not required of emetics and catharties as frequently right. of emetics and cathartics, as frequently yielding to the fies. above-mentioned heating and strengthening liquors. It is, however, principally to be noted, in case the cure be attempted by strengthening or lixivial medicines only, that 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 tho' whilft we attempt to carry off the waters, it may be proper to give strengthening medicines between times; yet, when the cure depends altogether on ftrengthening the blood, we must not meddle at all

with cathartics. (1)

39. It must also be remarked, that the dropsy is not An invetealways cur'd by answering both indications; viz. (1.) rate dropfy by carrying off all the water contained in the belly, incurable. and (2.) administering heating and strengthening medicines to prevent a fresh collection of water. For in an afcites of feveral years standing, the waters lying a long time upon the bowels, alter their fubstance, and putrefy them and the neighbouring parts, breed preternatural glands, and form small bladders full of lerum, (m) and reduce all the parts fituated in the cavity of the belly into a kind of putrefactive state, as appears upon diffecting 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 forward the cure as much as he is able by. evacuating and itrengthening medicines, and not to lose all hope himself, or cause the patient to despond. And it is for this reason his duty to give his ashitance, because in abundance of diseases, when the morbific matter is quite carried off, nature, which perpetually helps us, contrives fpontaneously, in a wonderful manner, to expel the pernicious remains of the diffemper. Hence every kind of drapfy, how obstinate soever it prove, and how much foever it may have injured the

(1) See p. 387. note (i) (m) These are usually call'd hydatids. bowels, may be treated in the same manner as if it was recent.

Outward of little fervice.

40. As to topics, or external applications, accordapplications ing to the best of my observation, they never do much fervice in this disease. The least pernicious are those which are applied by way of cataplasm or liniment to the belly to difcuss 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 fo far from being ferviceable, that they generally prove detrimental; as ointments made of ftrong purgatives, and applied to the belly, and blifters to the legs and thighs, to discharge the water when the parts are confiderably fwell'd. But both these applications are unfafe; for by the former the purgative quality of the ingredients is fo deeply fixed in the mufcles and membranes, as to occasion an incurable hypercatharis, or fuperpurgation; and as to blifters, which empirics commonly apply to the above-mention'd parts, they quite extinguish the natural heat, much diminished already by the stagnation of the water, and thus often caufe a gangrene, which is too common an accident in this case. For the slightest wound is very difficultly heal'd in dropfical fubjects, especially in a depending part, because the substance of the flesh in these parts is fo furcharg'd with moisture, that the ferum flows continually thro' any paffage it finds, and thereby obstructs the healing of the wound. And in my opinion the operation of the paracentesis, commonly call'd tapping, which fome practitioners commend, is not less hazardous, or more successful than blifters. (n)

41. To

(n) The operation of tapping was not fo commonly practifed in our author's time, as it has fince, and is at present, and besides, was generally deserr'd so long, till the weakness of the patient, and the schirrhous, corrupt state, or erosion of the viscera rendered it useless, so that it should not seem strange that he entertained fo unfavourable an opinion of it. Sir Theodore Mayerne, who was for some time cotemporary with him, has not once mentioned it

in his chapter on the droply, to be found in his works.
But to demonstrate its usefulness, we cannot do better, than recommend to the reader's perufal, the description given of the operation, and the foccess attending it, by Mr. Sharp, in his treatise of the operations of furgery, who concludes the chapter 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

41. To conclude: tho' when this diftemper 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 found, as feveral other difeafes that are ordinarily efteemed less dangerous. (0)

42. But if any one should accidentally find fault The remewith these remedies, as being simple and evidently natural I may with more reasons and evidently natemptible tural, I may with more reason reprove him, for for their his vicious turn of mind, in exclaiming against curing simplicity. other persons with such simple medicines, when he would wish to be cured himself, or have his wife, or children cur'd, 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 luftre and excellence of the art of medicine are not fo clearly feen in elegant prefcriptions, as in curing difeafes.

43. These are the observations I had to communicate The author on these two diseases, the gout and dropsy, and I believe vindicates I shall hardly meddle with any others. And as to the his other I shall hardly meddle with any others. And as to the works. works I have already publish'd, if a person will only give them a fingle reading, I am forry 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 fay he will receive fuch advantage from them, as may in some meafure equal my wish, and the great pains I have been at, in making and compiling these observations. And indeed, the faithfulness wherewith they have been delivered, can only be learnt by being conversant in practice, and as accurate and diligent an observer as I have Hh2

been long collecting. I have known feveral instances of people being tapp'd once a month, for many years, who felt no diforder in the intervals, till towards the time of the operation, when the diftension 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 confideration of the great benefits fometimes received from it, I cannot but recommend it as exceedingly ufeful.

(0) An ascites, coming upon other diseases, in which the viftera, were actually tainted, or approach'd that state, and attended with an extravalation of ferum, occasioned by a rupture of some lymphatic veffels, or hydatids, a wasting of the upper parts, great thirst, and an evacuation of a very high-coloured urine, in a finall quantity, which drops a fediment upon flanding, may in

general be reckon'd incurable.

The improvement of medicine, by whem obstructed.

been. For as 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 perfuaded the judicious part of mankind will not condemn me, who cannot but know that the improvement of medicine is alike obstructed by two forts of men. The first are those who do not at all contribute to improve the art they profefs, but hold those in contempt who do fo 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 affirm, we ought not in the leaft to depart. (p)

44. But

(p) This is indeed an idle and abfurd pretence, and deferves 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 hilfory of diffempers, whence we are furnish'd with so excellent a fet 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 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 fo univerfally and fucceis-fully practic'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, amongst 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 fet it upon a furer foundation, and recommend it more effectually than ever, to the protection and encouragement of men of genius and candid dispositions.

Is not the prefent improv'd state of chemistry, pharmacy, anatomy, and furgery, wholly owing to the labour and application of the moderns? How much we furpass the antients in these 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 fervile deference to the ancients, is to infinuate 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 de-

44. But why do we own that all other arts which are of less importance to mankind, have been confiderably improved without doing any injury to the antients, and hold physic alone to be entirely perfect? Could not the inventors of the furer way of failing, now practifed, try the use of the compass, which succeeds fo well, without contemning the antient mariners, who being lefs skilful directed their course by obferving 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, which the inhabitants of the western parts of Europe are best skill'd in, be a reflection on those ship-carpenters, who built the fleets that engaged at Actium; or on Augustus and Mark Anthony, who were fuch great commanders both by fea and land? Befides, 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 accused of lessening our opinion of the antients, than a fon is of leffening 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 difeases, but rather tend to missead, than to direct the physician. It should seem that nature has given these men wir enough to reason in a superficial manner about her, but deny'd them judgment to teach them that all the knowledge of her is to be had only from experience; the

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decide in favour of the ancients, 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 prescription from its antiquity, and late-discovered truth be rejected for its novelty; which would be taking so preposterous and irrational a method in cultivating a science, that is to grow up from facts chiefly, and receive its best improvements from vigorous 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 judgment on either, so as not to betray an obstinate attachment to the antients, or a groundless and partial

contempt of the moderns.

human mind being reftrained to the narrow limits of knowledge, derivable from the fenses. 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 confists 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. (q)

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(q) The ridiculous vanity of being esteemed persons of a happy invention and prolific genius, has prevail'd 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 minutiae 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 mathematicks, 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 perplex'd 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 should look upon them as things absolutely undiscoverable, and an attempt to discover them, a stuitless 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 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 propercit remedies for curing them, and the manner of prescribing them to the best advantage. A knowledge of all these particulars is so effentially 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 the contrary, another may be reckoned a good one, who is thoroughly acquainted with

them, and nothing more. See pag. 45. note (a)

## POSTSCRIPT,

Treating of the causes, signs, and cure of the WINTER-FEVER.

I. XXIITH the readers leave I will here subjoin an The rise and observation of moment, concerning the dif- continuance of the wincovery and cure of fevers, which escap'd my memory, ter-fever. or otherwise had been mentioned in a properer place. I have found a certain fever prevail from the beginning of winter to the middle of fpring, which, both in the fymptoms and method of cure, manifestly differs from the then reigning flationary, or epidemic fever of the general conflitution, and is therefore to be reckon'd a-

mongst those fevers I call intercurrents.

2. It feems to proceed from the coldness, density Its causes. and moistness of the air, whence the pores of the skin are closed, and the blood from an obstructed perspiration loaded with a copious ferum, which, by its long continuance in the veffels, becomes prejudicial, putrefies, and eafily raifes a fever upon taking cold, or fome other flight cause given. And if there be much morbific matter, it occasions such a fever as we have described, under the title of a bastard peripneumony. (r) But if there is only a small quantity of morbific matter it only produces the fymptoms I proceed to enumerate.

3. (1.) Paroxyfms of heat and cold fucceed alter- Symptoms. nately for a day or two after the beginning of the fever; (2.) a pain in the head and limbs, and an universal restdefines 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.) blood like that of pleuritic persons; (7.) it is also generally attended with a cough, but not with fuch a difficult respiration, 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 diftinguishing and capital symptoms of a peripneumony, tho? it differs from this diffemper only in degree: I call it the winter-fever.

4. Tho' this fever in the beginning is only attended with the fymptoms proceeding from taking cold, yet ment of it abundance of pernicious symptoms arise from treating produces several bad Hh 4

Ill treat-

Il frantoms,

it in an improper manner, which at length prove destructive. For if the patient be confined in bed, and tormented with cardiacs to raife fweat, and carry off the fever, which however is feldom effected, it is frequently accompanied with a delirium, a lethargy, a weak and irregular pulse, a dry tongue, and an erup-These and the tion of red, and fometimes livid fpots. like fymptoms, tho' they are reputed by fome 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 diffurbs the fpirits, and occasions a translation of the morbific matter to the brain, and of course increases all the symptoms.

The method of cure particulariz'd.

5. To cure this fever I endeavour to make a revulfion of the copious ferum collected by the diminution of infenfible 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.

A purging draught.

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.

I repeat this draught twice more, interposing a day between each purgation, provided all the symptoms do not go off before. And in the evening after the operation I give an ounce of syrup of poppies, by way of opiate. On the intermediate days of purging, in case of a cough, I prescribe the pettoral decottion, and a lintus 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 blood, if the fever be very violent, I prescribe an emulsion of the cold seeds, and also the following julap.

Take of the distill'd waters of water lilly, purslain, Acooling and lettice, each four ounces; syrup of lemons, an julap. ounce and half; syrup of violets, an ounce: mix them together for a julap, a draught of which may be drank at pleasure.

6. In the mean while I order the patient to keep The regifrom bed in the day-time, and to forbear flesh: but men. after the first or second purge, I allow him a draught of thin chicken broth now and then. It must, however, be noted, that in case any violent symptom, as a difficulty of breathing, or a sharp pain in the head in coughing, flews that this diftemper nearly refembles a bastard peripneumony, both bleeding and purging must be repeated at proper intervals, till the fymptoms vanish entirely; and the patient is to be carefully treated according to the method laid down in our difcourse on that difease. (s) But the sever under consideration is very feldom fo violent, as to require any further 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 conflitution; as being certain abundance of persons have lost their lives, for want of attending to, or knowing this particular.

(s) See feet. vi. chap. iv. p. 242;

Take of the defall & coater of coater lilly, purfain, of college anne and half heap of chart, an bince that a topic of the control b. In the mean while I code the man and all a ment from bod in the day time, and in forbeat Belti; but met. actioned, that begin to any violent during and a floor poisson has policife died manuagers arrive a very feident fo violent, at to require any fat har leva-But count h of this, which, however, I shought proconditution; as being certain abundance of perlans have lost their lives, for want of attending to, or knowing (i) Berfell to the in the in And as they the best offer heat of the ball. The second second second second second

### Schedula Monitoria:

OR, AN

## ESSAY

ONTHE

### 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:

ORAN

# E S S A Y

ON THE

### Rife of a NEW FEVER.

To which is added,

TWO DISSERTATIONS,

One on the Purkin Fever, happening in the confluent Smarr-Pox; and the other, on voiding Bloody, Urine from the Scone in the Kidneys.

### 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 thro a native generous disposition and great integrity of mind, which induced you to support me in what you was sensible was truth, tho at a time when most of the faculty exclaimed against me.

I ought not however to be offended with them, nor indeed am I, 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 is altogether becoming wise and ingenious
men not to admit hastily, and without a previous examination, the particulars delivered by me, which were direstly opposite to the received method of prastice. Notwithstanding this, as I am not less indebted to you, I judged 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 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, however this be, I can at least plead in my own behalf, that the' the space of thirty years, which I have 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 tho' 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 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, I am perfectly easy in mind, and 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 little the better for them.

But enough of this: and now, worthy sir, let me intreat your kind acceptance of this performance, and look on this address as a proof of the respect I bear you, which others also join with me in, who are less acquainted with your merit than I am. As I have not the least dependance on 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

bonester 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, betray 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 hindered 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 fuch 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. I take my leave, worthy fir, with intreating you to continue your friendship to me, who will always remain

> Your most humble servant, THO. SYDENHAM.

### Schedula Monitoria:

### An Essay on the Rife of a New Fever.

HO' my declining age, and a constitu- The rise of tion much broken, by long illness, might anewconjustly excuse me from any great applica- fitution tion of mind yet I cannot but all fever. tion of mind, yet I cannot but advertise my countrymen of the entrance of a new constitution, which has given rife to a new and very different kind of fever from those which lately prevail'd, nor refrain from endeavouring to procure the health of others, even at the expence of my own.

2. It must be remember'd that intermittent severs Preceded by began first in autumn, in the year 1677, and increased a sharp daily, and became epidemic till they came to their state; frost. and afterwards gradually decreased, so far as in the latter years of this constitution to appear fo feldom, that they could scarce be reckoned epidemic. (a) 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 fo hard, as to bear the weight of carts, and booths with different forts of merchandize, and vast crowds of people. Tho' the cold was neither so When the fevere, nor lasted so long, the following year, namely, fever first in 1684, yet, as foon as it began to thaw in February appeared. 1685, the fever I intend to treat of here appeared, which I esteem a new fort of fever, and altogether unlike the fever of the eight foregoing years.

3. Now, whether the change of this constitution is Whence the to be afcribed to the alteration of the manifest qualities change of of the air, which happened during these two winters, the consti-I know not, as having observed that no alterations of tution. the fenfible qualities of the air, however different, have

produced species of epidemic diseases; and that a certain fuccession of years, tho' they have differed from one another in their outward appearance and temperature, have, notwithstanding, all conspired in producing the fame species of stationary fevers. Having, therefore, deliberately confidered these particulars, I concluded, as I have elfewhere remarked, that the change of a conftitution depends principally on fome fecret and hidden alteration in the bowels of the earth, communicated to the whole atmosphere, or on some influence of the planets. It must, nevertheless, be noted, that upon the departure of the depuratory fever fome time ago, a fevere frost happened in the beginning of winter in 1664, which abated not till towards the middle of March, and was foon fucceeded by a pestilential fever, and, in a fhort time afterwards, by the plague itself. But however this may be, the fever under confideration 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 takes the Species of this fever.

4. When I was first call'd in this fever, I firmly beat first mis- lieved it was not one of that species of severs I call stationary, but rather of the class of intercurrents, which happen without diffinction in most years: so that I esteemed it the same kind of distemper as the bastard peripneumony, which I have described above (b); with this difference only, that the fever was fometimes not attended with those symptoms which characteriz'd and distinguish'd that disease; as (1.) a violent cough; (2.) a fevere 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 baftard peripneumony. As my bookfeller 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 miftaken; 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 fummer, which feafon commonly terminated those peripneumonic fevers, this fever still continued, whence,

> (b) See feet. vi. chap. iv. p. 242. 1685, Ithink.

whence, foon perceiving my error, I was fully perfuaded that this fever was to be referr'd to a new constitution.

5. This fever, from the justest observation I could Its sympmake, was generally accompanied with these symptoms. toms enu-(1.) Intervals of heat and cold fucceeding each other, merated. 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 refembling pleuritic. blood; (5.) a cough mostly, which, with the other concomitants of a mild peripneumony, goes off fo much the fooner, as the difease comes on at the greater distance from winter; (6.) sometimes a pain in the neck and throat in the beginning of the illnefs, but not fo violent a one as in the quinfey; (7.) tho' the fever be continual, yet it often increases towards night, as if it were a double tertian, or quotidian; (8.) lying always in bed, tho' with few cloths on, is dangerous, for the fever being thereby translated to the brain, a coma or phrenfy foon fucceeds. And, to speak the truth, there is fo great a tendency to a phrenfy here, that it frequently comes on fpontaneously of a sudden, without any fuch occasion, but rises not to such a height as it does in the small-pox, and other fevers: the patient being rather quietly, than furioufly delirious, and talking wildly between whiles. (9.) Petechiæ, or eruptions frequently appear, occasioned by an unseasonable use of cordials and a hot regimen, and young persons of a warm conftitution are feiz'd with purple fpots, which are certain figns of a confiderable inflammation, both in this and all other kinds of acute difeafes; (10.) and fometimes such spots as are term'd miliary eruptions come out all over the furface of the body, appearing much like the measles, only they are reder, and when they go off, dot not leave branny scales behind them, as in that difease: tho' these eruptions do fometimes come out spontaneously, yet they are frequently driven out by the warmth of the bed, and cordials; (II.) The tongue is either moift 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 moift, it is white and foul. (12.) Sweat, likewise depends upon the regimen; for if that be over-heating, it is in a manner vifcous, especially about

the

the head, and, tho' it flows plentifully and universally, 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 morbisic matter, if not to the head, at least to the limbs. But when the sever has seized the head, and the sever prevailed, the signs thereof vanish, only the pulse beats sometimes quick and sometimes slow, at length, however, when the spirits are exceedingly hurried by wrong management, the pulse becomes unequal, with startings of the tendons, and death soon follows.

