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T W E L V E
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O N
F E V E R S.

EXPLAINING
The Method of curing these Disorders, upon
the Principles of HIPPOCRATES.

B Y
T H O . G L A S S , M . D .

Translated by N . P E T E R S .

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M D C C L I I .

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THE METHOD OF CURING THESE DISEASES, UPON
THE PRINCIPLES OF HYPOCRATES.

BY
THO. GLASS, M.D.

Translated by M. F. P. R. S.

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MDCCLX.

T H E
P R E F A C E.

THE high *Admiration* in which *Hippocrates* has been held by all *Physicians* without *Exception*, for upwards of two thousand *Years*, induced me to study his *Writings* with the greatest *Care* and *Application*.

He is, and not without *Reason*, accounted a very difficult *Author*: for besides the *Obsolescence* of his *Language*, and *Corruptions* of his *Writings* by *Defects*, *Alterations*, and *Additions*, he affects a singular *Brevity* of *Expression*, and for the most part only mentions the leading *Symptoms* which happen in *Disorders*, and the principal *Remedies* administered to the *Sick*; and likewise frequently in a manner stifles his *Meaning*: for *Example*, He speaks several *Times* of an exquisite *tertian Fever*, and of *turgid Matter*, and gives us several *Precepts* relating to them; but has no where described the *Marks* by which

A they

they may be known. For the chief Aim of this consummate Artist, being to instruct those who were already well versed in his Art, he slightly touches, or entirely omits, such Things as were commonly known to Physicians; but whatsoever they were ignorant of, if of Consequence to be known, and productive of considerable Good or Hurt, those he thought proper to commit to Writing (1).

I therefore make no Doubt but Hippocrates was very intelligible to the Physicians of his Time, and to after Ages, who had the Use of the Writings left by his Predecessors; but these Records being lost, the first Principles of Medicine were wanting, upon which, as a foundation, he built his structure: So that we need not wonder if an Author, who has been celebrated for his Eloquence, is sometimes obscure to the Moderns.

This relates chiefly to those Books of his which were composed with a Design to be published: For, according to the Account of ancient Commentators (2), several of the Books of Hippocrates were committed to Writing for private Use, and designed as Helps only to the Memory; but his Successors published them, that nothing might be lost which came from so great a Man. Hence,

(1). De rat. vict. in morb. acut. (384) Edit. Foes 1657.

(2). Galen Com, 13. in Pront. 1. & lib. 2. de diff. respirat.

very likely, we meet in his works with so many crude, repeated, confused, and dubious Passages; nay, and some plainly false: For as much as the Editors have sometimes formed general Rules from particular Observations.

But among the vast Number of those who have laboured to explain the Writings of this truly great Author, Galen deservedly claims the first Place: For by interpreting the obsolete Words, explaining the ~~confuse~~ Sentences, amending the corrupted Places, and filling up the vacant ones, he drew out the Doctrine of Hippocrates from Obscurity, which was then badly understood, and that only by very few. In this Undertaking he has done vast Service to Physick; but it were to be wished, that he had neither mixed useless Philosophy, nor logical Subtilties, with that Art which Hippocrates first of all separated from the Study of Philosophy: For from hence, the Pleasure of philosophizing and disputing so captivated the Minds of Physicians, that they studied his System with the utmost Industry, but neglected the Observance of Nature, till Time at length destroyed what was founded only in Opinion.

Some of Hippocrates's Followers, striking out a particular Road, have attempted to dispose his Matter in a new Method, than which a more certain Way cannot be taken

for coming at the Truth of the Hippocratic Doctrine. It is plain to every one who reads the Writings of this ancient Physician, how Passages and Observations relating to the same Subject, are dispersed throughout the whole Work, and thrown in among other Things entirely foreign to them; so that to collect and dispose those in a proper Order, appears at first Sight to be a very useful Design: Nor need there Arguments to prove the Truth of it, since we have the Works of Celsus, Aretæus, and Lommius. But still I was in Hopes some Improvements might be made on what these and others have done in this Affair. With this View I sat about reducing the Matter Hippocrates has left us, under such Heads as seemed to me most convenient, one of which was of Fevers. On perusing what I had collected together, I imagined, that the History and Cure of Fevers, taken from Hippocrates, would be no unacceptable Present to young Practitioners: For this Distemper is the most common, and the most fatal of all that afflict Mankind; and though some Physicians may have differed from Hippocrates as to the method of Cure, yet all allow, that he was the best acquainted with the Signs of Diseases, and their Portent: But if so, it will follow, that he best knew what way Nature took, either to pre-

P R E F A C E.

vent bad Symptoms, or to remove them when present, or entirely to carry off the disease; and he who is the most knowing in these Particulars, must needs be most capable of imitating Nature. Hippocrates, therefore, not only by observing Nature, but also by following her, must have been as successful in curing Disorders, as in presaging their Event; and we learn from History, that on account of extraordinary Services done to Greece, he received divine Honours whilst alive, even at Athens; and was the first after Hercules the Son of Jupiter, who was initiated in the great Mysteries.

Moreover, it is not improbable, that he first invented this Method of Cure, and added it to the antient Physick. Among other Proofs of this, is the introduction to his book of Regimen in acute Diseases, viz. “ Those
 “ who composed what are called the Cnidian
 “ Sentences, have rightly described the Pa-
 “ tient’s Complaints in every Disease, and
 “ how some of them came on; and these any
 “ one, not skilled in Physick, might rightly
 “ describe, provided he was truly informed
 “ by each Patient what he suffers: But as
 “ to other Particulars, which a Physician
 “ is not informed of by his Patient, and
 “ should discover himself, they are neglected;
 “ though some of them are necessary to be
 “ considered, in order to form a Judgment
 “ of

“ of the Consequence. Now as the Method
 “ of Cure depends on such Knowledge, in
 “ this I very much differ from them.”

Besides, from this and other Passages which occur in his Writings, he has the Honour likewise of being accounted the Inventor of the Art of Presaging; and this, indeed, cannot be in the least doubted of if Galen is to be believed, who asserts, that he ~~was the first of all Physicians who attempted~~ to form a Judgment of the State of the Disorder from the Urine (3). There were, without Doubt, Physicians before Hippocrates, who could make a good Guess whether the Patient would die or recover; but this was not enough to satisfy him, for he wanted to know the very Day on which such a Change would happen, and likewise by what Means the Patient would escape, or by what Symptom be carried off: And truly the Hippocratic Practice rests chiefly on this knowledge, and cannot stand without it. For no Physician can prescribe a proper Method of Diet for one in a Fever, if he is ignorant how long the Fever will continue; nor will he be able to lower the Diet a little before the Crisis, if he cannot foresee its Approach. A Physician ought likewise to be able to foretell what Sort of Evacuation Nature will make use of in

(3). Lib. 1. de Crif.

order to carry off the Disease, otherwise he cannot possibly understand how to draw the morbid Matter the same Way that Nature impels it.