How to be cured.

6. As to the cure; those figns of the peripneumony which accompanied this fever at its rife, foon after the beginning of winter, convinced me, as I faid 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 baftard peripneumony, in the postfcript of my epiftle on the dropfy. And, indeed, this method agreed pretty well with the few patients which my ill state of health suffered me to attend, and others, also, who used it upon my recommendation. Whatever motive it was that induced me to follow this method, as I have fince confidered the fymptoms of this disease, and the temperateness of the last year, which fucceeded the two hard winters (especially of the winter feafon, which, in reality, on account of its mildness, scarce deserved the appellation) it appears manifest to me, that this fever is only a simple inflammation of the blood, and confequently, that the curative indications are to be entirely levell'd at suppresfing the inflammation by a fuitable method, and proper 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 sever generally resembles pleuritic blood, yet it does not well bear repeated bleeding. But if a difficult respiration, a violent pain in the head in coughing, and other symptoms of this kind, shew the 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 (c): and this I would have carefully noted.

8. In the evening I lay a blifter between the shoulders, and next morning exhibit this lenitive potion.

Take of tamarinds, half an ounce; the leaves of senna, A gentle two drams; rhubarb, a dram and half; boil them to- purging gether in enough spring-water to three ounces; in the strained 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 given three times, interpofing a day between each purgation, and the following, or a like opiate, to be taken at bed-time after the operation.

Take of the distill'd water of cowslips, two ounces; syrup of white poppies, an ounce; fresh lemon-juice, draught. 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 occafions by the tumult it raifes in the blood and juices of persons in fevers, which symptom yields to opiates, tho' they feem to promote it. For this reason, as I durst not venture to give a purge in the tomatous sever of 1673, I perfitted in the use of glysters, being fully convinc'd that purgatives did then immediately caute a coma, which might perhaps have been prevented, if I had thought of administring an opiate after the operation of a cathartic (d).

9. But on the intermediate days of purging, an opiate must not be given at bed-time, for fear of checking, or entirely stopping 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, a neglect of which hath been of fatal confequence to abundance of persons, especially to children, as I have elfewhere observed by way of caution. (e)

to. It

<sup>(</sup>c) See sect. vi. chap. iv. pag. 242. (e) See pag. 291, 292, par. 47, 48:

A composing

10. It must, nevertheless, be noted, that the the above-mentioned evacuations ought in general to be used in the cure of this fever, yet young persons, or especially children, frequently recover after being blooded and purged once, and require no more purging, the fever being conquer'd by the first cathartic: whereas on the contrary, it is fometimes 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, feldom happens, unless it be caused by the aphthæ, fucceeding 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 sever, is gone off, and at length ceases spontaneously, as the patient recovers strength; which is well worth noting, inafmuch as the hiccup happening at the declenfion of this fever, is no way dangerous, unless several medicines be over-officiously and ineffectually administered, in which case it proves fatal. But both the aphtha and hiccup, or either of them, if they do not go off fpontaneously, but prove obstinate, readily yield to the bark; an ounce of it being made into an electuary, or pills, with a fufficient quantity of the fyrup of red poppies, and taken in the manner I formerly directed in my epiftle to Dr Brady, drinking a draught of whey after every dose. (f) I have found this the furest 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.

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 fix spoonfuls of the following julap after each dofe.

Take

Take of the distill'd waters of pursain, lettice, and Accoling cowslips, each three ounces; syrup of lemons, an ounce julap. and half; fyrup of violets, an ounce; mix the whole together for a julap.

Or.

Take of spring-water, a pint; the distill'd water of Another. roses, lemon-juice, and fine Sugar, each four ounces: boil them together over a foft 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 stipticity, whence it is improper in all diseases requiring to be cured by purgatives; to fay nothing here of the

mineral nature of this spirit.

12. It frequently happens, especially in the declension Sweating of this fever, that the patient, when treated in this man- not to be depended on ner, fweats now and then fpontaneously, in the night, in this fewhich greatly abates all the fymptoms, but notwith- ver, and standing, as such sweats are not to be depended on, the therefore not above-mentioned method must by no means be discon- to be protinued, 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 fweat be prolonged beyond that space of time, wherein the febrile matter, prepared by due concoction, is entirely carried off, the following fweats will do nothing but raise a fresh inflammation. Hence, tho' those sweats which Howed fpontaneously, might, perhaps, be critical, with respect to the expulsion of the febrile matter, fitted to be carried off, yet the fubsequent sweats may be only lymptomatic, and fo do more mischief than good. In short, the gentle warmth of the bed in the night fortunately favours the fweat which flows fpontaneoully at that time; and, for this reason, the patient should have no more, nor thicker cloths laid on him than he usually had when in health; he should forbear all heating medicines, lie later than ordinary the next morning, and afterwards perfue the methods of cure above delivered. i I amendenam fir med no I i 3

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The regimen.

13. The diet in this case should be water-gruel, or barley-broth, and now and then, a roafted apple upon occasion, 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 sweeten-

ing it with fine fugar.

14. I have elsewhere observed, that when the patient hath been twice purged, there is no necessity to restrain him from eating chickens, and the like food of eafy digeftion; this indulgence being allowable on account of purging, which otherwise could not be granted. Again, after the last purge, provided the fever be formewhat 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 fome days, which may promote the recovery of the patient's ftrength, and prevent the fever fits.

15. As this kind of fever is more apt to feize the head than any I ever yet faw, and cannot be removed without great difficulty and danger, I advise my patients to lie without their cloths only a nights; but if they are fo much debilitated by the difease that they cannot sit upright, I allow them to lie down upon the bed, or a couch, with their cloths on, and the head a little high: neither do I fuffer a greater fire to be kept in the room,

than they were used to, whilst in health.

Especially, if the inflammation be violent.

Sitting ab

a days re-

commended.

16. This regimen is not only to be ftrictly follow'd from the beginning, in all that have this fever, except in women feiz'd with it a few days after delivery; but must be indispensibly injoined, when the patient is attacked with a phrenfy, petechia, purple spots, or any other fign 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 fitting up in the day-time, inafmuch as the heat of the furrounding air, included in the bed by the coverings, puts the blood into an excessive motion, and the supine posture of the body hurries it violently to the head. But in this fever, when a phrenfy comes on from ill management, it cannot be removed immediately, neither is it fafe 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 fpontaneously by means of the above-mentioned method. Nothing, however, feconds 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 fupply 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 phrenfy.

17. What hath been faid of the phrenfy is also ap- And in a plicable to the coma fucceeding this fever, in which the coma. febrile matter, as it happens in that diforder, is tranflated to the head, whence, except the whiteness of the tongue, no figns of a fever appear, fo that the patient feems perfectly free therefrom. In this diforder, therefore, as well as in the former, the use of purgatives, fudorifics, blifters, and the like remedies, instead of proving effectual, do much hurt : for such evacuations oftener kill than cure here. Having, therefore, previously used the general evacuations of bleeding and purging, the cure of this diforder, tho' it may terrify the attendants, is to be trufted to nature and time. For the' the patient should be afflicted with a stupor for fome days, he will, neverthelefs, at length recover his health, proivded he be not constantly kept in bed, but is suffered to rife in the day-time, and lie down on the bed, or a couch, with his cloths 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. (g)

18. The phylician must not be discouraged from making the above-specified evacuations, tho', upon feeling the pulse, he should perceive a starting, and a convulfive motion of the body, because both bleeding and repeated purging are absolutely required, and do fervice 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

(g) See fect. v chap. ii. pag. 191

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purging at intervals. And fince this diforder luckily falls in my way, and manifestly confirms the truth of what I have afferted, I shall say something concerning it.

Se Vitus's dance de-Scribed.

19. This diforder is a kind of convulsion, which chiefly attacks children of both fexes, from ten to fourteen years of age. It first shews itself by a certain lameness, or rather undsteadiness of one of the legs, which the patient draws after him like an ideot, and afterwards affects the hand of the fame fide, which, being brought to the breast, or any other part, can by no means be held in the fame posture for a moment, but is difforted, or fnatch'd by a kind of convulsion into a different posture and place, notwithstanding all possible efforts to the contrary. If a glass of liquor be put into the hand to drink, before the patient can get it to his mouth, he uses a thousand odd gestures; for not being able to carry it in a strait line thereto, because his hand is drawn different ways by the convulfion, as foon as it has happily reached his lips, he throws it fuddenly into his mouth, and drinks it very haftily, as if he only meant to divert the spectators. As this disorder appears to me to proceed from some humours thrown upon the nerves, which, by their irritation excite preternatural motions, I conceive that the curative indications are to be wholly directed (1.) to leffen those humours by bleeding and purging, and (2.) to ftrengthen the nervous fystem. And to answer these ends, I use the following method. First, I order seven ounces of blood to be taken away from the arm, or fuch a quantity, whether more or less, as best suits the age of the patient: the next day I exhibit half the quantity, or a little more, of my purging potion; (b) and in the evening give the following draught.

Its cause and cure.

Acomposing aranght.

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.

20. I order the purge to be repeated thrice, with the interpolition of a day between each purgation, and the opiate to be given always in the evening after the 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 purged after every bleeding, as often as the strength will admit, for it is to be carefully observed, that there must be a sufficient interval allow'd between those evacuations, to prevent the mischievous effects therefrom. On the intermediate days I prescribe the following remedies.

Take of the conserves of roman wermwood, and orange- Astomachie peel, each an ounce; conserve of rosemary, half an ounce; Venice treacle and candied nutmeg, each three drams; candied ginger, a dram; fyrup 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.

Take of the roots of piony, elecampane, master-wort, Acephalic and angelica, each an ounce; the leaves of rue, fage, betony, germander, white hore-hound, and the tops of the lesser centory, each an handful; juniper berries, fix drams; the peel of two oranges; flice and infuse them without heat in fix pints of canary, and Strain it off as you use it.

Take rue water, four ounces; compound piony and Acephalic compound briony water, each an ounce; fyrup of pi- julap. ony, fix 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 foles of the feet.

21. According as the recovery advances, the foot and hand grow more fleady, infomuch, that the patient can bring the glass in a more direct line to his mouth, which certainly shews how much better he is. But tho', in order to finish the cure, I do not advise bleeding more than 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 subject to a relapse, it is proper to bleed and purge them for fome days about the fame feafon the next year, or a little earlier than it first began. And I imagine that the epilepfy in grown A finnacions

A contralic

A cepleatic

persons may yield to the same method, provided the remedies prescribed be properly adapted to the age of the feveral patients; tho', having feldom met with this distemper, I have not yet made trial of it. (i) ----But this by way of digression .---

(i) Few writers mention this diffemper, nor is it common: for my own part I have never met with an instance of it. Dr Sham in his practice of physic, vol. 1. p. 12. takes notice of it, and esteems it a convultive diforder, and exhibits the methods of cure as fuch.

A late author, however, humbly conceives it cannot justly merit this character, but allows it to be a nervous one; and thinks it, results either from morbid humours in the blood, irritating and stimulating the nerves, in confequence of which, the animal fpirits are excited to very irregular, preternatural motions; or elfe the animal fpirits themselves must be perverted and distemper'd, and thence be subjected to odd, irregular sallies and agitations.

We shall follow this author no further in his reasonings upon the cause of this distemper, as they do not appear entirely satisfactory and conclusive, but proceed to transcribe the cure, as de-

livered by him.

The proper intentions of cure, fays he, are (1.) to warm and comfort the nervous system: (2.) to strengthen and invigorate the animal spirits: (3.) to restore their injured crass or texture; and to regulate their actions or motions. Some regard should likewise be had to the blood, lest the disorders of the former should be originally derived from thence.

The blood, therefore, ought to be corrected: all its noxious, fimulating, or irritating particles or humours to be broken, dif-folved, or concocted; and its texture strengthened and confirm'd.

To answer these purposes, he prescribes a course of hysteric or nervous medicines, along with antimonial athiops, native cinnabar, the antifcorbutic juices, and a mixture of tincture of hiera picra, steel wine, and clixir of propriety, to be taken every third or fourth morning. And when the cure is completed, or pretty far advanced, observes that exercise and Spaw water will be very advisable, either to assist, or prevent a relapse. See a treatise of

diseases by Dr Charles Perry, vol. 1. p. 49, & seq.
Dr Cheyne calls this disorder a case of relax'd nerves; and delivers the following, as a method of cure which always succeeded with him. To answer the first intention of the general cure, says he, I order'd a vomit (generally I combin'd either the emetic wine, with an infusion of the Ipecacuanha, or the tartar emetic, with the powder of the root, (wherein the latter adds certainty and expedicion; the former force and strength to the operation) to be repeated regularly on the same day of the week, for a confiderable 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 prescrib'd for a month, or six weeks, on all the intermediate days, a large dose of athiops 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 erocus martis astringens, to brace the nerves inwardly; and ordered cold bathing every other day, for producing the tame effect outwardly; and the cure feldom exceeded three months. See his essay on the gout, p. 113. feet. 68.

22. It fometimes happens in women subject to hyfteric 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 diffurbance of the spirits, occasioned by the evacuations, and, confequently, if there be no figns 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, fetid afa, caftor, and fimilar ingredients, and julaps of the fame nature, of which I have fet down fome forms in my treatife on hysteric diseases. Furthermore, to recruit the ffrength, and suppress the vapours, it is necessary to allow such food, both of the folid and li-

quid kind, as is most palatable.

23. We have already observed, that this fever in the preceding, but especially in the current year, encreafed every day towards night, when a fit came on like that of an intermittent. The phylicians, therefore, who had learnt from experience, that all fuch 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, failed not to treat this fever with the fame medicine. But, however, rational this procedure was, it nevertheless did not ordinarily fucceed fo well as in the foregoing years. For having The bark made the strictest search I could into this matter, I ineffectual in this fefound, that tho' the bark was given in great plenty, ver. yet it so seldom cured the distemper, that I should rather ascribe the patient's recovery to some happy termination of it, than to the efficacy of the medicine: fo entirely it feem'd to have lost the effectually curative virtue it was polieis'd of in the years above specified, at least, in respect of the fever under consideration, which refembles 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,

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inasmuch as the bark avails not at all now, and that it is likewise increased by wine, cordials, and other heating things; which agreed well-enough with the

use of the bark, and the fever itself.

This fever often shews gripings or vomiting.

24. It is further to be noted, that this fever, throughout the fummer, 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 restlesnefs, but by gripings, fometimes with, and fometimes' without a loofeness; whilst, notwithstanding the fever of this feafon lurk'd under this difguife, 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 mefenteric 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 taking any folid aliment. But tho' this fever lies concealed under the forms of the fymptoms above enumerated, it is to be cured 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 fubflituted 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, fo that the patient may fleep after them, and at night an opiate exhibited in a large dose, viz. a grain and half of folid London laudanum, made into two pills, with as much maftich, or eighteen, or twenty drops of liquid laudanum, in an ounce of fmall cinnamon water, or any other generous vehicle. The stomach being by this means strengthened, and not irritated by the smallness of the quantity, will be less apt to throw it up. But if the purging draught and diacodium can be retained in the flomach, they are to be preferred to the above-mentioned pills and the laudanum, because they produce their effect without heating the body fo 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, loofness, or vomiting, or any other disorder suspected to proceed from a fever. For in a diftemper of fo fubtile 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 fymptoms, 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.

26. It must, however, be carefully noted, as it may Mineral be a means of fnatching abundance of persons from im- waters bad minent death, that notwithstanding what hath been attended already delivered, when the gripes degenerate into a with a feconfirm'd dysentery, (which, besides the gripes, is ver. attended with a discharge of a slimy matter streak'd with blood downwards) it is apparently very dangerous to treat the difease by the tedious method; which confifts (1.) in evacuating the humours, and (2.) in fmoothing their acrimony; not to mention the internal use of aftringent medicines of various kinds and forms, and the injection of aftringent 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 fo violent is this difeafe, that if purging be continued when it is confirm'd, 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.

27. For this reason, as soon as I am call'd to a per- Tobetreated fon in this diftemper, I give twenty drops of liquid lau- with laudadanum in plague-water, the wonderful water, or the degenerate like vehicle, and order the dose to be repeated twice in into a dytwenty four hours; or oftener, if, being given in this fentery. quantity and manner, it suffices not to ease the gripes, and check the bloody discharges downwards. when these grow thicker, which is the first fign of the approaching recovery, and the fymptoms are overcome, I reckon it fafest for the patient to persist in the use of the above-mentioned medicine morning and night for some days, lessening the number of drops e-

very 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

fleep be indulged long enough after it.

Theregimen

28. With respect to diet, if the patient hath heen inthis case. 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 this purpose cold in a proper veffel. The white decoction made with burnt hartshorn, boiled in spring water, drank plentifully is also beneficial in this case. Barley, or chicken broth, a poach'd egg, or any thing else of eafy digeftion, may ferve for diet in the beginning of the disease. But afterwards, we may rise by degrees to stronger liquors, and a more copious and folid diet, lest too rigid an emptiness should cause a relapse, or fome other fymptoms, the effects of inanition. It must, however, be noted here, that the' laudanum alone overcame the dyfentery of the prefent constitution, yet in those years wherein this disease is epidedemic, and prevails more than the rest, it should seem proper to use those evacuations, which I have already fet down in treating of a dyfentery. (k)

An iliac hot medicines in the beginning of a fever.

29. I proceed now to mention another case, where passion from a cure can no more be immediately made by that method which fuits the fever whence it proceeds than in the confirm'd dysentery just specified. Thus for instance, the patient is fometimes feiz'd with a chillness and shivering, and fits of heat and cold succeeding by turns, which certainly manifest an approaching fever, violent gripings come on fuddenly, 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, hath recourse to hot medicines both internals and externals, in order to expel the wind, whence he conjectures the diforder proceeds; 'till at length the pain increases, and being by its long duration 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 difease 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 fymptom requires no further than to order a fingle bleeding in the arm; inafmuch as purgatives, tho repeatwith the greatest frequency, 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 inteftines, and procure a ftool.

30. Here, therefore, I conceive it most proper to How to be bleed first in the arm, and an hour or two afterwards treated. to throw up a ftrong purging glyffer; and I know of none fo strong as the smoke of tobacco, forced up thro' a large bladder into the bowels by an inverted pipe, which may be repeated after a fhort interval, if the former 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.

Take of the pills of two principal ingredients, thirty- Strong purfive grains; fweet mercury, a scruple; balsam of ging pills. 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 dofe in a few hours. but as foon 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, fhould return as foon as the effect of the opiate is worn off, and the cathartic lodge in the body, then laying afide all hopes of opening a paffage this way, we must return to the use of the opiate before described, and repeat it every fourth, or fixth hour, till the bowels be quite free from pain, and their natural motion downwards of courfe 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 feem to have a contrary effect. An in-

stance of which I met with very lately in a gentleman afflicted with a violent iliac passion, which was afterwards fucceeded by aphtha, 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 gargarifm.

A cooling gargari m. Take of verjuice half a pint; syrup of rasp-berries, an ounce, and make a gargarism.

31. But when these passages have recover'd their ordinary natural openness, purgatives may be omitted for fome days, till the diffurbance newly raised in the bowels be entirely quieted, which space of time may be advangeoufly enough allow'd for diluting, cooling, and fmoothing the sharp humours, which being done, if the least figns of a fever still remain, purgatives must be exhibited every other day, as above directed .--- And let this fuffice for the cure of this diforder.

Children, how to be managed in this fever.

32. If a child be feized 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 feems to intermit after purging, give the julap made with the pe-

ruvian bark, above fet down. (1)

33. It is further to be noted, that tho' children are as fubject to this kind of fever, as grown perfons, and confequently ought to be cured by the fame 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 fo often used: the diftempers of children and young persons frequently yielding to the first or second purge. Nevertheless, it should be well confider'd whether the fever which is treated in this manner does certainly belong to this constitution, or is of a different kind, which ought likewife to be attended to with the same exactness in all constitu-Fever from tions of years. For it is commonly known that children are often feized with fevers proceeding from dentition, which are not eafily diftinguish'd from those of another kind. And, for my own part, I have been long diffatisfied with respect to the cure of these fevers, nor could I be perfuaded, till of late years, that any

dentition cured by Spirit of hartshorn. of those who were committed to my care, were recovered fo much by art as by accident, till having been often informed of the fuccess of a medicine not very famous, but rather little esteem'd for being in common use, I likewise order'd it, and sound it succeeded better than any I had ever experienced before. The medicine I speak of is three or four drops of spirit of bartsborn, according to the age of the child, given in a spoonful or two of blak-cherry water, or any proper julap, every four hours;

to a fifth or fixth time. (m)

34. Children are subject to another very trouble- A heetic fome diforder, which differs much from the fevers of in children various conflitutions of years, and from that last-men- infusion of tioned: It is a kind of hectic, which holds them a long rhubarb in time, and they languish with little heat, a loss of appetite, small beer. 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, flic'd thin, to be infufed in a glass vessel well-closed, in a quart of fmall-beer, 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 fame rhubarb, and this being also drank, I add a third quart of liquor to it, after which the rhubarb

(m) The fymptoms accompanying dentition should feem 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 diforder.

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 fame 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 loofness, 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 fwell'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 fweet almonds, and a little faffron and nitre; and thefe 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 prejudicial.

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.

whole quantity be used. (n)

Evacuations not to be continued in the fewer under confideration till the Grantons go quite off.

35. But to return to the fever under confideration, which is that of the prefent constitution: it must be carefully observed in this kind of fever, in the same manner as in the rheumatifm, and feveral other distempers, only curable by evacuations, that if we obstinately perfist in the use of the above-mentioned evacuations, till the fymptoms go quite off, the difeafe will often prove fatal. For it is not uncommon to find fome flight fymptoms remain a-while, even after the diforder 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, ordered to cure the difease, and partly occasioned by the emptiness proceeding from the flender diet used throughout the course of the cure: all which, when they affect fuch fubjects as are much debilitated, and in a manner worn out with distempers give rife to vapours, as in women, and proceed from the fame 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 phyfician ought to forbear the unreafonable use thereof, and wait a-while to fee what time will contribute to this end, which frequently proves the best and most fuccessful physician in conquering these slight symptoms; and I have, indeed, often known them go off

(n) In this diforder it should seem proper to take away blood in a small quantity, and adminster testaceous 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 affistants 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 presserib'd.

in the declention of fuch a difease, without any thing more than an opiate, taken two or three nights running.

36. The method just commended is the best that I The author's have ever tried in curing this fever; and if it fails of method eieffectually removing it, at least brings it to inter- this fever, mit, and then it always yields to the bark. But as or brings it purging, as it is here directed, in order to cure this to intermit. fever, may perhaps feem detrimental to fome perfons, I affert from experience, that nothing cools fo much and fo furely, as purging after bleeding, which should be used first in all cases. For tho' a purge, whilst it operates, may, for the prefent raife a greater commotion in the blood and juices than there was before, and of course increase the fever, yet that mischies will be much over-balanced by the immediately fubfequent benefit. For experience shews, that purging after bleeding, checks a fever fooner and better than any other remedy whatfoever, inalmuch 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 fo contribute to render it more lasting, and likewise, as it makes way for an opiate, which operates with more speed and fafety, than if the morbid humours, which might otherwise lessen its virtue, had not been expelled by purging.

37. Whereas, on the contrary, that method which Sweating consists in carrying off the febrile matter thro' the here less pores of the skin, is not only less certain, but more certain and troublesome and tedious, as prolonging the disease seweral weeks, and brings the patient's life into imminent woid of dandanger; and, put the case he is at length so happy as to ger. escape 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 unfound judgment tie themselves up to follow rules of art, as they are falsly, term'd, despising the contradictory testimony of their fenses, and perplexing the cure by their hurry and apprehention? Kk 2

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prehenfion, they change a difeafe, which of itfelf goes off in a little time and eafily yields, into a lafting and difficult disorder.

The method above recommended best in most fevers.

38. For these reasons, therefore, I hope I may with due confidence affert, that the method of cure above delivered, which confifts 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 unaffifted first digests the morbid matter, and, after it is fufficiently concocted, carries it of gently thro' the pores; which fuccefsful manner of curing fevers by nature, having been often observed by practical physicians, the theorists thence took occasion to make this rule, that all fevers may, and

ought to be cured only by sweating.

Difficulty of curing fevers by (weat.

39. But admitting this conclusion, it is manifest that art, how nearly foever it may feem to imitate nature, cannot always certainly cure fevers by fweat. For (1.) art is unacquainted with the manner of duly preparing the morbific matter for expulsion; and tho' this were no fecret, yet there are no certain figns, indicating its due preparation; whence the fittest time of raifing a sweat must needs likewise be unknown. And fure none but an obstinate person will deny it highly dangerous to excite fweat inconfiderately, before the due concoction of the febrile matter, as the translating the unconcocted matter to the brain must increase the diftemper. Besides, as I have elsewhere observed, the judicious aphorism of Hippocrates, viz. " that concocted and not crude matters are to be evacuated," feems to re--late 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 injured 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, contrariwife, it is much increased thereby,

thereby, and becomes a lafting and inveterate difeafe.

40. (2.) It is further to be observed, that as those fweats which appear spontaneously in the beginning of the fever are entirely fymptomatic, and not at all critical, fo those, likewise, which are forced out at this time by fudorifics, do generally forward the cure no more than the former, which avail nothing to this purpose. (3.) Again, as the proper time of promoting fweat is not known, fo neither can we tell how long we should perfift in this way; for if the sweat be continued beyond the due time, that is, longer than is requifite to carry off all the morbific matter, the wafte of those fluid particles which should serve to dilute and allay the heat of the blood, will be a means of prolonging and encreasing the fever. Hence, therefore, the precariousness of this method appears; whereas, on the contrary, the phyfician hath it in his power to regulate the other method, which confifts in expelling the febrile matter by bleeding and purging, as he shall judge most convenient. (4.) Furthermore, this method deferves the preference for this reason, namely, because it will do no mischief, tho' it should fail of curing; whereas fudorifics are pernicious, unless they complete the cure: for the warmth of the body, when a person hath been kept in bed fome time contrary to his usual custom, not to mention cordials, which are always adminiftered in this method of cure, difturbs the animal œconomy, and causes convulsive motions of the limbs, and other irregular fymptoms, which cannot be described, because they do not come under the history of the difeafe, as is common in feveral fymptoms in all difeafes, but proceed originally from the tumult and diforder fuper-induced, which frequently oppress nature, when the diftemper is treated according to this method: all which are ordinarily ascrib'd to I know not what malignity.

41. The invention of the term, or opinion malignity, The mifta-] has been far more destructive to mankind, than the in- ken notion vention of gun-powder. For, as those fevers are prin- of malignicipally entitled malignant, which are found most in- tal to manflammatory; hence it is phyficians have recourse to kind. certain cordials and alexipharmics, in order to expel the imaginary poison by the pores; for so it must be

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Prov'd from reason. call'd, unless they had rather trifle about words, than propose in earnest what may be understood; and upon the fame foundation they have adapted the warmest regimen and medicines to those diseases which chiefly required the reverse. We have, indeed, an evident proof of this in the cure of the Small-pox, which is one of the most inflammatory diseases, as well as of other fevers; phylicians having, perhaps, been led into this mistake by the petechiæ, purple spots, and the like fymptoms, which in most subjects proceed originally from an inflammation super-induced upon the blood, already over-heated by the fever: because they seldom come out spontaneously, except in the beginning of the plague, or that fort of confluent fmall-pox, attended with the highest inflammation. In this kind, indeed, the purple fpots shew themselves in different parts of the body, intermix'd with the erruptions, at their coming out, and are accompanied at the fame time with a flux of blood from the lungs, or urinary pattages, and a cough, if the fever be fo high as to put the blood into a very tumultuary motion, and cause it to burst the vessels, and empty itself into the cavities of the body. And tho' the purple fpots in this fever proceed not from such a confiderable heat of the blood, as that which occasions fuch bleedings; yet they are produced by the fame inflammation, with this difference only, that it is not fo violent, and when accompanied with fuch a flux of blood (the only fymptom in the fmall-pox which hitherto baffles the art of medicine) eafily yield to a cooling regi-

42. But if it be inferr'd, that there is fome malignity in the case, not only from the purple spots, but also from finding the symptoms of the sever 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 sever; all the appearances being quite irregular. For the animal occonomy being disorder'd, and in a manner destroy'd, the sever is thereby depress'd, which in the true natural

order generally rifes high. I remember to 'have met with a remarkable inftance of this feveral years ago in a young man I then attended; for tho' he feem'd in a manner expiring, yet the outward parts felt fo cool, that I could not perfuade the attendants he had a fever, which could not difengage 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.——And this may suffice, with respect to these particulars.

43. But if the reasons alleg'd be not sufficient to Ana experprove the validity of my sentiments of this matter; rience.

yet, if experience teaches me that this fever does not readily yield to fweating, it is enough for my purpole, fince it is not reasoning, but experience, that shews what fort of fevers will yield to, and ought to be cur'd by fweat, and what kind by other evacuations. And indeed, no judicious person, who is sufficiently acquainted with the nature of men and things would haftily embrace the fentiments of another person, tho of the greatest authority, in matters of meer speculation, not demonstrable by any certain experiment. A man of this character should reflect, that there is so much difference and fubtilty in arguments, that tho' a theory may be proposed by a person which shall appear to be founded upon fuch folid reasonings as to command the affent of all that are prefent; yet, foon after, another person of greater abilities, perhaps, coming to confider 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 difcoverable in nature, and fubflitutes a new and feemingly more probable and artful hypothesis in the room of it, which, notwithstanding, meets the same fate as the former, as foon as fome third person, as much superior in parts to the fecond, 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

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great difficulty of finding this person, and distinguishing him from the rest of mankind, will soon appear to any one, who is not fo 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, posses'd of much more penetration than weak men; fo it is not certainly known, whether the brain, which is the repository of thought, may not be so formed by nature, that mankind cannot fo clearly difcover what is abfolutely true, as what is best adapted to their nature. But we shall fay no more to those physicians, who regulate their practice more by idle speculations, than experience deriv'd from the folid testimony of the fenfes. (0)

The difference stated between the author's, and the opposite methods, shewing which is best.

44. But if it be objected here, that this fever frequently yields to a quite opposite method to that I have laid down; I answer, that the cure of a disease by a method which is attended with fuccess only now and then in a few inftances, differs extremely from that practical method, the efficacy whereof appears both from its recovering greater numbers, and all the practical phenomena happening in the cure. Thus, for instance, abundance of persons have recover'd of the fmall-pox, notwithstanding their having been treated by a hot regimen and heating medicines; and on the contrary, feveral have recovered 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 furest way of judging in this case, I take to be this: if in perfuing the former method, I fhould

(a) Truth and nature being always the fame, to be convinc'd of the vanity of fystems, 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 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 restimony of the senses.

find, that the more I heat the patient, the more I encrease the sever, restlesness, delirium, and other symptoms; and, on the contrary, if it should appear upon being moderately cool'd, that he is so much the calmer and freer from the sever, and other symptoms; and surther, that by keeping the sleshy parts in such a degree of warmth as best suits with the rising and suppuration of the pustules, they grow larger and suller, than keeping him over-hot. Having, I say, thus stated both cases, I conceive it cannot be doubted which me-

thod 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 frensy, purple-spots, petechiæ, and the like symptoms; but surther, that the fever by this procedure is attended with all forts of irregular and violent symptoms: and on the other hand, if 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 thebest; tho both the subjects recover by such different treatment. But if more persons recover by this method than the other, the dispute is so much the more easily determined; which, however, I shall decline affirming, 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 fuspect it to be some subtile and spirituous begining of that depuratory fever, now abolish'd, which the dreadful plague succeeded. In reality, there are some phenomena which rather incline me to embrace this opinion, infomuch as not only intermittent fevers, efpecially quartans, still continue in a few places; but likewife, fome of those continued fevers do sometimes degenerate into intermittents, especially during this autumn; not to mention now the fits of this fever towards night, which a little refemble the fits of intermittents: and what further confirms me in this fentiment is, that persons in this disorder are much fubject to vomiting. I do not, however, pretend to 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

#### Of the putrid Fever

had prevail'd, I cannot fay, my time having been hitherto fufficiently taken up in observing the gene-

ral symptoms of fevers, and not having yet found that fevers might be distinguish'd with regard to the

various conftitutions of different years, or the dif-

" ferent feafons of the fame year". (p)

(p) See pag. 14. par. 4.

#### A DISSERTATION

Concerning the putrid, or second fever, happening in the small-pox.

I have long labour'd under, may possibly deprive me of the opportunity of publishing some recent observations I have made, (tho' late in my life) concerning the second sever happening in the small-pox, it is hop'd 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 constuent smallpox differ.