But to erect entirely, or to build upward from the Foundation such an accurate Art of Presaging, and to form from thence a most artificial Method of Practice, he must have been assisted with a great Number of Experiments; in making of which, it was necessary Nature should not be disturbed by Art, but left entirely to herself: For the first thing to be found out was, how Nature by herself cures Disorders; but how can that be known, when Art hath excited some Motion? For when Art makes one Motion, and Nature another, the Change produced in the body must be the compound of both.

How is it that we see very different Effects produced by the same Remedy, unless it proceeds from a difference in the Action of Nature? Besides when Blood is drawn, or a Vomit, or Purge, or any other Medicine given, which is capable of making any considerable Alteration, how can we tell with any Certainty, if not taught by former Experience, what would have happened to the Patient, if such a Remedy had not been administered?

The Observations we have in the first and third Books of epidemic Diseases, are, in

my Opinion, Experiments of this kind; for therein every remarkable Change which happened in those Disorders is very exactly noted, and in the Histories of particular Patients, all the Appearances which signified any thing, are fully set down as they daily succeeded each other: But it is seldom there is any Mention made of Remedies, and even the greater Part of these are slight; nor do I believe (to speak my Thoughts freely) that Hippocrates ordered more than those he has mentioned, excepting only a proper Diet. Indeed Food, when rightly managed, is one of the best Remedies in Fevers; therefore this Part of the Hippocratic Writing did not deserve to be derided by Asclepiades, as merely a Contemplation on Death; especially since hereby the Opportunity of rightly applying every artificial Evacuation in acute Diseases, which was not well understood before, and could not be quickly learned any other Way, was searched after for the common Good of Mankind in all future Ages.

But I know that Galen, and some very learned Men besides, contend, that the great Parent of Physick treated those Patients according to the Rules laid down by him in some other Parts of his Works. They defend their Opinion by such Arguments as
these

these (4): Hippocrates was, without Doubt, acquainted with very effectual Remedies for the Disorders with which many of these Patients were afflicted, because he has ordered them in some other of his Writings; wherefore it is unreasonable to think he suffered his Patients to go without them, when they were greatly wanted. It is most certain, indeed, that in other Places he hath prescribed divers Kinds of Remedies, and laid down the best Rules for applying them; nothing, however, appears to the contrary, but that he composed his Rules from these very Materials, (I mean the Observations of which I am speaking) grounding hereon his Conjecture of what would be proper, and afterwards confirmed it by Experiment.

It is also probable from History, that Hippocrates made these Observations in his younger Days: For, after the Death of his Parents, being already well instructed in Physick and other Sciences, he formed a Resolution of travelling, in order to have greater Opportunities of practising Physick: In these Travels he visited all Greece, and some Countries that lay beyond it, and became famous every where by his Practice. Upon leaving his own Country, he first settled in Thessaly (5); now there and at Thrace

(4). Comment. 31. 2d Epidem.

(5.) Soran. Histor. de Vita Hippocrat.

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almost all these Observations were made, which are related in his genuine Books of epidemick Diseases.

Moreover, it is very credible, that in these Patients he would not so often have observed Fevers to be carried off by an Hæmorrhage coming on of its own Accord, if a Vein had been opened whenever the Fever was violent, the Age vigorous, and the ~~Strength~~ firm: Yet he himself orders this, but it is quite unworthy of an honest Man, in so serious an Affair, to advise others to that which he would not himself make Use of as the best Remedy in the like Case. We may therefore reasonably conclude, that Hippocrates was as yet ignorant of this Rule.

But it is farther urged for the Opinion of Galen, that Hippocrates plainly tells us, that Medicines were sometimes given to the Patients whose Histories he hath recorded in these Books, though he hath not informed us what they were, viz. In the ninth History of the third Book, and the fifth in the second Section of the same Book. In the first History is the following Passage, "ωφελεειν" εκ ετι ηδυνατο, that is, as Foësius interprets it, Non amplius quicquam juvare poterat, Nothing could do any further Service; which indeed may as well be understood of the Efforts of Nature, as of the Helps of Art: For thus he affirms, that

a Flux of Blood from the Nose in an Inflammation of the Præcordia, κάρτα ὡφελέειν, doth a vast deal of Service (6); and this Meaning of the Word is not uncommon. But the same Sentence is translated otherwise by Valefius, viz. Remedio non locus erat, There was no Room for Remedies. The other History is this: "Calvus of Lariffa was suddenly seized with a Pain in his right Thigh, and received no Benefit from the Use of Remedies." The Greek Sentence is τῶν δὲ προσφερομένων ἔδεν ὡφελεῖ. The Word προσφέρειν (as Foefius says in his Oeconomy) properly signifies the administering of Food, and those Things which more immediately belong to Diet; yet this Word often relates to external Applications, and now and then likewise to all Kind of Remedies: But as Hippocrates was accustomed to use Fomentations immediately at the Beginning of Disorders, for asswaging all Manner of Pains, these Words may possibly signify, that on the first Day external Remedies were in vain applied to this Patient. So that upon the whole, there does not seem to be a great deal of Force in these Arguments.

But it is absurd to suppose, even by Galen's own Confession (7), that Hippo-

(6). In prognostico, (38).

(7). Comment. 31. ad Epidem.

crates should make no Mention of his giving the strongest Medicines, and applying those Remedies which produced the greatest Alterations, when he carefully informs us of the very slightest. Who can believe, that he who never neglected to inform us of a Drop of Blood's falling from the Nose, or of the injection of a Clyster, or of the putting up of a Suppository, or of the applying a Fomentation, should often pass by in Silence the taking away a large Quantity of Blood, or the giving a strong Purge? And yet this same Man carefully describes the Quality, Quantity, and Time of all the natural Evacuations.