2. I have long fince flewn in another place, wherein the great difference confifts between the diffinct and confluent small-pox; namely, that the former fort is fo void of danger, as to fland in need of very little affiftance from medicine, the patient recovering fpontaneously by the help of nature, unless he happens to promote fweat 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 difease will be expell'd by this means thro' the pores of the fkin, and, therefore, diligently promotes the fweat by cordials and a hot regimen, as fhould feem proper; and he perfues this method the more willingly, because it appear'd to relieve him in the beginning, and agrees better likewife with the ill-grounded opinion of the attendants. But those particles being at length carried off by fweat, which should have contributed to raise the puffules, and swell the face, the consequence is, that the face, which on the eighth day

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ought to fwell, and be inflamed in the intermediate fpaces, on the contrary appears funk, and those spaces white, whilst the pustules yet look red, and continue elevated even after the death of the patient. The · fweat, which flow'd freely to this day, ceafes spontaneoutly of a fudden, and cannot be raifed again by the warmest cordials; and in the mean time the patient is feiz'd 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 recovered, and not been at all endangered, if he had trufted 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 fo much, and does not in the least endanger life, unless there happens a flux of blood from the lungs, or urinary passages at this juncture, yet afterwards, in the declention of the difease, on those days which I formerly observed were most dangerous, the patient is brought to fuch an extremity on a fudden, 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, dangerous that is, in the mildest, but most common fort of the days. confluent small-pox, the fourteenth in the middle kind. and the feventeenth in the worst species, which we frequently meet with; tho, it fometimes, but feldom happens, that the patient furvives to the twenty-first day; the eruptions continuing fo dry and hard to this time, and fo deeply fix'd in the flesh, especially in the face, asby no art to be brought to fall off. (b) But the patient feems generally to be first endanger'd 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 feventeenth are still to be apprehended; a very vehement fit of reftlesness comes on also every day towards the evening, during

The most

<sup>(</sup>n) See pag. 102. par. 20. (b) See pag. 334. par. 5.

#### Of the putrid Fever

the intermediate space of time, and there is great, difficulty in faving the patient.

Whence the greatest danger in the confluent smallpost.

5. I have likewise shewn, that the greater or less impending danger in this fort of small-pox, proceeds from hence; namely, that the distinct small-pox is a accompanied with fewer phlegmons, or tumors with inflammation, of which kind all puftules 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 rifing too high from this quarter, nature being able to preserve the blood from the taint communicated thereto by fo fmall 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 infinuate themselves into the mass from the furface of the whole body, now in a manner univerfally 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 are bad.

6. Since then the fafety of the patient depends fo and cordials 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 phyfician ought not to force out the variolous matter in a violent manner, at the beginning of the difeafe, by a hot regimen and cordials, whence too greet an affimilation of the morbific matter lodg'd in the blood is occafion'd, and the whole fubstance of the body in a manner chang'd into supplies for the disease; but should rather use all his endeavours to suppress so e-The method normous and fubtile an inflammation. To answer this purpose, bleeding in the arm is to be first perform'd, 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 ftrong liquors, or (3.) violent pain attacking some part of the

body.

of cure.

body, or (4.) lastly, if the distemper be joined with vehement vomiting: and after bleeding a vomit should be given as being conducive to the fame end. But as nothing heats the patient fo much, and confequently promotes the too copious assimilation of the ways in bed variolous matter to that degree as lying always in bed, very preju-I enjoin him to fit up a-days till the fixth day from the dicial. beginning of the disease, and the fourth from the eruption, when all the puffules appear. (d) After this time I keep him in bed till the difease goes off, but neither allow him to wear more, or warmer cloths, or fuffer 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 fuch other cooling liquors as he likes beft.

7. But notwithstanding the most cooling regimen be Why anopiused, the patient will often be seiz'd with heats, a de- ate is to be lirium and restlesness, for which reason I order an o- given every piate to be taken every night earlier than ordinary; night. this diftemper being generally attended with a kind of fit, 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 fuppura-

tion afterwards. (e)

8. It is nevertheless to be regretted, inasmuch as the What iste youthful part of mankind chiefly perish by this disease, be done that the patient, who before was in no great danger, is when the often feiz'd on the eleventh day, or fome one of thefe fever comes days which I have reckoned the most dangerous in the eleventh different forts of the confluent small-pox, with a high day. fever, very difficult respiration, and great restlesness, which, thefe and all other helps hitherto discovered by medicine not availing, fuddenly put an end to his life. to the aftonishment of his friends, who, till this fatal period, had hopes of his recovery. In this cafe the physician, having done all he could to prevent it, will exert himself to conquer this sudden violent turn of the disease; in order to which let it be well confidered, that this adventitious fever which happens on the

(d) See pag. 338. par. 12. pag. 343. par. 22. pag. 348. par. 28. pag. 35 1. par. 31. (e) See pag. 353. par. 35, & feq.

bundant information and fatisfaction.

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 fometimes oftner, as there is occasion. For it must be carefully noted, that the fymptoms in fome perfons are foenormoufly violent, that an opiate given even in a very large quantity cannot overcome, nor even check them in lefs than twelve hours; in which cafe it is indifpenfibly necessary to repeat the opiate in the same dose every fix or eight hours.

11. But as it frequently happens in the declenfion Coffiveness of the diftemper, partly from the nature thereof, and at this time partly from the great virtue of the opiate, which the died by a circumstances manifestly required, that the patient be- gentle purge comes fo very costive, as to be in danger of suffocation, and that the fever likewife rifes so high as to leave little hopes of recovery, we must suit the remedy to the prefent exigency. Accordingly, this being the case, less danger will ensue from taking a gentle purge, than from the fever, much increas'd by the retention of the faces. I have fuccesfully order'd here an ounce and half of lenitive electuary to be diffolv'd in four ounces of fome 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 difease, 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, in case great restlesness, or fickness threaten danger, lest the patient for want of this affiftance should perish, whilst the operation of the medicine is waited for. Nor will fo mild May be gia purge occasion the least mischief, tho' it should not wen with work at all: fo that if it does not answer the expec- safety. ted end the first day, repeat it the next, and the latter dose seconding the former, it will seldom fail the phyfician. But if it should seem to have procured a sufficient discharge for the present, and the patient grow better thereupon, the fecond draught may be deferr'd to another time. (g)

(g) Dr Huxam affures us, that nothing hath fucceeded better with him for removing this fever, than repeated purgatives, with

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Bleeding may be repeated althere is occa sion.

12. in this manner bleeding and purging may be reandpurging peated by intervals, as the fever and reftlefness feem to require, till the patient is out of danger. But, with ternately, as respect to purging, that the mentioning it may not prove much more detrimental than beneficial, let it be carefully remembred, 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 fecond fever. (b)

Spitting of blood and -bloody-urine, how to be flopp'd.

May be ei

13. But in order to complete the method of practice in this difease 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 fmall-pox. Both these hemorrhages, as I observed before, come on at the beginning of the difeafe, either before the puftules appear, or whilft they only flew themfelves in some few places, and

the addition of calomel occasionally, and interposing opiates between whiles. I have not only experienced this method, fays he, in my own children, but in feveral 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 intention of cure, according to Dr Hillary, are; (1.) to prevent the production and increase of these acrid cacochymical humours, as much as possible. (2.) To hinder the return of the purulent variolous matter from the puftules 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 cooling glyfter in the first, 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 bank, which he disapproves, thinks that a fuitable purge or two, and a liberal use of Elixir vitrioli Mynsichti, with gentle cardiac bitters, may answer the end much better; with a good nutritious diet. See his effay on the small pox, p. 105. & feq.

(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 fometimes bleeding may be omitted previously there-

to, as unnecessary.

in the rest lie thick under the skin, and are of that fort, which would prove most confluent, if one of these fymptoms did not cause the distemper to terminate fatally; whilst purple-spots appear in the mean time in fome parts of the body, and threaten death. But tho' the purple-fpots may be removed by duly cooling the blood, yet both bloody-uring, and a violent flux of blood from the lungs, ordinarily forethew certain death: nevertheless this dreadful difficulty may likewise be overcome, and life preferved. For as both thefe fymptoms proceed from the vehement inflammation, and of course the exceeding thinness, or dissolv'd state of the blood, fuch medicines as cool and likewise thicken the blood, by their binding and incraftating quality, admirably check these bleedings. For this reason, after bleeding once plentifully, give an opiate.

Take of distill'd water of red poppies, two ounces; li- Acomposing quid laudanum, fourteen drops; distill'd vinegar, draught. 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.

Take of the troches of Lemnian earth, Armenian bole, An aftrine each a dram; feal'd earth, blood-stone, dragon's gent pomblood, 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.

Take of the best distill'd waters of plantain, and oak- Astyptie buds, each three ounces; cinnamon water without julap. spirit, two ounces; syrup of dried roses, an ounce; spirit of vitriol, enough to give it a moderate tartness; mix the whole for a julap.

In the mean time the opiate above prescrib'd must be given every evening: emulfions also made of the four greater cold feeds, and white poppy feeds, are very beneficial. (i) But after the bleeding is stopp'd, the distemper

(i) Dr Hillary, in these hemorrhages, advises bleeding to such a quantity, as the age and strength of the patient will permit, is to be treated in all other respects throughout the course of the cure, according to the method above de-

livered in our discourse on the small-pox. (k)

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 (1) communicated. And the fyrup of poppies or diacodium, I would have made in the following manner.

Syrup of poppies.

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. (m)

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 in their stead a grain and half, or two grains of solid London laudanum, dissolv'd in some proper distill'd water, by which means I avoid making any mistake, and hurting my patient.

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and the violence of the symptoms require; and that it be repeated, if the pulse rise, as it often does, after the first bleeding. And as we 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 through which the blood is evacuated; if it passes off by urine or stool, besides the relief we may expect from bleeding, warm refreshing somentations apply'd to the extremities, will cherist the heat, which in this case is mostly too languid, and by relaxing the vessels, diminish the resistance, and sollicit a larger quantity of shuds to these parts. See his essay on the small pon, p. 133, 134, & 136.

pon, p. 133, 134, & 136. (k) See sect. iii. chap. ii. p. 95.

(1) See p. 151. par. 14.

(m) Dr Hillary takes notice that fyr. de mecon. is the most suitable anodyne in this disease, as it is the softest, and rarefies the least, of any opiate we know of. See his Esay on the small-pox, p. 114.

## A DISSERTATION

Concerning of bloody-urine from a stone in the kidneys.

HO' it may feem to argue indifcretion to pub- The author's lish an observation which I have experienced reason for in my felf alone, yet it is hop'd no equitable publishing person will be displeased with me, who have suffer'd fo long and fo much from bloody-urine, from a stone in the kidneys, for being moved to compassionate those who labour under the fame difeafe, and to communicate those remedies which have given me relief, tho' they may perhaps feem 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, fo that I was constrained for two months in the summer season to lie always in, or upon a foft bed, whence towards the close of the fit I began to feel a dull heavy pain, especially in the left kidney, and fometimes, tho' very feldom, in the right. And after the gout went off, the pain in the kidneys remain'd, and attack'd me at intervals, which, tho' it was not very fharp, made me fear the stone; for I had hitherto escap'd those fits, which are attended with fevere pain along the ureters, and violent vomiting. But tho' these figns of the stone Fears he in the kidney appear'd not hitherto, yet I had reason hath a to believe I had a large stone in one of them, which large stone being too big to pass into the ureters, occasioned the in one kidabove-mentioned fymptoms. And feveral years afterwards I found I was not miftaken; for having walk'd confiderably, and for a long time in the winter feafon, in 1676, foon after the breaking of a fevere frost, I made a bloody-urine directly, and conftantly did fo whenever I walk'd much, or was carried in a coach over the stones, tho' the horses went slowly; but this fymptom did not feize me when I travell'd in a coach in unpav'd roads, how long a journey foever I made.

Voids bloody wrine.

Uses several remedies ineffectually to relieve himself.

3. The urine I voided on these occasions, tho' it look'd very bad at the the time of making, fo as to resemble 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 forts of cooling incraffating remedies, along with a proper regimen, and carefully forbore all fharp, pungent, and attenuating liquors. But having received 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 fuspecting it was too large to be expell'd thereby; I at length loft all hopes of relieving myfelf by this way, especially having found that some of my acquaintance hastened their death by fruitlesly endeavouring to cure this complaint by fuch 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.

Induc'd to try manna.

Mis manner to of taking it.

Greatly relieved by it.

4. But happening afterwards to recollect the great commendations which fome perfons have bestow'd on the feed of the ash-tree, for its stone-dissolving, or stone-breaking virtue, I imagined, that if the feed had fo much virtue, the manna thereof might probably have more. For the manna which comes to us, according to Mr Ray, and other earlier writers, is neither an aerial honey, nor a certain 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 fatisfied, whilst he was in his travels in Italy, by a physician, who frequently gathered manna from the branches and leaves of these trees, first closely covered with linnen. Accordingly, to make the trial, I diffolved two ounces and half of manna in a quart of whey, and drank it, and took a little lemonjuice between whiles, as well to make it operate more speedily, it being ordinarily a flow purgative, as to render it more agreeable to the stomach. It is hard to express the ease I perceiv'd in the region of the kidneys from this medicine; for tho' the pain was not continual before, yet I felt a troublesome weight. Encourag'd by this good fuccefs, I took this purgative

every

every week on a fet day, for fome months, and found a manifest amendment after every purge, till at length I could bear more shaking in a coach, and indeed, continued free from this fymptom till last spring, Seiz'd with at the beginning of which it return'd, occasioned by the disorder my having had the gout feverely all the preceding again. winter, and my inability to motion, whence I was constrained to abate of my ordinary exercise. And now I doubted whether I should have recourse to purging again, as finding that the mildest purge certainly occasion'd 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 I recollected, that I might fafely refume my former method of taking manna once a week, course to provided I took an opiate in the evening, after the o- mama aperation, to quiet the tumult rais'd by the purgative. new, with Accordingly, in the morning I drank two ounces and night. half of manna diffolv'd in a quart of whey, and at night took fixteen drops of liquid laudanum in smallbeer; and repeated the manna and laudanum in this manner twice a week, for three weeks. But afterwards I took the manna only once a week, because it discharged such plenty of foul humours, as to leave little fear of the gout. And reason intimating, that Quits the if manna was poffes'd of any stone-diffolving, or stone- opiate. breaking virtue, its efficacy on which I depended, must needs be leffened, in some measure, by so powerful an aftringent as laudanum is, I thought it best to omit taking the opiate, as I only purged once a week.

5. I have continued this method for fome months, Repeated always purging on the fame day of the week, and brought on would not upon any account be perfuaded to break it. fome symp-But tho' the pain of my back abated, as formerly, up- toms of the on taking the first purge, yet soon after repeated pur- gourging brought on fome fymptoms of the gout, and and fometimes affected the limbs, and fometimes the bowels: but laudanum effectually checkt 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, in the end, it answered my expecta- But cured tion, having never had this symptom since my first his difor-

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Hath re-

publi-

publication of this treatife, and therefore I left off the

manna entirely.

The author retracts a former opi-nion of his concerning purging.

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6. With respect to purging, therefore, in case of bloody urine, and provided only manna be used according to the method above deliver'd, I must retract an affertion I formerly publish'd 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. For I did not then recollect that the fit which I fear'd 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. (a)

7. To

(a) See p. 429. par. 22. 6 feq. I have known, fays 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, intro-duced into the habit by them, with cordial and warm medicines, mix'd with opiates. This method they continued till the pain was gone, and the tumour subfided. And to prevent its return, carry off all the remaining goutish humours, and to strengthen the habit, they persu'd gentle stomach purges, aromatick diluters, and warm alteratives, till a strong constitution was obtain'd: 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, was, that by fuch a method, inflammatory rheumatisms (of the nature of which the gout was) erysipela's, scirrhous, and even hot tumours, were fafely, quickly and certainly (without relapses or danger) carry'd 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 SEED ! intirely the gouty remains, to sweeten the sharp humours, and to strengthen the relax'd solids. But this I mention only to illustrate and confirm my advice, of gentle fromach 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 fubtile (tho' an humour certainly it must be) to be carried off by any gross evacuation whatsoever. And many fatal experiences have confirmed the danger of tampering after such a manner (whatever authority it may have to defend it, or specious reasons to enforce it) to fuffer any cautious person to venture upon it. See his effay on the gout, p. 34. 0 feq.

7. To these observations I will add a few particulars, His way of relating to the regimen and diet, which should feem living. proper in both these distempers; for I would not omit mentioning any thing that may be ferviceable to persons in my condition. In the morning, after I rife, 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 digeftion: 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 bufiness permits, take a turn into the country 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 my felf to fleep, in order to dilute and cool the hot and acrid humours lodg'd in the kidneys, which breed the stone. I always prefer fmall-beer brew'd with hops, hat which has none, because, tho' unhopp'd small-beer is fmoother and fofter, and fo better fuited to bring away the stone from the kidneys, yet that which is brewed with hops, on account of the flypticity it receives from the hops, 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 sea- Condemns fon; this being one of the best helps for promoting Juting " digestion, and preserving the proper order of nature : late. whereas, on the contrary, fitting up late weakens all the digestive faculties in aged persons afflicted with any chronic difeafe, and injures their vital principle to a degree, not to be eafily 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 way, if I am abroad a confiderable time; by which means I fecure myfelf pretty well from bloody-urine.

Attack'd [ometimes with the gout inmardly.

8. But with respect to the gout, I will add one obfervation, which is this: of late years, the gouty matter fometimes strikes in, occasion'd by fome error in the non-naturals, the figns of which are great fickness, with vomiting, and a slight pain of the belly, whilst the limbs at the same time are suddenly freed from pain, and better dispos'd to motion than ordina-In this case I drink a gallon of posset-drink, or fmall-beer, and, after having discharged it upwards, take a small draught of canary, with eighteen drops of liquid laudanum in it, and compose my self to sleep: and by this method I have feveral times faved my felf

His method ry. of relieving himself.