To avoid this Difficulty, it is said, that these Writings relate only to the Art of Presaging: But Histories of Patients cannot be at all serviceable towards presaging, if the Remedies made Use of are concealed: For if violent Remedies were privately given, we don't know what Alterations were occasioned by them; but it is certain, that they must have occasioned some very considerable Change. Therefore we shall in vain expect the same Symptoms to succeed one another in other Patients in Fevers, where the same powerful Remedies are not applied, and the more egregiously shall we be deceived, the greater the Virtue of the Remedy.

But

But from these Observations, in which nothing is concealed which was necessary to be related, we may see in what Manner the Symptoms in Fevers, when not interrupted by Art or any external Cause, succeed one another, and by what Ways Nature herself gets rid of these Diseases: From that Fountain flows the Art of Presaging, and from this the true Art of healing. This is the genuine Doctrine of Hippocrates, which has stood entire the Examination of Ages; and being equally true in all its Parts, has never put on a different Face. I appeal to the most learned Boerhaave, whose Opinion take as follows (8):

*“ Examine Greeks, Romans, Arabians,
 “ you’ll every where find the Doctrine of
 “ Hippocrates repeated and confirmed: For
 “ whatever Things excellent may be found in
 “ Diocles of Carystos, in Aretæus of Cap-
 “ padocia, in Ruffus of Ephesus, in Aetius,
 “ Oribasius, and others whose Writings
 “ have reached down to us, is owing to
 “ Hippocrates. The Romans, among whom
 “ Celsus and Pliny excel, look upon Hip-
 “ pocrates as a Deity, and have recourse
 “ to his Precepts as to an Oracle. The best
 “ of the Arabians describe Galen as a pure
 “ Fountain, who, wherever he has followed
 “ Truth, is wholly Hippocratic. Among*

(8). In oratione de Commend. stud. Hippoc.

“ the more modern physical Writers, it is
“ to be lamented, that a few only, if any,
“ have attained to the Perfection of the
“ Antients. One I most highly esteem, Dr.
“ Thomas Sydenham, the Glory of his
“ Country, and greatest Light of Physick;
“ whom as often as I contemplate, I see in
“ my Mind an exact Representation of the
“ true Hippocratic Genius: His Merits
“ are far superior to the highest Encomiums
“ I can give him.” To which, if I might
add any thing, it should be this: That by
following closely the Steps of his divine Pa-
rent in Practice, he arrived to so great
Success in curing acute Diseases.

But it is more owing to a neglect of cul-
tivating the Hippocratic Method of Cure,
than to any other Cause, that although by
later Experiments the Structure and Powers
of the human Body are far better understood,
and the remote Causes of Diseases more ac-
curately investigated, and the Number of
Medicines greatly increased, and their Vir-
tues more largely discovered; yet neverthe-
less, the usefulness of Medicine in curing
acute Diseases, if not diminished, is not
increased since the Time of Hippocrates.

This being premised, I shall proceed to
the History and Cure of Fevers, according
to the Precepts of the divine old Man.

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COMMENTARY I.

Of FEVERS and their Difference.

A FEVER is called by *Hippocrates* Πύρ and Πυρετός, which denote Fire, it being from the Heat, which the Patient complained of, and the Physician perceiv'd by his Touch, that a Judgment was form'd of this Distemper. For those who practis'd Physick before *Herophilus*, were not very sollicitous about the Pulse: This famous Pupil of *Praxagoras*, who flourished at *Alexandria*, about the Time of *Ptolemy* the Son of *Lagus*, added the Doctrine of the Pulse to that Part of Physick which treats of the Signs of Disorders: The same was afterwards more
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largely explained by *Archigenes*, and at length brought to Perfection by *Galen*. To these Persons we are chiefly indebted for the Discoveries conveyed down to us, relating to the Pulse (1).

Some Fevers go off in such a Manner, as to leave the Patient entirely free, before another Fit comes on; hence they have the Name of Intermittents: Of these some return every Day, some every third Day, and some every fourth Day; others are compounded of the preceding, and some observe no certain Periods: There are a few which have longer Intervals, returning every fifth Day, or later, but such are rarely met with (2).

There is another Kind of Fevers which at Times abate of their Violence, but still stick to the Patient till a new Fit returns; whilst others have scarce any or no Remission at all; both these are called by *Hippocrates* continual Fevers, but his Successors have divided them into Continual and Remittent.

(1) Galen. lib. de Puls. differ.

(2) Hip. Epidem. 1. Sect. 3.

Of continual Fevers, these which end within four Days are extremely acute; within seven Days exactly acute; within fourteen simply acute; tho' the last sometimes extend to the twentieth Day, after which Time, if there has been no considerable Remission, they generally grow more gentle, and are then to be reckoned of the slow Kind (3).

Fevers are also distinguish'd according to the Difference of their Causes; as a Fever from Repletion, &c. so also from the efficient Matter, as a Fever from the Bile, &c. likewise from some remarkable Symptom attending it, as an ardent Fever, a Fever with Hiccup: Thus *Leipyria*, *Assodes*, and innumerable other Names have, on these Accounts, been given to Fevers. But the great Parent of Physick was very little solicitous about Names, and blames the *Cnidian* Physicians for being so particular about them (4): What he chiefly regarded, was the Violence of the Fever, the Strength of the Patient, and the Tendency

(3) Lib. de Prænot. & Aphor. 23. Sect. 2.

(4) Lib. de Victûs rat. in acutis, sub initio.

of the morbid Matter. However it may not be amiss to remark here, that those Fevers which arise from an Inflammation of any particular Part, take their Name from the Part affected, as a Phrensy, Peripneumony, Pleurisy, Hæpatitis, and the like.



COM-



COMMENTARY II.

*Of CONCOCTION and CRUDITY; with
other Signs, as well of Recovery, as of
Death.*

IN every Fever great Regard is to be had to what Physicians call the Stages, or Periods of the Disease, and these are four, *viz.* the Beginning, the Increase, the State, and the Declension (5). In the Beginning, according to *Hippocrates*, all things are crude and gentle; but these Circumstances are not limited to any certain Number of Days, therefore neither is the Beginning of the Disease. A Fever then will be in its first Stage until the Signs of Concoction, or of great Danger appear. After the Beginning is the Increase, which continues so long as the Com-

(5) Galen. de Crif. lib. 1.

6 *Of Concoction and Crudity, &c.*

plaints and Paroxysms are growing worse, and these return sooner than the former, and end later. The State or Height of the Fever, is when the Paroxysm equals the former without exceeding it: But as soon as the Complaints and Paroxysms abate, the Declension begins. In continual Fevers, when the Symptoms grow worse and worse, it shews the Disease to be increasing, but when they grow milder and milder, it is declining (6). *Galen* however won't allow these Diseases which are free from Danger, to be absolutely at their State, before the Signs of a perfect Concoction are apparent (7). The State indeed, according to *Hippocrates*, doth signify sometimes a perfect Concoction, and sometimes the greatest Height of the Fever. As to the Signs of Concoction and Crudity, he is very particular, and from them chiefly draws his Rules both of Prognostication and of Cure: On which Account 'tis necessary to know precisely what the Ancients taught concerning them.

Meat and Drink, then, received into the Stomach, continue in a crude State, until

(6) *Celsus*.

(7) *De Cris. lib. 1. cap. 18.*

they

they are attenuated, dissolved, and digested; when they have undergone this Change, Concoction is finished in the first Passages. But the milky Humour thence prepared, which is there perfectly concocted, being afterwards carried into the Blood, is very unlike the Humour which flows in the Blood Vessels, and therefore is in this other Elaboratory of Nature, accounted crude, but when it has been farther prepared in the Vessels, and is changed into Blood, then it is no longer crude, but mature or concocted.

Besides, I find *Hippocrates* calls not only that Matter which is imperfectly prepared and undigested, crude, but likewise whatsoever degenerates from its natural healthy State. “ There is, says he, in a human
“ Body, somewhat of bitter, and salt,
“ and sweet, and sour, and sharp, and
“ insipid, and a thousand other Things,
“ which have different Qualities, according to their Quantity and Strength, but
“ by reason of their being mixed and
“ blended one with another, they are not
“ perceiv’d, neither do they cause any
“ Uneasiness; but when any of them is

8 *Of Concoction and Crudity, &c.*

“ separated from the others, and collected
 “ by itself, then it becomes sensible, and
 “ occasions some Disorder (8) : Thus in a
 “ *Coryza*, there is a Discharge of a thin
 “ acrid Humour from the Nose, or De-
 “ fluxions fall upon the Eyes, by the Acri-
 “ mony of the Humours ; of whatsoever
 “ Kind they be, the Part affected will be
 “ fretted and pained, the burning Heat,
 “ and Height of the Inflammation will con-
 “ tinue till the catarrhus Humours are con-
 “ cocted and thickned. So likewise when
 “ there is a Defluxion upon the Fauces,
 “ and from thence a Hoarseness, a Quin-
 “ sey, an Erysipelas, or Inflammation of the
 “ Lungs, the Discharge is first of all salt,
 “ thin, and acrid ; and whilst this lasts,
 “ the Disorder is confirm’d ; but when
 “ it grows thicker, and more concocted,
 “ and has lost its Acrimony, then the Fe-
 “ ver, and all the other Complaints, go
 “ off. The Matter is concocted, when
 “ the Humours are thoroughly mixed
 “ and tempered with each other, and as
 “ it were digested” (9).

(8) In. lib. de Prisc. Medicin. (13.)

(9) In. lib. de Prisc. Medic. (15) & (16.)

In perfect Health it is certain, that both what is discharged from the Body, and what is retained within, are thoroughly concocted; and in Sickness, the nearer they are like what they were in Health, the nearer they are to a good Concoction. Crudity is judged of from the Contraries. When there is any remarkable Crudity, the Body is some way or other disordered by it, and the greater the Crudity, the greater will be the Disorder. In Fevers, however, the Signs of Concoction and Crudity, are chiefly taken from the Stools, and from what is spit up, and from the Urine, but mostly from the latter. For Fevers are reckoned Diseases of the Blood, and the Urine is nothing else but a Liquid secreted from the Blood, on which Account it will infallibly give the best Indication of the Disposition of the vital Humour, when there is no Disorder in the urinary Passages.

In this excrementitious Humour, the Substance, Colour, and Contents are usually regarded. That Urine is best which resembles what is made in Health; this when discharged in the Morning, after a
perfect

perfect Concoction of the Food, is of a moderate Consistence, somewhat deeper than a straw Colour, and what Sediment it has, is smooth, white, and even : Whilst the Chyle is mixing with the Blood, there is a larger Sediment, but when that is thoroughly incorporated with it, a slighter. The Colour of the Urine is heightened by Fasting, and the longer a Person refrains from eating and drinking, the deeper will it be. Exercise likewise, and whatever considerably quickens the Blood's Motion, adds both to the Height of the Colour, and the Quantity of the Sediment. Moreover, the Way of Living, Age, Constitution, Climate, or Season of the Year, will make a Difference. Therefore in acute Fevers, we must expect the Urine to be of a deeper Colour, and more loaded with Contents, than in Health.

There are several Sorts of crude Urine ; one Sort is turbid as soon as discharged, and shortly after drops a Sediment ; another Sort continues turbid ; a third is fine for some Time, then grows turbid, and drops no Sediment at all. The first Sort is the best, and shews that Concoction is
advanc'd ;

advanc'd; the last signifies that it is scarce yet begun; the other, that it is in a Condition between both: These are Crudities with regard to the Consistence.

As to the Colour, that which is limpid is the crudest of all; between this, and that of a natural Colour, there are many Degrees, as there are between this last and black Urine; so that the farther they are from the natural Colour, the farther are they from a State of Concoction. Urine which is of a good Colour, but has no Sediment or Clouds in it, is concocted as to Colour, but in other respects crude. Limpid Urine, in acute Fevers, denotes a Phrensy. Where the Urine is for a long Time together quite fine, and of a natural Colour, it shews, in a dangerous Fever, that Nature is hardly able to concoct the febrile Matter; but in a Disease which is not mortal, that an Abscess will follow.

If smooth, white, even Clouds float in the Urine, they denote it almost concocted, especially if they fall downward: If there is a red, smooth, and even Sediment in Urine of a deep Colour, the Disease will be lasting, but is without Danger: When the Urine

rine appears sometimes concocted, and sometimes crude, 'tis a Sign of a long and dangerous Disease : When the Contents of the Urine are of a mealy Kind, or scaly, or like Bran, or black, or livid, or where a fatty Film floats on it, somewhat like a Cobweb, there is great Danger. The mealy Kinds denote a violent melting Heat ; the fatty Film likewise a colliquative Disease ; the branny and scaly Contents shew the Solids to be worn away ; and the Black, a Gangrene of the Humours, unless the Patient be a Woman who labours under a Suppression of the Menfes : The thicker the black Urine is, the more dangerous ; if it be thick and quite black, it is a sure Sign of a deadly Disease.