> from imminent death. (b) 9. Tho' it may perhaps feem abfurd, especially in a person whose life or death is of 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.

Apologizes for talking fo much of himfelf.

> 10. Lastly, we are to take notice of the great danger which fome perfons who have the gout and stone run, by unadvifedly taking manna diffolv'd in the purging mineral waters; for the' being taken this way, it works quicker, and fits eafier on the stomach,

Danger of taking manna diffolv'd in the purging waters in the gout 1 and Stone.

(b) Dr Cheyne tells us, that flight touches of the gout in the ftomach, which feems to have been our author's cale, will yield to any little stomach purge; but adds, that it is more obstinate towards the decline of life; when it fettles in a constant pain, nauseating and kecking in the stomach. Vomits are reckoned dangerous in the gour, lest they should derive the humour on the stomach: but there can be no room for fuch a suspicion here, wherefore, upon the first seizure of the stomach, a vomit is instantly to be administered, and repeated, according to the occasion of the case : after that tineture of hiera piera, with compound spirit of lavender, and a few drops of tincture of makeweed, and tincture of diambra, with a hot finapifm, or blifter on the ancles; and, last of all, the highest cordials, and most generous wines may be freely induiged, without fear of inflammation. Among the cordials, I would recommend the Electuarium de ovo, as containing camphir (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 feldom does after such a method taken in time) nothing but a long course of the Bath waters, with feel, bitters, and gentle from the purges, a regular diet, and proper exercise, can effectually cure it. See his effay on the gost, p. 76, 77. See pag. 457. the note (t).

Opiates are to be used with great coution, and very sparingly,

for fear of weakening the inward parts, and fixing the pain,

which they are apt to do, if indulg'd too freely.

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 occasion a fit, which continues, not without endangering the life of the patient, till the stone gets back again into the pelvis. Steel waters, likewise are unsafe, unless it be certainly known beforehand, that the stone is fmall enough either to flip, or force its way thro' 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 confists in a very tharp pain in one of the kidneys, extending thro' the whole duct of the ureters, and accompanied with violent vomiting) he may be affured that the pelvis, instead of having a large stone in it, rather contains a number of small stones, one of which will fall occafionally 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 Steel-wathe increase of small-stones, or to expel them from the mended in kidneys, than drinking fteel-waters plentifully every these diseaiummer. (c)

II. But

(c) Mrs Stephens's medicines have justly deserved so superior and general a character for these purposes, from the numerous successful trials which have been made of them, most of which have been attefted by perfons of great judgment, and undeniable veracity, that I cannot help recommending them warmly to those who are unhappily afflicted with the stone, and at the fame time declaring for their better encouragement, that I am thoroughly fatisfied of their excellency and utefulness in this painful diffemper, not a few instances of their good effects having fallen under my own observation. But for fuller information the reader is defired to confult the following pamphlets lately publish'd, and we doubt not he will be abundantly convinced that we have advanced nothing more concerning these medicines than is strictly true, and become a promoter of so very useful and valuable a discovery. See A View of the present evidence for and against Mrs Stephens's medicines, as a solvent for the stone. By Dr Hartley. Printed for S. Harding in St Martin's Lane, 1739. — An account of some experiments and observations on Mrs Stephens's medicines for disjoiving the stone. By Stephen Hales, D. D. F. R. S. Printed for T. Woodward in Fleet-street. ——An account of the remedy for the stone &c. extracted from the examinations of it given into the royal academy at Paris, by Mess. Morand and Geoffroy. By Richard Gem, of the university of Cambridge. Printed for J. Roberts in Warwick-lane- 1741.— De lithontriptico a Jo-anna Stephens nuper invento differtatio epifiolaris. Antiore Davide HarrA fit of the

11. But as perfons may often be feiz'd with a fit of flone, how to the stone, when these waters are either not procurable, or at an improper feafon for drinking them, they are to be treated according to the following short and plain method. The patient being fanguine and not aged, take ten ounces of blood away from the arm of the pain'd fide, then let a gallon of poffet-drink, in which two ounces of the roots of marsh-mallows have been boil'd, be drank with the utmost expedition, and the following glyster injected.

An emollient glyster.

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 marshmallows, each two ounces: mix the whole for a

When the patient has thrown up the poffet-drink, and the glyfter done working, give a fufficiently large dose of liquid laudanum, for instance, twenty five drops, or fifteen or fixteen grains of MATTHEW's pill. But bleeding is not to be used in aged persons, worn out by fome inveterate chronic difease, and antient women, fubject to the vapours, especially if they void black gravelly urine at the beginning of the fit: neverthelefs, in other respects, this method must be closely follow'd.

12. But

Hartley. A. M. & R. S. S. Lugduni Batavorum. apud Verbeek

It must be observ'd, 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 diffoly'd in them, drank freely; and opiates, in case of great weakness and violent pain, and an unsuccessful trial of other things.

If these medicines were taken for a sufficient time in the gour, they might probably lessen the cause of the fits, and perhaps enzirely remove the distemper: and being so safe, as rather mending than impairing the general health in most persons, it were worth while to make the trial.

for a Referr is Warnish had a trat - it intentration of a

12. But to return to the stone, supposing it a large Steel-waone, which is our present subject: if the patient hath ters perninever had a fit, on account of the stone's being too of a large large to quit the pelvis; fteel waters will not only do ftone, and no service, but cannot be used without immediate dan- in the gout. ger, for the reasons above-mentioned. Nor do mineral waters fucceed better in gouty persons, if they be advanced in years, as fuch mostly are, and withal of a weak and phlegmatic constitution; the strength of nature being fometimes impair'd to that degree in fuch fubjects, as to give great reason to apprehend the total loss thereof from such a quantity of water. But whether the ill confequences, happening to perfons 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 diftemper, 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.

683 All to return to the fluge, funpoing it a later Steelman one, which is our prefere religion; if the patient and the remaining never had a fit, on account of the Rone's being 100 of a large large to quit the foldie: theel waters will not only do flone and nothering, but cannot be used without immediate dan- in the gast. ger. for the realons above-mentioned. Nor do mineasl waters forceed better in youty perfore, if they be advanced in years, as fuch molily are, and within of a week and phleomatic conditation; the french of nature being fometimes impain'd to that degree in fuchfubjects, as to give great reafon to apprehend the rotal los thereof from fach a quantity of water, a But wheconfiguration, proceed from this, or fome, other coole, I am thoroughly persuaded that abundance of persons, who have been extremely debilitated, and in a manner worn out by this diffemper, have been definoy'd by their waters. 19: And this is in a manner all I have differented concerning the cure of diferies to the prefent day, September the 20th, 1686. 

# Processus Integri:

O R,

Complete Methods

OF

# CURING most DISEASES.

To which are added,

An accurate Description of their several SYMPTOMS,

Many good OBSERVATIONS,

AND

A short TREATISE of a CONSUMPTION.

Processus Integri:

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Complete Methods

70

# CURING most DISEASES.

To which are added,

An accurate Description of their feveral SYMPTOMS,

Many good OBSERVATIONS,

CHA

A most TREATISE of a Consumerion.

# PREFACE.

REFACE

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 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 is univerfally held in high esteem; whose rules, tho, they are deeply imprinted in my mind, for fear, thro' Some accident, they should slip my weak memory, both to my own and the detriment of the deceas'd, I fent to the press, and caus'd about twenty copies of them to be printed to oblige my friends. How this piece came to be publish'd amongst 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, as containing no superficial reasonings, or groundless hypotheses; so that it describes diseases in a familiar and accurate manner, and exhibits the best methods of cure; the sole scope of the work being to shew what nature is able to perform and bear. And to fay the truth, provided a person know 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 sure, 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 amply of the periodic return of intermittents; whilst the sever in the mean time plainly discovers itself even to the attendants on the sick, by the restlesses, thirst, heat, quick pulse, reachings, and other symptoms. Hence I have often wonder'd, why physicians of great judgment and full practice, sollicitously endeavour to come at the immediate and proximate causes of disorders, and bring them from that obscurity which nature has involv'd them in, unconscious in the mean

#### PREFACE.

time of their inability to account for some obvious appearances; as, for instance, whence proceeds the greenness of grass, the whiteness of snow. It were better to personate the physician than the philosopher (for who would have Cartesius for his physician?) so as duly and clearly to enumerate the least phenomena, and candidly and faithfully to deliver the most effectual remedies, for the cure of every particular disease. By this means the art of medicine, being no longer confined in too narrow limits, will eminently promote the health of mankind, and cause

its professor 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 was always industriously sollicitous in searching after nature's method of curing difeafes, that he might give his affiftance. and alleviate the miseries of mankind; and hence he improv'd practice from experience, with a number of wellgrounded observations : but, to the misfortune of the confumptive, whilft he perfued these studies without intermission, the debilitated spirits for sook their ordinary posts, and the gout, which he had been afflicted with several years. and 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 one disease, for to this succeeded 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 disforder to take its course, being neither desirous of life nor death, it carried him off. But not to deprive the consumptive of help, we have publish'd such fragments, which every where discover their author, and may be serviceable in the first stage of a consumption; that from this sketch it may appear, how accurate and complete a treatife of consumptions we might have expected from him, had providence permitted him to live to finish it.

How skilful he was in curing fevers, the small-pox, the meastes, and all other acute and chronic diseases, the following sheets will shew. The properest regimen and diet are every where directed, only a few necessary remedies are prescribed, and such as are neither invented to enrich the appothecary, nor compounded out of vain oftentation. He allow'd his thirsty patients to quench their thirst, as he did his, by drinking small beer freely at pleasure, which wonderfully refresh'd and cool'd them; and did not cruelly

Stop

# PREFACE.

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 cloths on them, or giving them remedies to carry off the erude and yet unconcocted matter by the pores, which being by this means put in motion, flies to the brain, and occasions a phrenfy, or coma, or from the extravasation of the blood, cover the breast with purple spots, or what are termed miliary eruptions. Can the history of the small-pox be written in a more masterly manner than he has done it? He marks the day of the eruption in both forts, and exactly describes the nature of the pustules : he tells us when the salivation begins, and how long it lasts; in what manner the swelling of the face and hands appears, and plainly intimates what is to be expected every day. He was the first who advised the use of opiates in this distemper, with what advantage, is best known to physicians, and who justly condemn'd the practice of giving cordials before the eruption, which often occasion'd 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, desiring him to overloak whatever errors he may meet with in this performance. min all taget en for a inich a of sobich ter the patient

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# The Prescriptions most frequently used by the AUTHOR.

The common purging potion.

TAKE of tomarinds, half an ounce; senna, 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 a water of holy thistle, two ounces; the infusion of the saffron of metals, an ounce; syrup of cloves, half an ounce; mix them together for a vomit, to be taken at four in the afternoom, drinking a large draught of posset-drink after every puke.

#### The pearl julap.

Take of the distill'd waters of black cherries and milk, each three ounces; small cinnamon water, an ounce; prepar'd pearls a dram and half; fine sugar, enough to sweeten it; and rose water, half a dram: mix all together for a julap; of which let the patient take four or sive spoonfuls when he is faint.

#### The cordial julap.

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 julap, a few spoonfuls of which are to be taken often.

#### The dietetic decoction.

Take of the roots of farfaparilla, fix ounces; fafafras and china, each two ounces; liquorice-root, an ounce; boil them together in two gallons of spring-avater 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

## Prescriptions most used by the Author.

therein half an ounce of aniseeds, 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 drunk for thirty days for common drink.

The opening and antiscorbutic apozem.

Take of the roots of grass, succory, fennel, and sparagus, of each an ounce; currants and raisins stoned, each two ounces; the leaves of liverwort, hart'stongue, 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 springwater to a quart, and towards the end of the operation add half a pint of rhenish wine; strain off the decoction, in which, whilft hot, infuse in a close vessel for two hours an handful of the leaves of garden scurvy-grass, then having strained 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 siveet almonds, an ounce; syrup of red poppies, of pursain, and of jujebs, and the healing loboch, each half an ounce; white sugar a sufficient quantity; and make thereof a loboch or linetus, 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; beat 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; oli-M m 2 banum,

## Prescriptions most used by the Author.

banum, mastich and amber, in fine powder, each a dram; oil of nutmegs by expression: mix them together for a loboch; 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 the polypody of the oak, a pound; monk's rhubarb, the leaves of senna, and stoned raisins, each half a pound; rhubarb, slic'd, and horse-raddish root, each three ounces; the leaves of garden scurvy-grass and sage, each four handfuls; four oranges slic'd; insuse them together in five or six gallons of ale, whilst it works; and when it is sit to drink, let it be used for common drink for a fortnight, or three weeks, drinking a draught of it every morning especially.

#### The hyfteric 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 senna, four ounces; syrup of buckthorn, an ounce; the electuary of the juice of roses, two drams: mix them together for a draught.

# Processus Integri:

O R,

# Complete Methods of curing most DISEASES.

Of that disorder which is called the hysteric passion in women, and the hypochondriac disease in men.

HEN 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 give up all hopes of recovery, and prefage the worst evils to themselves. Whatever part of the Body the distemper attacks, and it affects feveral, it foon produces the fymptoms peculiar thereto. Thus, when it feizes the head immediately after a difficult delivery, it occafions an apoplexy, which terminates in a palfy of one fide. Sometimes it causes convulsions, much like an epilepfy, and appearing in this manner it is commonly term'd the strangulation of the womb, which is accompanied with a rifing of the vifcera and pracordia into the throat. Sometimes the patient is feiz'd with the clavis histericus, 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 cholic, the iliac passion, the stone, and a suppression of urine, and sometimes causes enormous vomitings and a looseness. Outwardly, in the sleshy parts it sometimes occasions pains, and sometimes a swelling, which in the legs resembles a dropfy. 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 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.

M m 3

3. Let

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 sive 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 julap, of which let four or sive 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 a bolus is more defirable,

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 insusion after it.

Take of the roots of angelica, elecampane and masterwort, 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 strain'd off as it is wanted.

6. In weakly conflitutions fleel may be exhibited in powder, according to the following form.

Take of iron-filings, finely powder'd, an ounce; compound powder of wake-robin, fix drams; the feeds of coriander, anife, and fweet fennel, each half an ounce; cinnamon, and red coral prepar'd, each three drams; nutmeg, two drams; make them into a fine powder, to which add fine fugar, 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 fix spoonfuls of the following julap, 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 julap.

Or,

Take of Rhenish wine, in which wormwood has been infused, half a pint; compound gentian water, two ounces; surup of clove-july flowers, an ounce; mix them for a julap.

Take of fine myrrh, galbanum and fetid asa, each a dram; castor, balf a dram: balsam of Peru, enough to make them into a mass, each dram whereof is to be made into twelve pills, 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.

Complete methods of curing most diseases.

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 by-steric julap above directed.

Sixteen or eighteen drops of spirit of hartshorn, given often in any proper vehicle, do great service.

8. If the disease yields not to this process, let the following pills be used.

Take of the troches of myrrh, reduced to powder, a scruple; balfam 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 bysteric sulap, with twelve drops of spirit of hartsborn therein.

The antiscorbutic electuary, and the distill'd water defcrib'd above, in treating the rheumatism \*, are beneficial in these disorders; and so is the strengthening electuary, with the addition of an ounce of the conferve of garden scurvy-grass, and six drams of the compound powder of wake-robin, drinking some of the above-mentioned 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 these, let them be left off till it vanishes. (2.) They must be continued six weeks at least, or rather two months. (3.) A little candied ginger, or some carraway comfits, should be taken between whiles to warm the stomach. (4.) Three of the hysteric pills, with sour or sive spoonfuls of the hysteric julap may also be taken every evening during the first ten nights.

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# Complete methods of curing most diseases.

days running, and used by the way of bath the third; continuing this method fix weeks, or two months.

12. If the steel overheats 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 fymptoms be moderate, it will be fufficient to bleed first, and afterwards purge three or four times, and then administer the hysteric pills morn-

ing and night for ten days.

16. In case of intolerable pain, violent vomiting and purging, laudanum must be exhibited, and afterwards the fpirits 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 cleanfe 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 fafety, fuch a quantity of laudanum must immediately be given, as may be fufficient to conquer this fymptom, repeating it after every vomiting, in a folid 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 fymptom, only intermitting fuch 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 upon even the gentlest glyster.

18. The frequent and long continued use of Venice treacle is very ferviceable in this and many other difeafes proceeding from a want of heat and concoction.

19. A few spoonfuls of an insusion made with the roots of gentian and angelica, the leaves of wormwood, and centory, orange-peel and other ftrengthening ingredients, in canary, taken thrice a-day, does great fervice, provided the patient be not of a thin and bilious conftitution.

20. The bark is an excellent remedy, especially in hysteric spasms, a scruple of it being taken morning

and night for fome weeks.

21. In thin and bilious conftitutions 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 ftomach, and affording too little nourishment to keep up the strength.

22. But nothing does so effectually strengthen the blood, and raife the spirits, as riding much on horseback almost every day for a considerable time; and

riding in a coach is no contempible remedy.