There is, however, an Allowance to be made for the Constitution of the Patient, and the Nature of the Distemper ; for if Children or young Persons fall into a Fever, after Repletion and Inactivity, the Urine can hardly be judged well concocted, before it has a large and laudable Sediment ; but if Persons of a middle Age, are seized with the same Disorder, after
Abstinence

Abstinence and hard Labour, a kindly Cloud in the Urine promises a good Crisis. Limpid Urine is worst in Children, and black in Adults (1). In Icteric, Bilious, and genuine Erysipelatous Fevers, and some of the putrid Kind which happen in Summer, the Urine is generally transparent and yellowish, almost home to the Crisis: In those Fevers, when a Cloud appears in it, 'tis a Sign of Concoction; sometimes, tho' but seldom, it appears turbid, and if it has any Sediment, 'tis generally greenish, yellow, or brown, but never white (2).

This Sort of Fevers is very different from the Inflammatory Kind, where a white Sediment is so much desired; for in these the Blood is thicken'd, its red Globules augmented, and when any is drawn off, it is covered with a tough, sily Pelli- cle; whereas, in the others, it is dissolv'd, hardly coagulates, and sometimes the greatest Part of it is turn'd into a thin ichorous Humour. In slow pituitous Fe-

(1) Hip. Prænot. (40.) Prænot. coac. (210) De Judicat. (54). Galen. de Cris.

(2) De Gorter. Exercit de site. Wintringham Com. Nosolog. in Constit. Ann. 1719.

vers, the Urine is pale, which, whilst the Disease is increasing, often drops a great deal of thick, flakey, uneven Sediment, of a pale or whitish Colour. About the State, when Nature gets the better, the Sediment is in a smaller Quantity, and more concocted; but when the Patient is in a very dangerous Way, the Urine is sometimes pale and fine from the Beginning to the End (3). Moreover, in a bastard Peripneumony, the Urine affords scarce any Prognostick at all, insomuch that it frequently appears of a good Complexion, even when Death is at Hand (4). Lastly, When Nature throws off the febrile Matter thro' other Passages (provided the critical Evacuations, or Abscesses, proceed regularly) we sometimes find the Urine is not concocted, until the Disease is in its Declension, or quite over; and this happens most of all in Fevers which are terminated by Abscesses on the Skin; and in the next Place in those which are terminated by Stools; and then in those

(3) Hollerius in lib. 2. de morb. intern. cap. de Feb. ex cruditate.

(4) Boerhaave cap. de peripneumon. lent.

which

which are terminated by Expectoration. If the Urine is suppress'd, or comes away involuntary, there is the utmost Danger.

As to Concoction in the first Passages, we may know it to be well performed, if the Stools are neither more or less frequent than they used to be in the Time of Health; if their Quantity answers to what is taken in; if they are brownish, soft, figured, and equal, and not fetid. These are the most kindly Stools in acute Diseases, tho' lax Stools are of service if they are not very thin, large, nor frequent (5). On the contrary, it is a Sign of a bad Concoction in the first Passages, when the Stools are either in greater or less Quantity than is requisite, when they are either very watery, or very much dried up, or of a clay Colour, or bilious, or not well mixed. Moreover, not only the excrementitious Matter of the Food, and of the first Passages, is evacuated by Stool, but sometimes in Diseases, the morbid Matter of the whole Body is purged off this Way. For Inflammations of the internal Parts of the Body, purulent Abscesses, and acute Fe-

(5) Prænot. (39 & 40.)

vers, are sometimes carried off by Stools of a bilious, mucous Nature. It may not be improper to observe here, that the Antients called any of the Excrements bilious, when they were pretty much tinged with a yellow Colour. Those Stools are very bad, which are extremely thin, and entirely bilious, frothy, greasy, fetid, bloody, when not critical, and griping; or which come off very frequently, or weaken the Patient by their Quantity: It is still worse when the Stools come off insensibly; and worst of all if they are black or livid, especially when the Patient is much worn by the Disease; for such generally die the Day following (6).

In Diseases of the Breast, we ought chiefly to regard the Matter which is spit up; and this is reckoned well concocted, if it be smooth, white, of an uniform colour, and in Consistence like good Pus; it ought to be brought up by the Cough with Ease, to be discharged pretty early in the Disorder, and in a considerable Quantity: However, in the Beginning of

(6) Hip. de Prænot. Aphor. 22. Sect. 4. Coac. Præfag. (216.)

the Disease, we must not expect a Discharge of concocted Matter: for tho' it should be of a deeper Colour, or have some Blood intermixed, provided it is expectorated betimes, and becomes continually more and more concocted; or if the Patient begins to expectorate in the second Period of the Distemper, and the Matter discharged has the Signs of Concoction, it is a Sign of a safe and short Disease. If there has been no Expectoration in the first Stages of the Disease, it is bad, but worse if the Discharge which went on well in the Beginning, stops about the Crisis. Matter which is whiteish, glutinous, and coughed up with a great deal of Difficulty, is of no Service; that which is quite yellow or bloody after the first Days, is a Sign the Disease is crude, and will give no Relief: When it is thin, salt, and frothy, and excites a violent Cough, but is hardly to be brought up by it, if it continues long so, it is dangerous. The worst kind of all is the Black, and that which at the State of the Disease is so viscid that it cannot be expectorated, but sticks fast within the

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Lungs,

Lungs, occasioning a rattling in the Breast, and Suffocation. Inflammations of the Lungs, and Pleurifies, where there is no Expectoration, are very dangerous(7).