#### Of the depuratory or cleansing fever for the years, 1661, 62, 63, 64.

1. IF the patient be young, take away fome blood from the arm, and the fame day, a few hours afterwards, or the following day, two hours after a light dinner, give a vomit of the infusion of crocus metallorum, having three quarts or a gallon of poffet-drink in readiness to take a draught off immediately after every motion upwards and downwards: and the operation being over, give the following, or a like opiate.

## Complete methods of curing most diseases.

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-slowers, two drams; mix them for a draught.

It is not fafe to give emetics made with the infusion of crocus metallorum, 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 fuffer the patient to be coflive, that the febrile matter may the fooner come to concoction; for which purpose mild cordials administered during the last days, are very beneficial.

Take of Gascoign's powder, fourteen grains; the electuary of the egg, half a scruple; syrup of clovejuly-flowers, enough to make them into a bolus, to be taken every eighth hour, with five or six spoonfuls of the following julap.

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 julap.

4. If this method be carefully followed, it will generally be found proper, from the feparation of the urine, and the manifest abatement of all the symptoms, to give the common purging draught towards the fifteenth day.

5. It fometimes happens, especially in the aged, after the sever is gone off, and purging hath been used, that the patient notwithstanding is 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 falt 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

## Complete methods of curing most diseases.

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 purging are gone off, give a scruple of the greater pil. cochia, 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 mintwater be persisted in a considerable time, and the belly preserved from cold by wearing a double stannel.

## Of the pestilential fevers of the Years 1665--66.

I. A FTER the fick person hath been blooded in in bed, let him be well cover'd 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; Gascoign's powder, 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 julap 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-slowers, an ounce; mix them together for a julap.

2. If there be a vomiting, do not give the fudorific till by the weight of the clothes only the fweat begins to flow, the face being covered with part of the sheet in order to promote it.

3. When the fweat is begun, it is to be continued for the fpace of twenty four hours, by giving draughts of fage 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 fwelling 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 posses.

posset-drink: but next morning give my common

purging potion.

5. The years 1667 and 1668, gave rife 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 sever of 1685, &c. \*

### Of intermittent fevers.

I. THE fit begins with a chillness and shaking, which are soon follow'd by heat and then by sweat, which terminates the sever: tho' in the beginning of this disease, especially in autumn, a remission rather than an intermission is perceived. The cold and hot fit both are 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 sever is going off; but a pain of the tonsils, a hoarseness, hollow eyes, and a hippocratic sace 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 this 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 sever, especially in a quartan, this process is to be repeated every week for three weeks more.

3. If pills are better liked,

Take of the Peruvian bark finely powder'd, an ounce; fyrup of clove-july-flowers, enough to make it into pills of a middling fize, fix whereof are to be taken every fourth hour.

\* See pag. 495.

If a tincture,

Take of the Peruvian bark grossy 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 fometimes feafonably administer'd, namely, so long before the fit, that the operation may be over before it comes, works a 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 likewife 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, fweat three or four hours afterwards; and let it be repeated twice in the fame 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, balf 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, sweeten dwith sugar, and forbidden the use of glysters during this process.

8. If a dropfy happens in the declenfion of the difease, the fever not being yet remov'd, the cure must not be

attempted by purgatives, but by infusions in wine with horse-raddish root, the tops of wormwood, the lesser centory, juniper berries, and broom ashes, &c. but aster the sever is gone off, by purgatives and aperients.

9. In children feiz'd with this disease proceed thus:

Take of the distill'd water 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 julap, 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 is attended with the following fymptoms. (1.) Heat and cold fucceeding 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 fometimes, (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 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, (II.) and the effect of a hot regimen are pstechiæ, purple spots, miliary eruptions redder than the meafles, an irregular pulse, startings of the tendons, and at length death. (12.) Symptomatic fweats happen in the beginning, which being promoted by art, appear viscid 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 figns of a baftard peripneumony appear. And in this case bleeding and purging must be repeated till the patient recovers.

3. At night apply a blyfter, and next morning prefcribe 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; Grup of white poppies, an ounce; fresh lemon-juice, two spoonfuls; mix them for a draught.

4. The aphthæ and hiccup which fucceed fpontaneoully after the cure of the fever, ordinarily go off in the fame manner; but if they continue long, are eafily removed with an ounce of the Peruvian bark, made into an electuary, or pills, with a fufficient quantity of the fyrup 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 deftroy'd by lying conftantly 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; fyrup of lemons enough to make them into an electuary, of which the quantity of a nutmeg is to be taken thrice a day, with fix spoonfuls of the following julap.

Take of the distill'd waters of pursain, lettice and cowslips, each three ounces; lemon-juice, an ounce and half; fyrup of violets, an ounce; mix them together for a julap.

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purple (pots, miliary cruptions to

Take of spring water, a pint ; rose water, lemon-juice, and fine sugar, each sour ounces; boil them together. over a flow fire, till the scum rises, which must be carefully taken off. Three ounces of it may be taken at pleasure.

The following gargarism is likewise proper.

Take of verjuice, half a pint; syrup of rasp-berries, an ounce, mix them for a gararism.

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 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 fmall-beer likewise at pleasure.

8. When the patient has been purged twice, he may be allow'd to feed on 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 in the afternoon, and at night also for some days.

9. Nothing is more ferviceable in a delirium or coma than shaving the head, without applying a plaister, but

only wearing a cap.

the fever continue after this repeated bleeding and purging, then, provided there be no figns of a peripheumony 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.

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1. APPLY two leeches behind each ear, and a blifter to the neck, and purge them with an infusion of rhubarb in beer.

2. If the fever feem to intermit after purging, exhibit the julap with the *Peruvian* bark above fet down, in treating of intermittent fevers.

### Of the scarlet fever.

THE scarlet sever 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, larger, and redder than the measles, and continue two or three days, after which the scarf-skin salling off the true skin appears mark'd with branny scales

Take of burnt hartshorn finely powder'd, and Gascoign's powder 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 fellowing julap.

Take of black cherry and milk water, each three ounces; fyrup of citron-juice, an ounce; mix them for a julap.

2. Apply a blifter, 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 pleurify.

I. THIS disease prevails between the spring and fummer: it begins (1.) with a chilness and shaking, which are soon accompanied with (2.) heat, thirst, restlesness, and the other symptoms of a fever; (3.) in a few hours the patient feels a violent pain in one fide, near the ribs, which sometimes extends to the scapula, sometimes to the spina dorse, and sometimes to the fore-part of the breast; (4.) he has likewife a violent cough; (5.) the matter expectorated at the beginning of the difeafe, is fmall 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 less obstructed; (7.) the body is sometimes costive, and fometimes too open; (8.) the blood, when cold, looks like melted tallow.

2. Take away ten ounces of blood from the arm of the affected fide.

Thike of the distill'd water of red poppies, four ounces; falt 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

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 apozem, of which half a pint is to be taken three times aday.

Take of oil of sweet almonds, two ounces; syrup of violets and maiden-hair, each an ounce; sugar-can-dy, enough to make them into a linetus.

Oil of fweet almonds, by itfelf, or fresh drawn linfeed oil may be also given.

Take of the oils of sweet almonds and lillies and marshmallow 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 fame quantity, three days running, if the pain and difficulty of breathing require it.

#### Of the bastard peripneumony.

THIS distemper arises towards the beginning, and frequently at the close of winter. At the beginning (1.) the patient grows 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.

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Take of the pulp of cassia, fresh extracted, an ounce; liquorice root, two drams; four fat sigs; 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 strain'd 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 fame quantity, and the day after give another purgative, which is to be repeated every other day, or feldomer, according to the strength of the patient. And further, if the symptoms do not go off, bleeding 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 difease begins (1.) with a chilness and shaking, with the other signs of a sever; (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 sever goes off by degrees, whilst the pain continues and sometimes increases. A rheumatic sumbago 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 fizy, as in a pleurify.

2. Let ten ounces of blood be taken away from the

arm of the affected fide.

STILL GOVERNMENT OF THE

Take of the distill'd waters of water lilly, purstain, and lettice, each four ounces; syrup of lemons, an ounce and half; syrup of violets, an ounce; mix them for a julap, some of which may be drank at pleasure.

3. Emulsions of the four greater cold feeds should be prescribed, and a cataplasm made of the crumb of white bread and milk tinged with saffron, applied to

the part affected.

4. The next day take away the fame 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 glyfter of milk and fugar between whiles, or the fol-

lowing.

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 fecond or third bleeding, must be attempted in the following manner.

7. Exhibit my common purging potion every other day, till the disease goes off, and in the evening, after the

operation, an opiate of fyrup of white poppies.

8. If the diffemper does not yield to these remedies, and the patient is too weak to bear any evacuations, give him the antiscorbutic electuary, and distilled water described in treating of the scurvy which are also proper in a scorbutic rheumatism.\*

o. 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 fo well bear.

only for four days running, and afterwards, befides the whey, he may eat a piece of white bread once a 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

toms 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. I N this diffemper (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 blifters, and spread over the forehead and head; (3.) the eyes are buried under the swelling; (4.) a chilness, shivering, and other figns of a fever accompany these symptoms. In the other kind of this diforder, which is occasion'd by drinking, there is (1.) a flight fever; (2.) attended with pimples, not unlike thefe caused by the flinging of nettles, which sometimes rise up into blifters, and foon after vanish, and lie conceal'd under the skin, where they produce a very troublefome itching, and, upon fcratching, come out again. There is also another kind of eruption which generally appears in the breaft, being a broad fpot with yellow scales, which scarce rises higher than the skin, and whilst it keeps out the patient is not at all indifposed, but when it strikes in, a flight sickness succeeds, and the urine is turbid and yellow: it yields to the fame 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

potion.

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 leffer 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 firain'd 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 Complete methods of curing most diseases. 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 glyfter of milk and fyrup of violets, and a cooling e-

mulfion and julap.

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 spoonfulsof the following julap.

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 julap.

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 eruptions still continue, let the parts affected be anointed with the following liniment.

Take of the ointment of harp-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 these medicines must not be used before bleeding and purging have duly preceded

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## Of the quinsey.

I. THE quinfey commonly comes between fpring and fummer; the fever accompanying it, is foon fucceeded by a pain and inflammation of the fauces, uvula, tonfillæ, 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 befmear'd with honey of rofes, well acidulated with fpirit of vitriol, or fpirit of fulphur; and foon 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 whiles.

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 tagether for a gargarism.

And let the cooling emulfion, prescrib'd in the cure of

the pleurify 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 diforder still continues, which very rarely happens, let bleeding and purging be further repeated, and a large sharp bliftering plaister applied between the

shoulders, after the first bleeding.

5. On the intermediate gays of purging, inject a cooling and emollient glyfter in the morning: the patient must use a sparing diet, and sit up a few hours every day.

6. In all these severs, 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 broth, water-gruel, and the like kind of diet, and use small-beer, and milk and water for his common drink.

### Of the measles.

I. 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 to the series of the cold succeeding by turns to the series of the cold succeeding by turns to the cold series of the cold series

(2.) the fecond day a perfect fever comes on, accompanied with (3.) great fickness, (4.) thirst, (5.) loss of appetite, (6.) a white, but not dry tongue, (7.) a flight cough, (8.) heaviness of the head and eyes, with a continual drowfiness, and (9.) a constant distillation from the nose and eyes, and an effusion of tears which is the most certain fign of the measles. (10.) These symptoms are succeeded by a sneezing, a fwelling of the eye-lids, immediately preceding the eruption, a vomiting and a loofeness, attended with green stools, especially in children whilst they are breeding teeth. The fymptoms increase till the fourth day, at which time, and fometimes on the fifth day, little red fpots, like flea bites, appear in the forehead and face, which growing more numerous and large, run together, and mark the face with large red fpots, which are composed of small red pimples, rifing 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 breaft and belly, and then to the thighs and legs; but in these parts they are large and red, and do not rife above the furface of the fkin.

2. The fymptons do not abate upon the eruption in this difease 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 drowfiness and loss of appetite remain. On the fixth day, or about that time, the forehead and face grow rough, the eruptions begin to dry and the skin seperates; but in the other parts of the body the spots appear very large. About the eight day they vanish in the face, and fcarce appear in the rest of the body. On the ninth day they disappear entirely, and the face, limbs, and fometimes the whole body feem cover'd with branny scales; but the cough, fever, and difficulty of breathing, grow more violent. 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 qunces of it be taken three or four times a day.

Take of oil of fiveet almonds, two ounces; fyrup of violets and maiden-hair, each an ounce; white fugarcandy, enough to make them into a linetus, to be taken often in a small quantity, especially when the cough is troublesome.

Take of black cherry water, three ounces; fyrup of white poppies, an ounce; mix them together, for a draught, to be taken every night the distemper throughout; lestening 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 fymptoms, refembling a peripneumony, fucceed after the measles is gone off, bleed plentifully in the arm, and repeat the operation a fecond 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 fweet almonds by itself. About the twelfth day from the beginning of the diftemper give a gentle purge.

5. The loofeness sueeeeding the measles is cur'd by

bleeding,

## Of the small-pox

THE small-pox is of two kinds; either distinct, or confluent. The diffinct kind begins with (1.) chilnefs and shivering, (2.) great heat, (3.) a violent pain of the head and back, (4.) vomiting, (5.) a confiderable tendency to fweat in grown persons, whence it may be conjectured that the fmall-pox will not prove of the confluent kind. (6.) a pain under the ferobiculum cordis upon pressing it with the hand, (7.) drowfiness and stuper sometimes, (8.) epileptic convulsions, especially in children, which happening after dentition, one may affert that the smallpox is just approaching; so that for instance, suppofing a child be feiz'd with a convulfive fit over night, a kindly fmall-pox will appear next morning, and very rarely the confluent fort.

of the distemper, sometimes later, but seldom sooner, the eruptions come out, at which time the symptoms abate, orgo offentirely. At first reddish pustules, as large as the head of a small pin, appear scatter'd up and down in the sace, neck, breast, and the whole body, and at the same time a pain seizes the fauces, and in-

creases proportionably as the eruptions fill.

3. About the eighth day, the spaces between the pustules that appear'd white before, begin to grow red, fwell, and are painful; the eye-lids are distended so as to close the eyes, and resemble an inflated bladder, Next after the face, hands, and fingers fwell, and the eruptions on the face that till this day were fmooth and red, now grow rough and whitish (which is the first fign of suppuration) and discharge a yellow matter in colour, not unlike a honeycomb. The inflammation of the face and hands, being in the mean time come to its height, renders the spaces between the eruption of a florid red colour, refembling that of damask roses: and the milder the small-pox is, the nearer do the eruptions and their intermediate spaces approach this colour. puftules on the face grow every day rougher and yellower, as they suppurate, whilst those of the hands and other parts appear smoother and whiter.

4. On the eleventh day, the fwelling and inflammation of the face vanish, and the eruptions being come to their due maturity and fize, 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 fort 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 appears whitish and sunk, whilst the pustules

notwithstanding continue red and elevated, even after the death of the patient. The sweat which slowed freely to this day ceases suddenly, and the patient in the mean time is seiz'd with a delirium, restlesses, sickness, and a frequency of making urine in small quantities and in small quantities and in small quantities and in small quantities.

in small quantities, and in a few hours expires.

6. The confluent small-pox is accompanied with the fame fymptoms, but they are more violent: the fever, for example, reftlefness, fickness, and vomiting, &c. rage more feverely, but there is lefs tendency to fweat than in the distinct kind. Sometimes a loofeness precedes, and lasts a day or two after the eruption, which it scarce ever does in the distinct The eruption, in this fort of fmall-pox happens on the third day, or earlier, but feldom later, and the fooner the puffules come out, the more they run together. Sometimes, however, the eruption is retarded to the fourth or fifth day by forme violent fymptom; as for instance, (1.) a sharp pain in the loins, refembling a fit of the stone, (2.) in the side, like a pleurify, (3.) in the limbs, like a rheumatifm, or, (4.) in the stomach, accompanied with great fickness and vomiting. The confluent fort differs from the diffinct in this, that the fymptoms do not abate immediately after the eruption, but the fever and its concomitants afflict the patient for feveral days afterwards. Sometimes the puftules 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 puffules do not come to any confiderable bignefs, but run together in the face, and cover it like a red bladder and make it fwell fooner than in the diflinct fort; at last they appear like a white pellicle, closely adhering to the face, and rifing a little above the fkin.

7. After the eighth day this pellicle grows every day rougher, and inclines to a brown colour; the fkin is tenderer, and in the worst species of the confluent small-pox falls off in large scales, but not till after the twentieth day. 'Tis worth observing, that the nearer the pustules, as they suppurate, incline to a dark brown colour, they are so much the worse, and the longer in falling off; but the yellower

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 seams behind them. Sometimes the skin of the back and shoulders scales 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 seet are larger than those of the other parts, and the nearer they approach the body the less they are.
- 9. In grown perfons a falivation, and in children a loofeness (tho' not so certainly) accompanies the confluent kind. The falivation fometimes begins with the eruption, and fometimes not till two or three days afterwards. At first the matter is thin, but on the eleventh day it grows more vifcous, and is rais'd' with great difficulty. The patient is thirsty, and is feiz'd with a hoarfnefs, great flupor and drowfinefs, coughs between whiles as he drinks, and the li-quor flies out at the nostrils. At this time the falivation generally stops, which, if it were not supplied by the fwelling of the face, and the fwelling of the hands, now manifeftly beginning, and lafting longer than the former, would immediately destroy the patient. For tho' the fwelling of the face, according to the nature of the disease, ought to abate a little on this day, yet it should not fink entirely till a day or two afterwards. The loofeness does not attack children fo foon as the falivation does grown perfons.
- rages from the beginning of the illness to the time of the eruption, after which it abates till the suppuration begins, which being finish'd it goes off. Wrong management occasions abundance of irregular symptoms, as a finking of the pustules, a delirium, a 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.
- fr. The seperation is finish'd with a febrile ebullition, in the first three or four days, and the ex-

pulsion is perform'd during the rest of the time by means of small abscesses in the slesh.