Though *Hippocrates* very much depended on these Signs, yet he carefully observed every other Appearance that could give room for Hopes or Fear. To mention a few; it presages good, if the Patient has almost an healthy Countenance, if he lies in Bed in the same Situation as he was used to when well, or in any one he likes; if he breathes freely, if he is free from Pain, if he is of a sound Mind, and bears his Distemper with good Spirits; if he wakes by Day, and sleeps by Night, if he has no eager Desire for drinking, nor aversion for Food; if the Præcordia are even, soft and plump, if the Body is all over soft, and equally warm. If there are all these Circumstances, or most of them, the Disease is without Danger, and will soon be at an End. But the contrary denote Death: That is, when immediately at the Beginning of a Disease, the Face, without any apparent Reason, is

(7) Hip. Prænot.(41) & Coac. Profap.(178)

funk or discoloured; when the Eyes, the Nose, the Ears or Tongue are much altered as to appearance, or the Use of their Functions; when the Patient lies continually upon his Back, or is every now and then sliding downwards towards the Bed's-foot, or bears the Disorder with Impatience, and is continually turning from Side to Side; when he breathes with Difficulty, when he has a violent and continual Pain in his Head, or in any of the more noble Viscera; when he is greatly oppressed with watching or with Sleep, or very much out of his Senses; where there is an insatiable Desire of drinking, but an utter loathing of all kinds of Food; where the Præcordia are unequal, hard, elevated, or depressed; where the Inside is burning whilst the Outside is cold. Some of these Symptoms, however, are no way dangerous, if they appear after Concoction. But I shall dwell no longer on this Subject, since *Hippocrates* in his Treatise of Prognosticks, hath carefully recorded all the good and bad Signs in acute Diseases, and made an Estimate of

their respective Powers. For among the good Signs, all are not equally good, nor among the bad, are all equally bad, some being worse than others, and some worst of all. But in general, every Alteration of Circumstances from what they were in perfect Health is bad, and the greater the Alteration is, the greater the Danger, and the more necessary those Parts or Functions which suffer the Alteration are to Life, the more certainly is Death to be expected. Whoever (says the best of Physicians) is desirous of knowing beforehand, which of his Patients will recover, and which die, and who will continue ill a long Time, and who will soon get well, ought to have a thorough Knowledge and Understanding of all the Signs, and more especially of those exhibited by the Urine and Expectoration, and to compare their several Powers with each other, as I have done. Yet in another Place he gives this Precaution, that Predictions are not always certain in acute Diseases; for, as *Celsus* relates, “ There
“ is such a great Variety of Constituti-
“ ons,

“ ons, that no certain Signs can be laid
“ down, of the future Event of a Dis-
“ order; this indeed renders our Art
“ Conjectural, but such is the Nature of
“ the Conjecture, that tho’ it most com-
“ monly answers, yet it may now and
“ then deceive us; and this is a Thing
“ which the Weakness of Man cannot
“ avoid”(8).

(8) *Celsus*, lib. 2. cap. 6. In this Book he explains chiefly from *Hippocrates*, the whole Art of Presaging.





COMMENTARY III.

Of the Crisis, and the Signs of its Approach.

IN acute Diseases there frequently happens a sudden Change, either for Recovery or Death: This Change is generally preceded by a violent Perturbation, and some or other of the following Symptoms. Very violent Pains of the Head, great Giddiness, a Delirium, deep Sleep, Noise in the Ears, Deafness, redness of the Eyes, Mists before the Sight, a false Perception of Flashes and Sparkles of Light, involuntary Tears, shaking of the lower Lip, a universal Tremor, a sudden Difficulty of Breathing, a puffing up or drawing in of the Præcordia, hurry of Mind, Anxiety, perpetual Tossing, intolerable Heat. This particular Time of the Disease the Greeks called Κρίσις, hence the Hurry and Evacuations which happen about

about the *Kρίσις* are called Critical. When perfect Health succeeds, the Crisis is judged compleat; but when the Disease goes off for a short Time only, to return again, or abates considerably of its Violence, it is then imperfect. Moreover, *Hippocrates* in his Histories of particular Patients, pronounces those critically freed from their Fevers, who recover by slow Degrees, and repeated Evacuations, without any violent Perturbation. But *Galen* allows only the sudden Changes in Diseases, which are attended with Perturbation, to be properly called a Crisis (9).

It having been observed that a Crisis happens more frequently, and that its Signs are more certain on some particular Days, the Antients have called these Days Critical, among which the *Septenaries* were esteemed the most efficacious, and next the *Quaternaries*. The *Septenaries* are the seventh, fourteenth, and twentieth, for the second *Septenary* begins with the eighth Day, and the third with the fourteenth; the middle and last Day of each *Septenary* are *Quaternaries*, such are

(9) Lib. 2. de Cris. at the beginning.

the fourth, seventh, eleventh, fourteenth, seventeenth, and twentieth. *Hippocrates* likewise observed, that acute Diseases had their Paroxysms on these Days, and therefore tells us that their Periods are terminated by four Days unto the twentieth (1): Moreover every Quaternary, which is the middle of its proper Septenary, is called *Index* and *Contemplatorius*, because the Signs of a Crisis to happen on the following Septenary, appear the preceding Quaternary; accordingly the fourth Day of a Disease is the Index of the seventh, so likewise the eleventh of the fourteenth, and the seventeenth of the twentieth; the seventh, fourteenth, and twentieth are both Quaternaries and Septenaries (2); of the other Days, those called equal, were thought less effectual to terminate Fevers, so that if the Fever left a Patient on those Days, a return was apprehended, especially if the Paroxysm did not come upon the equal Days; for where the Paroxysm comes upon the equal Days, the Crisis happens on the same (3): But such

(1) Lib. Prænot. (44)

(2) Aph. 24. Sect. 2.

(3) Lib. 1. morb. vulg. (964) (965) Aphor. 36. Sect. 4.

Fevers are generally more dangerous than others, whose Paroxysms return upon the unequal Days. But of all the critical Days, *Galen* thought the seventh the most powerful, next to that the fourteenth, then the ninth, and then the twentieth; these constitute the first Order, as the seventeenth, fourth, third, and eighteenth do the second. The sixth has the worst Character of all, for the Crisis which happens on that Day is fatal, or at least extremely dangerous. Those Fevers which leave the Patient on the eighth and tenth Day, he expected would return again(4). In the second twenty Days, only the Septenaries have a Power of terminating Fevers by a Crisis, and after that Time only the Vicenaries.

But *Celsus* imagines that in this Affair the Antients laid a Stress on the *Pythagorick* Numbers, which were then in great Repute(5): However we find that regular Tertians by a constant Law, have their Fits on the alternate Days, with respect to two Paroxysms; and ardent Fevers are

(4) Lib. 1. de dieb. Decretor.

(5) Lib. 2. cap. 4.

likewise observed to keep the same Period. Tertians indeed do not always return exactly at the same Time, for they sometimes seize the Patient a few Hours sooner, and sometimes later, so that in the Course of a few Periods, those Paroxysms which came on at the beginning, upon the unequal Days, will in the Sequel, by hurrying on too soon, or staying off too long, happen on the equal. Those of them which are growing worse, very frequently anticipate the due Time; on the contrary, when they become more gentle, they generally return later; wherefore in continued Remitting Fevers, whose Paroxysms return every other Day, like as in a Tertian, if the Paroxysm has so far anticipated its due Time as to seize on an equal Day on this side the seventh, we may suspect the Disease to be very dangerous. For we can hardly expect in the beginning of a Fever, that the Interval should be prolonged so far, as that the Paroxysm which was expected on the fifth Day, should be delayed till the sixth; since it is sufficient for the Disease to shew such a Disposition towards the End of the
second

second Septenary, so that the seventh Paroxysm which was to have happened on the thirteenth Day (at least if it returned every other Day at the usual Hour) should now be protracted to the fourteenth. Moreover, in Intermittent Fevers, the Matter which produceth the Paroxysm is concocted within the Space of the Fit, and begins to be expelled at the Height of it: But in Continual Fevers, the febrile Matter requires a longer Time to be concocted, and when it is prepared for Expulsion, no fitter Time can be found for its being thrown out, than when the Paroxysm is at its Height, because then all the Humours are propelled through the Vessels with the greatest Violence. In Fevers therefore when the Paroxysms happen every other Day, and the Assaults are more violent every other Paroxysm, or on the Quaternaries, and most violent of all every other Quaternary, the Septenaries will on this Account be the most critical; after them the Quaternaries, and then the unequal Days. Hence likewise we may see the Reason why Fevers which run higher on the equal Days, should have

have their Crisis also on the same Days. But whether the Causes assigned seem probable or not, the Histories of Patients in the first and third Book of Epidemics plainly evince, that the Crisis and their Signs for the most part appear on the critical Days. With us indeed Fevers have not such regular Returns every other Day, as they had formerly in *Greece* and *Rome*, either on account of the Difference of Climate, or manner of Life, or Method of Cure. Such Fevers as are scarce at all heightened on the alternate Days, frequently elude the Power of Critical Days; and slow Fevers, for the generality, are not influenced by them; in these indeed we ought to regard the feverish Periods, if there are any, above the Critical Days.

Besides these, there is another Property ascribed to Critical Days, which is, that Fevers which return again after an imperfect Crisis, generally begin their second Attack upon one of those Days; and we observe that Quartan Fevers, cured by the Peruvian Bark, return at that Time on which the Paroxysm would have happened,

pen, even tho' the Fever has been stopt for some Weeks. But those who are inquisitive after more Knowledge in this Matter, may consult *Galen's Books of Critical Days*, and his *Commentaries on the First and Third Books of Epidemics*; in the last Pieces, according to the Remark of the learned Dr. *Freind*, his only Aim seems to be, to explain the Doctrine of Critical Days, and to confirm it chiefly by this Authority. I should have mentioned before, that when any Part of a Crisis falls out upon a Critical Day, the Crisis is to be attributed to that very Day, provided the Signs of it appeared upon the preceding Quaternary.

What remains is to treat of those Signs or Indications by which we may presage the Time of the Crisis; and here we must consider the present Epidemick Constitution, the Climate, the Season of the Year, the Age, Temperament of the Patient as well as his Way of living, and likewise the periodical Returns of the Fever, but most of all the Signs of Crudity and Concoction(6).

(6) Hip. Aphor. 2. Sect. 1. Galen de Cris. lib. 3: & de Dieb. decret.

If the Patient is in the Vigour of his Age and Strength, if it is Summer time or very near it, and the Weather agreeable to the Season, if 'tis not a cold Climate, if the Body is compact and of a florid Complexion, if the Fever is violent, if the Signs of Concoction appear the first Day, and the other Symptoms are very favourable, then the Disease will be happily terminated by a Crisis, on or before the fourth Day; and the more there concur of these Circumstances, the more certain will the Event be. ' Thus *Pericles* whose Urine on ' the third appear'd well concocted, was ' on the fourth critically freed from his ' Fever (7). (But let us take care not to be deceived by a kindly Sediment which sometimes appears in the Urine at the very beginning of a Fever, for this is sometimes a Sign of the Concoction of the Food, and not of the febrile Matter; what proceeds from concocted Food, quickly disappears, whereas that which is owing to a Concoction of the morbid Matter becomes daily more mature). But if there's no Sign of Concoction on the first or second Day, tho'

(7) *Ægrot.* 6. Sect. 2. Lib. 3. *Epid.*

the Patient has all other favourable Symptoms, he will not be freed from his Fever in the first Period, or which is the same thing, within the fourth Day. If the Urine has Signs of Concoction on the fourth Day, a Crisis may be expected the seventh (8), especially if the Fever is more Intense every third Day, and no Obstacle arises from the Physician, the Patient, his Attendants, or any other external Cause; and this is a thing which ought to be particularly consider'd in all Presages, for if nature is interrupted by any of these, a Crisis cannot be foretold with any manner of Certainty (9). But if there's no Concoction before the seventh Day, there will be no Crisis before the eleventh, nor on that unless the Heat be great, the Paroxysm violent, and its Returns upon the unequal Days. Signs of Concoction appearing on the eleventh Day, or the bad Symptoms of the Disease abating (which shew the Matter to be concocted in the Blood-vessels tho' not discharged) prognosticate a Crisis will happen on the fourteenth. In

(8) Aphor. 71. Sect. 4.
Lib. 1.

(9) Galen de Dieb. Decretor.

this second Septenary there generally happens a very remarkable Alteration, and the Violence of the Heats seldom continues beyond this Period ; for which Reason *Hippocrates* sometimes fixes the fourteenth Day for the Boundary of acute Fevers. Nevertheless if this Day doth not terminate the Fever, but advances the Signs of Concoction, the seventeenth will put an End to it. The slightest appearance on the seventeenth Day is a sure Token of a Crisis about the twentieth or twenty first.