12. In the mildest fort of the confluent small-pox, the eleventh day inclusive, from the beginning of the illness is the most dangerous, the sourteenth in the middle fort, and 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 restlessness 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 the infusion

of crocus metallorum.

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, acidulated with spirit of vitriol.

which ordinarily happens on the fixth day from the beginning of the illness, give an ounce of the fyrup 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 fyrup of poppies does not agree with the patient, liquid laudanum may be exhibited in its flead; for inflance, eighteen drops of it for an ounce of the fyrup, 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 in the diffinct fmall-pox the opiate need only be exhibited every night, after the eruption is o-

ver, 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 indispensibly 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.

affured 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 a-

bout his room.

20. If the heat renders the faliva fo vifcous that it can't be got up, the throat must be frequently fyring'd with a gargarism of small-beer, or barleywater with honey of roses; or the following may be used for this purpose.

Take of elmbark fix 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 bliftering plaister, apply a large strong one to the neck, on the evening preceding the great crifis of the difease, and immediately afterwards exhibit the opiate. may also be applied to the bottom of the feet, from the eighth day to the end of the distemper, and re-

new'd every day.

22. If a child be feiz'd on a fudden with convulfions after dentition, it may be confider'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 bliftering plaifter be applied to the neck, and the child immediately put to bed, and a cordial also exhibited, mix'd with a fmall quantity of fome 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 fucceeding day, the fecond fever, attended with reftlefness, and the other symptoms of this kind, rifes 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 sufficiently large quantity of blood, for instance, twelve ounces, or thereabouts, be immediately taken away, and the operation may be repeated a fecond or third time on the fubfequent days, if the abovemention'd fymptoms require it, but not otherwise. A lenient purgative may also be order'd

on the thirteenth day, but not fooner, or any of the following days, provided bleeding hath been previously used; for instance, an ounce of lenitive electuary, diffolv'd in four ounces of fuccory or milk water. But neither bleeding or purging obstruct the use of opiates, which, notwithstanding these operations, ought to be given in a large dofe, and repeated according to the exigency of the cafe; for we are always to have recourfe to opiates in this difeafe.

24. When the puftules are quite dry, the face may he anointed with a liniment, made of equal parts of oil of fweet almonds and pomatum, for two days, but

not longer.

25. On the 21st 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 fit up in the day time till the fixth day, and afterwards keep his bed conftantly, till the feventeenth, but not have more cloths laid on him than he was accustom'd to when in health.

27. His diet should be water-gruel, barley-broth roaft apples, and finall-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 be eafily 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 of the disease, let the powder and julap fet down in my differtation on the fecond fever in the confluent small-pox + be carefully exhibited every fixth hour, till these symptoms entirely disappears in this case opiates also may be given freely.

#### Of St Vitus's dance.

THis diforder is a kind of convulfion, which feizes children of both fexes, from the tenth to the fourteenth year: it manifelts itself by a halting, er 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 being drawn sideways by the spass, he moves it backwards and forwards, till at length the glass accidentally coming hearer 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

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; these ingredients being sliced, cut, and bruised as they require, let them insuse, 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 julap, four spoonfuls of which must be taken every night at bedtime, dropping into it eight drops of spirit of harts-born.

6. Apply a plaister spread on leather, of the plaister of gum caranna to the bottom of the feet.

7. To prevent a relapse, open a vein and purge for some days, about the same season of the follow-

ing year, wherein the difease first appear'd.

8. It feems probable to me that this method might fuit the falling fickness in grown persons, which, however, I have not yet experienc'd. 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. A N apoplexy is a total deprivation of fense, and motion, excepting that of respiration,

which is performed with difficulty and fnoring.

2. Take away twelve ounces of blood immediately from the arm, and afterwards eight from the jugular, and prefently after exhibit a vomit of an ounce and a half, or two ounces of the infusion of crocus metallorum.

3. Apply a large sharp 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 foon as the vomit has done working, give three or four fpoonfuls of the following julap, repeating

the dose at proper intervals.

Take of rue water, four ounces; compound briony and piony water, of each an ounce; spirit of harts-horn, twenty drops; fine sugar, enough to sweeten it; mix the whole for a julap.

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 between every dofe.

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 sour a clock in the morning, so that the patient may sleep upon them, and repeat them every third day to six doses.

Take of the conserves of the flowers of sage and rosemary, each an ounce; the conserve of orange peel, six
drams; 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 sufsicient 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 annseeds, cinnamon and nutmegs, each two drops; oil of cloves, one drop; fine sugar, (dissolv'd in the distilled 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 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.

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, allowing two days between every purge; and at night, after the operation is over, give a quieting draught of an ounce of fyrup of white poppies.

3. On the intermediate days of purging, let him take four ounces of an emulsion made with the greater cold feeds, and white poppy feeds, 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 frogspawn, 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 e-

5. If the disorder yields not to these remedies, let bleeding be repeated once or twice more (especially if the blood refembles that taken away in a pleurify) and purging likewife.

6. The patient should forbear wine, and all spirituous liquors, and all kind of food that is falt and hard of digestion, and on the intermediate days of purging,

drink milk boil'd with water.

7. It must be observ'd, that bleeding and purging, tho' repeated with the greatest frequency, often prove ineffectual in an inflammation 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.

I. 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, redrose 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 u-Jual 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 fymptoms, (1.) A fixt pain in the region of the loins, (2.) bloody urine, (3.) the voiding of a stone or gravel, (4.) a numbres of the leg on the side affected, (5.) the testicles 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 fanguine constitution, take away ten ounces of blood from the arm of the contrary fide, 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 strain'd liquor for a glyster.

3. When the posset-drink is thrown up, and the glyster come away, give a sufficiently large dose of liquid laudanum, for instance, twenty five drops, or sisteen or

fixteen grains of Matthew's pil.

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 sit, but in all other respects the above-mention'd method is to be sollowed.

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 fometimes to drink a large draught

of small beer.

3. If there be a large flone in the kidneys, a heavy

duil

dull pain is felt, which increases not at all, is not vio-

lent, nor accompanied with a fit of the stone.

4. The patient cannot fafely 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 enormous 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 drop from the pelvis, these waters must be refrain'd.

## Of the dysentery, loosness, 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 foon 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 ftreak'd with blood, but fometimes 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 rifes, and the tongue is covered with a thick white mucus, and fometimes is dry and black, (8.) a loss of strength and spirits are joined with the fever, and the inward parts of the mouth and throat are affected with aphtha, especially if the evacuation of the peccant matter hath been injudiciously check'd by aftringents, without having been first carried off by purgatives. Sometimes the dyfentery is unattended with a fever, and begins with gripings, which are fucceeded with the other fymptoms of this diforder.

2. 10

2. In a loofness, excrementitious humours are voided mixed with blood, and there is no ulceration of the bowels.

3. In a tenefmus there is a continual inclination to go to flool, yet nothing is voided but a bloody or puru-

lent mucous matter.

4. Bleed immediately in the arm, and the fame 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 difeafe.

Take of the distill'd waters of black cherries and strawberries, of each three ounces; plague water, 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 a dram of rose water to give it an agreeable taste; make a julap, 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 sine 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 loofnesses.

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9. When

9. When the flux amounts to no more than a loofness, omit the bleeding and purging above prefcribed, 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 glyfters of the fame warm, in the fame manner as we directed to be done in the cholera

morbus, with chicken broth, or poffet-drink.

12. If this difease 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 pleafure to recruit the strength, and the tenesmus will go off fpontaneously, as the strength returns.

13. If the dyfentery hath been ill treated, it fometimes afflicts the patient for fome years, in which cafe 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 lefs tendency to promote this difease, 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 foon comes on again, (3.) in the beginning the pain is not fo 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 de-

generating into an iliac paffion.

2. It is known from a fit of the stone by the following signs. (1.) In the stone the pain is fixt in the kidney, 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 dofe.

4. But if this diforder proceeds from a furfeit 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 difease, by reason of wrong management, proves of long standing, and brings the patient to the brink of the grave, plague water, the wonderful water, or any other cordial he liked best when in

health, drank plentifully, gives furprifing relief.

### Of the cholera morbus.

1. THIS difease 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 down-

downwards, with great pain and difficulty, (2.) violent pain and fwelling of the abdomen and bowels, (3.) heartburn, (5.) thirst, (6.) quick, small, and irregular pulse, (7.) heat, and restlesness, (8.) great nausea, (9.) sweating, (10.) contraction of the limbs, (11.) fainting, (12.) 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 sless. 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 the bufiness 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 sive 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 furfeit, 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 palfy, and a total loss of motion of the hands and feet. Riverius describes it under this \* name. 'Tis a common diforder in the Caribbee iflands, where it feizes abundance of persons.

2. This fevere pain is cured by giving balfam of Peru often in a large dose; for instance, twenty, thirty, or forty drops, in a spoonful of fine fugar, twice or thrice a day: but the palfy yields not to this remedy.

## Of the iliac passion.

IN this diforder (1.) the peristaltic motion of the bowels is inverted, (2.) cathartics and glysters foon 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 follow-

ing powder.

Take of 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 a dram; calomel, a scruple; balfam of Peru, enough to make them into four pills, to be taken in a spoonful of fyrup 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 fixth hour, till the bowels be made perfectly eafy, 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, forc'd 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 fooner opened.

6. As foon as the purgative hath done working, ex-

hibit the following draught.

Take of strong cinnamon water, an ounce; liquid laudamim, 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 the egg of a goose. It is known to be immoderate by (1.) the difficulty of bearing it, (2.) loss of strength and appetite, (3.) cachexy, (4.) pale complexion, and (5.) fwelling of the

2. Take away eight ounces of blood from the arm, and next morning give my common purging potion, and repeat it every other day to a third time, exhibiting a dose of fyrup of white poppies at night after the operation.

3. On the intermediate days of purging, let the foly

lowing 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 fix spoonfuls of the following julap upon it.

Take

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 plaintain, 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 bysteric 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 dis-

charge of green humours upwards.

2. The patient must drink a large quantity of posfet-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, allowing a proper interval between every dose, that so we might conjecture what effect

the last hath had before we exhibit another.

4. If the patient be of a fanguine constitution, or hath been 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

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 fliced, half an ounce; canary, four ounces; digest them together for twelve hours, without heat, then strain off the tinsture.

Or balsam of *Peru* may be used as is directed in the colic of the natives of *Poistiers*.

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 we at length 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 diforder manifests itself by the following figns. (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

lious vomiting fometimes, (8.) a hiccup, (9.) white excrements, (10.) the urine of a faffron colour, and

staining linnen 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 figns of a dropfy 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 wellhead.

### Of preventing miscarriage.

I. 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 slesh has been wash'd) for about four days more, and afterwards (3.) a vis-

cous mucilaginous matter, mix'd with little or no blood for the five or fix immediately following days.

and thence to the end of the month.

2. An immediate flux of the lochia is known by (1.) a loss of strength, (2.) fainting, (3.) the coming away of clotted blood, (3.) loss of appetite, (5.) pain in the hypochondria, (6.) a swelling of the abdomen, (7.) a weak and quick pulse, (8.) dimness of fight, (9.) noise in the ears, and (10.) convultions.

3. An incraffating 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 Jugar. Let half a pint of it be taken twice or thrice a day.

4. In the mean time exhibit some weak hysteric julap, and let the following composition, or a small vial of of spirit of fal-ammoniac, be often held to the note.

Take of galbanum and fetid afa, each two drams; castor, a dram and a half; volatile falt of amber, half & dram: mix them together for a nodule.

#### Of the suppression of the lochia.

I. THIS diforder is accompanied with (I.) 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 fweats, (9.) fainting, (10.) pulfation and heat in the womb, (11.) a palfy of the lower parts, and (12.) fometimes an epileply.

2. The patient should be put to bed forthwith, have 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 balf a dram; mix them all together and make an electuary thereof with a sufficient quantity of the fyrup 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 julap. Take Take the distill'd water of rue, four ounces; compound briony water, two ounces; fine sugar enough to sweeten it; and make a julap.

Or let her take a scruple of the troches of myrrh eve-

ry four hours.

3. If after having taken these medicines in the quantity here ordered, the lochia still continues suppress'd, exhibit only once, sourteen 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 fingle gly-

fter of milk and fugar.

### Of the dropfy.

I. NE of the first signs of the dropfy, is the pitting of the leg, when the finger is forced a gainst 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 afthma, often have fwellings 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 deftroy'd by a kind of deluge. In the fame degree that the swelling of the parts affected increases, the other parts waste away, and at the fame time a difficulty of breathing, the making little urine, and great thirst, accompany the distemper. The dropfy 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, an ounce; mix them all together for a draught to be taken early in the morning, and repeated

Or,

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 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 foruple; 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 distill'd water of succory, of each an ounce and half; fyrup 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 ferviceable only in fuch 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 enquired 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 preserable 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 there are fome 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 ftrengthening medicines are to be used.

Take of horse-raddish 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 fornetimes cure a recent dropfy without the affiftance 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 insusion:

Take of 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 insuse without heat, and the liquor be strain'd off; only when wanted.

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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-raddish root, 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; insuse all together in six gallons of ale made without hops, whilst it is working, and let it be used for common drink.

# Of a gonorrhea virulenta, or venereal running.

I, HIS disorder begins with an uncommon pain in the parts of generation, and a kind of rotation of the testicles; and in fuch as have not been circumcis'd, a spot not unlike the measles appears upon the glans, foon after which a fluid refembling femen flows therefrom, which changes every day both in colour and confiftence, and at length turns yellow, but paler than the yelk of an egg; and when this difeafe is more virulent and degenerated into the pox, this matter becomes green, and is mix'd with a watery humour, fireak'd with blood. The puftule upon the glans terminates at length in an ulcer, refembling the aphthæ in the mouths of children, and spreads and eats deeper every day, and the lips grow callous, Those that have undergone circumcifion, or have the glans bare, have no ulcer in this part, but only the gonorrhea. The running is foon fucceeded by a pain in the penis at every erection, as if it were violently fqueez'd with the hand, which fymptom 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 join'd a heat of urine, scarce felt at the time of making, but immediately afterwards the patient is fenfible 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 fometimes a pain and inflammation of the scrotum succeed. 2. Let

2. Let four of the following pills be taken every morning till the heat of urine be much abated, and the running grown confiderably paler, or whitish, then every other day for a fortnight, and at last twice a week till the running ceases.

Take of the greater pills 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 sour days between each dose; or, instead of it the following.

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, dissolved 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 strain'd liquor: mix the whole for a glyster.

5. Exhibit twenty five drops of opobalfamum, or balm of Mecha, dropt upon a lump of fine fugar, every night; or instead of it the quantity of a hazle-nut of Cyprus-turpentine. His common drink should be milk boil'd with thrice as much water, and small-beer at meals.

6. Or you may proceed in this manner,

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Take of the pills of two principal ingredients, half a dram; opobalfamum, 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 prescrib'd, 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 and 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 fwell'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 flower 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 omentation, 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.

ro. 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 fcrotum be fwell'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 oxycrate and bean-meal. 12. In the mean time purgatives and coolers aboveenumerated, must be given inwardly.

#### Of the venereal disease.

I. WHEN the blood is tainted by the long continuance of a gonorrhæa, or the unadvised use of aftringents, 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 feabs also and feurf in different parts of the body, which refemble 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 feize the throat first, and eat by degrees thro' the palate, to the cartilage or bridge of the nofe, which they foon confume, fo that the nose for want of its support falls flat; (7.) the ulcers, caries, and pains increasing every day, the limbs rot away peace-meal, and the mangled carcafs being at length grown hateful to the living, is buried in the earth.

2. Take of hog's lard, two ounces; quickfilver, an ounce; mix them together, according to the rules of art for a liniment 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 falivation rifes 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 falivation abate before the symptoms are quite gone off, it must be increased by exhibiting now and then a dose of sweet mercury occasionally.

4. The falivation should be so regulated that the patient may spit about two quarts in the space of twenty four hours.

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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 foon as the fymptoms are gone off, the patient's linnen should be chang'd for what has been worn

fince it was wash'd.

7. If a loofness succeed, as it generally does soon after the falivation rises, it must be stopt by administering 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 fame regimen and diet are to be order'd in a falivation, as are used in a course of purging; only the patient may live upon posset-drink, water-gruel, barley-broth, and warm small-bear for a few days in

the beginning of the course.

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.

fometimes pale, yellow, green, or blackish, fometimes 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.

2. Take away eight ounces of blood from the arm, and next morning at four o' clock let the following pills be taken, fleeping upon them; and repeat them twice more, allowing a day or two between every dofe

according to the ftrength of the patient.

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 julap, 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; Gafcoign's powder, 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; sprup 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 ellicampane, masterwort, angelica, and sweet cane, each half an ounce; the leaves of Roman wormwood, white horehound, and lesser centory, common calimint, 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 insuse 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.

I. I N 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,

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heat of the vifcera, a swelling of the loins and hips, and

a frequent sputation of a frothy faliva.

2. The same medicines are to be prescrib'd in this case, as in the fluor albus, except bleeding and purging.

#### Of the piles.

I. 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 sphineter, and sometimes appear outwardly in the anus.

2, Take away ten ounces of blood from the right

arm.

Take of melon and pumpkin feeds, each half an ounce; white-poppy feeds, two drams; five blanched fweet almonds, beat them together in a marble mortar, and pour on by degrees a pint and half of barley water; to the strain'd liquor add two drams of rosewater, 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; Lucatellus'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 spooufuls of the emulsion above prescribed.

3. Apply a piece of linnen dipt in the following mixture to the part affected, or if the tumour be internal, throw up three fpoonfuls of it into the anus with a fyringe.

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 slesh, and take a dose of syrup of white poppies every night.

#### Of the immoderate bleeding of the piles.

1. THIS diforder 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 fame medicines may be advantageously used in this case, as in the immoderate flux of the menses,

purging only excepted.

#### Of the epilepsy, or falling-sickness in children.

1. CHildren are feiz'd with this diforder, either in the first month after a loosness, 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 loosness, with green stools, as is usual in hysteric subjects.

2. Sometimes the fit comes fuddenly, difforting the mouth and eyes, caufing the face to turn black, and convulfing 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 fometimes long and fometimes fhort; and fometimes return at fet times, and at others keep no certain period: but upon the approach of death they follow one another very close. Children are subject to a drowliness in the intervals, till they are rouz'd by a fresh fit.

3. Apply a bliftering plaifter 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 julap, 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.

HE rickets are attended with a laxness, fluccidness, 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 excrefcencies appear in the joints, especially in the wrists, but less in the ankles; (5.) the tops of the ribs are fwell'd; (6.) the bones grow crooked, especially those of the legs, the arms, next, and fometimes also the shoulder and thighs; (7.) the teeth come flowly 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, fwell; (10.) a cough and diforders of the lungs fucceed; (11.) and the patient cannot fometimes lie on the right fide, and fometimes not on the left.

Take of the leaves of common warmwood, the leffer centory, white horehound, germander, scordium, common calamint, feverfew, meadow faxifrage, St John's wort, golden rod, wild thyme, mint, fage, rue, holy thistle, penny royal, southernwood, camomile, tansey, and lilly of the valley, all fresh gathered, and cut small, of each one handful; hog's-lard, four pounds; sheeps-suet, two pounds; claret, a quart; infuse them together in an earthen vessel upon hot ashes for sixteen hours, then boil them till the aqueous moisture is exhausted, 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 described, 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 fwellings of the belly in children, occasioned by immoderate evacuations, the blood of the viscera ought to be strengthened with strengthening herbs, as in the true rickets; but the arm-pits 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, more or less, according to the age of the child, in a spoonful or two of black-cherry water, or some other suitable vehicle, every sour hours, for five or six times.

#### Of a bestic fever in children.

I. I N this diforder children languish without much heat, lose their appetite, and the body and limbs

wafte 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 booping cough in children:

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.

#### Of bleeding at the nose.

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 and thickening diet, along with a cooling and thickening julap, and a cooling emulsion.

3. Give

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3. Give a cooling glyfter every day, and an opiate of fyrup of white poppies, every night; and exhibit

my common purging potion once or twice.

4. Apply a piece of linnen four times doubled, dipt in a folution of falt 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 li-

quor be used.

Take of Hungarian vitriol, and roch allum, each an ounce; the phlegm of vitriol, half a pint; boil them together till the falts are disfolved; filtre the liquor when it is cold, and seperate it from the crystals 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, wery finely powder'd, half an ounce; mix them well together: put up a tent of lint, dipt in this 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 ankles; (3.) heaviness of the whole body; (4.) a tension and lassitude of the legs and feet; (5.) dissicult respiration; (6.) palpitation of the heart; (7.) pain in the head; (8.) severish pulse; (9.) drowsiness; (10.) an unnatural longing for such things as are noxious, and unsit for food; and (11.) a suppression of the mension of the mension of the mension.

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 a suppression of the menses.

1. THIS diforder is accompanied with (1.) a loathing of food; (2.) bad colour; (3.) universal indolence; (4.) pain in the fore-part 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 julap without castor, with twelve drops of 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 bedtime.

#### Of vomiting, or spitting of blood.

1. A Spitting of blood is accompanied with pain and heat in the breaft, and fome 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 black cherry water, three ounces; fyrup 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; feal'd earth, blood-stone, and dragon's 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

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 fix spoonfuls of the following tincture.

Take of the leaves of red roses, and the inner-bank of oak, each half an ounce; the feeds 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 tafte.

4. If he has an aversion to powders, he may use electuary prescribed in the immoderate flux of the

menfes.

5. Let a glyster be given every day, and a dose of sy-

rup of poppies every night at bed-time.

6. Bleeding is also to be repeated again 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.

I. 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 foft in a quart of milk; then add oatmeal and linfeed flower, of each three ounces; boil them to the consistence of a cataplasm in the milk wherein the white lilly roots have been boil'd; and apply it to the parts affected morning and night.

#### Of burns.

i. BATHE the part affected with a piece of linnen dipt in spirit of wine till the pain ceases; and renew the application three or four times a day. Of

#### 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 sermentation. 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 diforder under confideration, take a-way 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 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 fix drams; let them stand a night in infusion, and disfolve an ounce of syrup of violets in the strained liliquor: 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 fide, and next morning exhibit the common purging potion, and then repeat bleeding

ing 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 throughout the course of the cure.

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, at they grow loofe.

#### Of the bite of a mad dog.

1. IN forty days, or more after the bite, the figns 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 linnen dipt in the same.

## Of an ulcer of the bladder.

1. THE fymptoms in this diforder are (1.) a voiding of fetid matter, or blood, and sometimes scales along with the urine; (2.) a dysuria, and pain in the

urinary passages.

2. In an ulcer of the kidneys, (1.) small fleshy excrescencies, and sometimes membranes 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 setid; (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 distilled 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.

I. THERE are three kinds of this diforder. (1.) A Dyspnea, 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, intercostul and abdominal muscles, and a rattling in the throat. In the former species the lungs themselves, and in the Q q 2

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latter the bronchia are stuffed. (3.) An Orthopnæa, which is the greatest difficulty of breathing, infomuch that the patient cannot breathe but in an erect 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 fol-

lowing medicines be used.

Take of the feeds of anife, finely powder'a, two drams; Lucatellus's balfam, 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 diforder do not go off let the whole process be repeated.

### Of the palfy.

i. THE palfy is a deprivation either of motion and the fense of touch in the affected parts, or of

only one of them.

2. Two scruples of the lesser pil. cochiæ 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 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 admirably suited 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 the parts of the body; (2.) a hectic sever, discoverable by the quickness of the pulse, slushing 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 sire emits a setid smell, and these 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 baftard peripheumony, and does not fucceed a pleurify or peripheumony for want of fufficient bleeding, the patient need only forbear wine and flesh, and use the following remedies at pleasure.

3. Let ten drops of balfam of fulphur with oil of anifeed be taken in a fmall 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 singers; then add powder of liquorice, elecampane, aniseed, and angelica, of each half an ounce; powder of Florentine orice root, and slower of sulphur, each two drams; oil of aniseed, two scruples; mix them together according to the rules of art, and make them into troches, to be entitled samily 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,

5. If the matter expectorated be thin, an incraffat-

ing linctus should be exhibited.

6. But if the cough yields not to this treatment, and especially if it be attended with a fever, or succeed a pleurify, 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 balfam of *Peru* in a spoonful of syrup of ground-ivy, or, if that be disagreeable, in a spoonful of sugar, thrice a day, with sour ounces of the bitter decoction without 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 horseback, 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 sever, than riding is of a consumption, at this time of life.

#### Of the scurvy.

neous lassitude, (2.) heavines, (3.) distinctly of breathing, especially after exercise, (4.) rottenness of the gums, (5.) setid breath, (6.) frequent bleeding at the nose, (7.) distinctly 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 fallow complexion.

2. Let eight ounces of blood be taken away from the arm, provided there be no fign of a dropfy, and

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next morning give my common purging potion, and repeat it a third time, once every three days.

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 forrel, an ounce; compound powder of wake-robin, fix drams; fyrup of oranges, a sufficient quantity to make them into an electuary, of which a piece as big as a large nutmeg is to be taken every morning, at five in the afternoon, and at night, drinking fix 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 pound; the root of wake-robin, a pound; the leaves of garden scurvy-grass, twelve handfuls; mint, sage, water-cresses, and brook-lime, of each fix bandfuls; scurvy-grass seed, a little bruised, half a pound; nutmegs half an ounce; white wine, fix quarts; draw off only three quarts for use in a common still.

4. Or diftil fcurvy-grass, fresh gather'd for the fame purpose. The patient ought likewise to use the following medicated beer for common drink.

Take of the root of horse-radish, fresh gather'd, two drams; twelve leaves of scurvy-grass, fix 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 fix bottles of this beer be made at one time, and in a few days, before it be finish'd, fix more, and renew them for the future in the fame 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 scurvygrass, of each half an ounce; the leaves of scurvygrass, 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; Q94

# 616 Complete methods of curing most diseases. and afterwards press out the liquor gently, and set

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.

I. 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 fometimes in the heel, the ankle, or the calf of the leg; immediately, a chilnefs, shivering and slight fever succeed, the pain increases gradually every hour, and the chilness and shivering abate in proportion as the pain grows more fevere, which at length comes to its height towards night, fometimes refembling a violent tension, fometimes the gnawing of a dog, and fometimes a weight and constriction of the parts affected, which becomes fo exquifitely painful, that the patient cannot bear the weight of the cloths upon it, nor the shaking of the room from walking brifkly 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 fwell'd. A flight pain is felt next day, and fometimes the two or three following days, which increases towards evening, and remits towards break of day. a few days it feizes the other foot in the fame 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 fooner, or later, according to the age of the patient. Thus for instance, in strong constitutions, and such as feldom have the gout, the fit frequently goes off in a fortnight; but in the aged, and those that have frequent returns of the disease, it lasts two months; and in fuch as are more debilitated either with age, or the long tontinuance of the diffemper, the fit does not

go off till fummer advances, which drives it a-

2. During the first fortnight the urine is high-colour'd, and lets fall a 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 soot 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, fo that the substance of the body is in a manner chang'd into gouty matter, it then feizes the hands, wrifts, elbows, knees, and other parts; fometimes rendering one or more fingers crooked, by degrees destroying their motion, and forming at length ftony 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 feizes the thigh, which feems to fustain a great weight, yet without much pain, and thence gaining the knee, attacks that part more violently, and the limbs are now fo contracted, and disabled, that the patient halts along with pain. The urine refembles that which is voided in a diabetes, and the back and other parts itch much towards bed-time.

4. After many fevere 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 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 a masculine habit of body. Children and young persons rarely have it.

6. The curative indication confifts in strengthening the digestive powers, having first carried off the foul

humours, and this is done either by medicine, diet, or

exercife, 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, groundpine, 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 oranges 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 difill'd water after it.

Take of horse-radish root, slic'd, three ounces; garden scurvy-grass twelve handfuls; water-cresses, brooklime, sage and mint, of each four handfuls; the peel of six oranges; and two nutmegs bruis'd; 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.

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 is to be consulted, but he ought to eat only of one kind at a meal; as to the rest, excepting sless, he may eat other things at pleasure, provided they are not acid, salted, or season'd with spices. 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.

are weaker than wine, and not fo weak as water, left 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 fostest 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 insuse 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, insuse therein half an ounce of aniseeds 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 rife early, especially in winter, keep his mind easy, and avoid

too much application to fludy and bufiness.

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 preser'd, if not con-

tra-indicated by age, or the stone. Venereal pleasures must not be indulged, and all outward applications forborn.

ed in the fit, yet the patient should forbear slesh 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 slesh 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 fymptoms endangering life must be relieved, the most frequent of which are, the faintness of the flomach, attended with gripings, as if occasioned by wind; in which case nothing is so effectual as a small draught of canary, occasionally using exercise at the fame time. But if fome violent fymptom threatens immediate death, (provided the head be not affected) we must have recourse to laudanum directly, exhibiting twenty drops of it, in a fmall draught of plague water, and the patient must compose himself to rest in bed. But if thro' fome error committed in the use of the non-naturals, a violent fickness 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 fnatch'd me from imminent death. Let the patient drink a gallon of poffet-drink, or fmall-beer, and as foon as it is all thrown up again by vomiting, give him a fmall draught of canary, with eighteen drops of laudanum in it. And if the fymptoms yield not to this treatment, let a fweat be raifed 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 fwelling, is to be treated like a true peripneumony, viz. by repeated bleeding, cooling and 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

Of

this cafe.

#### Of a consumption.

I. THERE are feveral kinds of confumptions. (I.) 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 folflice, which happening to fuch as have naturally weak lungs, these parts must needs be still more weakened by frequent fits of coughing, and become fo diseased at length hereby, as to be utterly unable to affimilate 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 diffemper, 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, a loofness succeeds, occasioned partly by corrupt humours, discharged from the mesenteric arteries into the intestines, and deposited there, and partly by the weakened tone of the vifcera; and thus the patient perifhes at length the following fummer by a diffemper occasioned by the foregoing winter. And this is the prineipal kind of this difease,

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 infinuate themselves into the lungs, thro' the ramisfications of the arterial vein, or pulmonary artery, which run thro the whole substance of the lungs, or are discharged by the falival dusts, 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

3. When this difease is confirmed, it for the most part proves incurable. The cure, however, may be attempted, (1.) by lessening the cause of the desluxion 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 sever must likewise be check'd by cooling medicines; such as assessmilk, milk-water, emulsions made of sweet almonds, the seeds of melons, pumpkins, and white poppies, cowssip 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 esteemed an ex-

cellent remedy.

4. The cure of this difease, in my opinion, is most fuccesfully 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 might give half an ounce of fyrup of white poppies. (2.) After an interval of two or three days exhibit another purge, and repeat it as often as there is occasion, till the symptoms either go quite off, or at least abate. (3.) After every purgation, let the patient take twenty drops of opobalfamum upon a piece of fine fugar, without drinking after it, or a pill made of Chio turpentine, and fine fugar: but opobalfamum is not to be used unless suitable evacuations have been previously made. An electuary may be substituted instead of it, made of Lucatellus's balfam, liquorice powder, anifeeds, and turpentine. (4.) After using evacuations care must be had to abate the cough, for fear the lungs fhould be weakened by the continual agitation thereby caus'd. And for this purpose fyrup of white poppies is the best remedy, and may be adminiftered 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 affiftant in the cure of this difease 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 debarred any kind of solid or liquid aliment, as the cure depends wholly upon exercise. Some persons that have been recover'd by this method have been seiz'd with a tumor in the neck

like a fcrophulous fwelling,

7. (2.) There is another kind of confumption, proceeding from a cough, which comes at a different feason of the year, namely, at the beginning of summer. It frequently attacks young persons of weakly constitutions, whose blood is over-stock'd with hot acrimonious particles. Such subjects having over-heated themselves by drinking generous liquors too freely, force up blood from the lungs by coughing, and feel a slight fort of pain in those parts: and these symptoms not being removed in due time by proper remedies, an ulcer is soon generated in the lungs, whence pus is at length expectorated.

8. This kind of confumption is eafily cured, at least in the beginning, by bleeding and purging twice alternately, along with a cooling and thickening diet, and a

total abstinence from slesh.

9. (3.) The third kind of this diftemper arises from a translation of febrile matter to the lungs in the declension of a fever, which being more debilitated hereby, are attacked with the symptoms just enumerated.

10. Sometimes a confumption proceeds from the purulent matter left behind in a pleurify, for want of having been plentifully expectorated, and requires the fame

treatment as an Empyema.

rate and too frequent evacuations are feiz'd with a fourth kind of confumption, in which a hectic fever comes e very night after supper; and these persons are most subject to abhthæ.

FINIS.

Complete methodo of turby most different c. This established boing frequently used, will a trop bis been of long wandlors, and will bisewill prob. But the principal affiliant in the cure of this difeafe is riding on horfeback every day, informed that coint of diet, not be debarred and limb of folial or limethod have been feld with a turner in the rack like a ferophulous fwellings as a 7. (24) There is another kind of confumption, featon of the year, namely, at the regioning of himmen. monious particles. Such fublic is having ever-heated themselves by drinking generous femous too freely, torce up blood from the lungs by one blook and first a flight is foon generated in the lungs, we succeed to at slength B. This kind of confumption is cally cured, an least in the beginning, by bleeding and purging twice alter-

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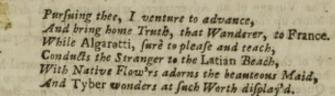
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