But in fatal Disorders, bad Signs appearing preface Death to the Patient, after the same Manner as good Signs in those that are free from Danger preface a Recovery : So that the most malignant Fevers, and such as are attended with the worst Symptoms at the very beginning, kill the Patient on or before the fourth Day (1): Thus it happen'd to a Patient of *Hippocrates* in a Phrensy (2). But in Fevers exquisitely acute, if a fatal Symptom appears on the fourth Day, Death may be expected on the seventh, unless the Pa-

(1) Hip. prefag. 44. (2) *Ægrot.* 4. Sect. 2. Lib. 3. Epid.

roxyfm anticipates the usual Time, and kills the Patient on the eighth, and indeed a probable Conjecture may be made of the very Hour of the Patient's Death; for in a deadly Disease, if at the beginning of a Paroxyfm the Patient is excessively cold, and hardly recovers Heat again, if he breathes with Difficulty, and Rattling in his Throat; if he is exceeding faint, or excessively sleepy, or has any other such dreadful Symptom, which he had not at any other time of the Paroxyfm, 'tis very likely he will die in the Beginning of the next Fit, especially if it comes on upon a critical Day. But if the Beginning of the Paroxyfm is somewhat gentle, and the State more violent, on Account of terrible Hurries of Mind, Anxiety, continual Tossings or Convulsions, he will die in the State of the Paroxyfm. When there are no such Symptoms about the State, but the Declension of the Paroxyfm is attended with cold partial Sweats, about the Face and Neck only, and the Patient almost loses his Senses and the Motion of his Limbs, Death may be
D expected

expected the very Hour we calculate the Declension of the next Paroxysm (3).

It cannot, however, be foreseen on the first Days of the Disorder, on what Day a Fever, which is not acute, will end; yet we may be certain immediately at the Beginning, that the Distemper will run a considerable Length, when the Fever is not altogether acute, when it increaseth slowly, when its Paroxysms come not on every third Day, when the Patient is chilly either by Nature or with Age, and the Body is flabby and bloated, when the Weather has long been moist and cold, when the Disease continues quite crude, or is attended with bad Symptoms; for the more of these there happen together, the longer will the Distemper last, provided the Patient has Strength to bear up under it.

A Physician who is incapable of distinguishing long Diseases from short ones, at the very Beginning, can by no means be qualified to prescribe a proper Regimen for his Patients, at least according to the Directions of *Hippocrates*.

(3) Galen. de Cris. Lib. 3.



COMMENTARY IV.

Of Critical Evacuations and Abscesses.

ACUTE Diseases, when left to themselves, scarce ever end well without some remarkable Evacuations, or ^a large Sediment in kindly Urine, or some critical Abscess. Such Disorders, according to *Hippocrates*, are carried off on a critical Day, by a Flux of Blood, by a plentiful Sweat, by a large Discharge of good coloured Urine, with a kindly Sediment, by loose mucous and bilious Stools, which are sometimes tinged with Blood; also by Vomiting and proper Abscesses (4). But Inflammations of the Lungs and Pleura, are chiefly removed by a free Expectoration of well concocted Matter; and when the same Disorder hath seized the Fauces, or the Glands seated near the

(4) Lib. de vict. rat. in morb. neut. 403. Coac. Prerag. 140. 142.

Ears, such kind of Spitting is of the greatest Service (5).

As to the particular Crisis which is about to happen, this may generally be foretold from the Season of the Year, the Epidemical Constitution, the Temperament of the Patient, and the Kind of the Disease, but chiefly from the Efforts of Nature, and Tendency of the Humours. In general the more acute Fevers are usually terminated by Evacuations, and the more lasting by Abscesses (6).

Among the Seasons of the Year, the Spring and Summer incline most to an Hæmorrhage (7): Among the Constitutions of the Air, the dry and hot, especially if preceded by Cold; among the Ages, that which is between 18 and 35; besides, a compact Habit of Body, a sanguine Temperament, the most acute Fevers, and Diseases which come to a Crisis, in the first Periods, are most subject to the same Evacuation; especially if the Pulse is exceeding strong, if the Heat, particularly about the upper Parts is scorching,

(5) Prænot. 40. 50. Coac. Prefag. 179. 176. 151.

(6) Galen de Cris. lib. 3.

(7) Aph. 20. Sect. 3.

if the Urine, which appeared concocted, becomes suddenly fine, and if the Body is costive (8). Moreover we know the Humours to be tending towards the upper Parts, if there is a violent and continual Pain in the Head, or a Giddiness, or Deafness, or a Noise in the Ears, if the Temporal Arteries throb violently, if the Parts about the Throat and Neck swell and look red, if the Face becomes bloated, if the Eyes are inflamed, or falsely perceive Sparks and Flashes of Light, if Tears fall involuntarily, if the Nostrils itch, if the Præcordia are distended without Pain, or if a Difficulty of Breathing comes on suddenly; when these Symptoms, or the greatest Part of them appear, a bleeding at the Nose will soon follow (9). But if there be Signs of an impending Hæmorrhage, without the Marks of the Blood's tending towards the superior Parts, and instead thereof an Heaviness, Tension, Heat, Pain and Pulsation about the Loins,

(8) Prænot. Coac. Præfag. Epidem. Lib. 1. Sect. 2. Galen Lib. 3. de Crif.

(9) Prænot. Prædict. Lib. P. 79. 80. Epid. Lib. 1. 948. Coac. Præfag. 138. 143. 145. 151. &c.

the Blood will rather burst out from the lower Parts, and there either from the Mouths of those Vessels about the Fundament which use to bleed, or in Women by the same Way as their natural Discharges (1). But if the Blood, after it has made an Effort to pass off through the lower Parts, should again tend upward, and the Pain, and other Symptoms, should leave the Loins, and soon after attack the Head, it denotes a plentiful Hæmorrhage at the Nose (2). Lax Stools, and a moist Skin, generally follow a Flux of Blood (3).

But Vomiting more frequently happens to Persons of a middle Age, and of a bilious Constitution, at the End of a hot Summer, and the Beginning of Autumn, when the Fever both begins with shivering and trembling, and has its Paroxysms like a Tertian Ague. The Signs of the Stomach's being oppressed, and of the Vomiting's immediately coming on, are a sharp Pain or Heaviness of the Head,

(1) Prædict. Lib. 1. 78. Coac. Præf. 168.

(2) Prædit. Lib. 1. 79. Coac. Præf. 168.

(3) Aph. 27. Sect. 4.

Uneasiness about the Præcordia, Restlessness, Anxiety, Coldness of the Extremities, a small, hard, and unequal Pulse, a gnawing at the Mouth of the Stomach, the Mouth's running with Water, a Nausea and Trembling of the lower Lip (4). What is discharged by Vomiting, ought to be neither too thick, nor in too great Quantity, and to consist of a regular Mixture of Bile and Phlegm.

Sweats are to be expected mostly in the Summer-time, especially when frequent Showers fall, as in Spring (5); where the Skin is of a lax Texture, where a Delirium happens at the coming on of the Paroxysms, and the Feet grow very hot at their going off, and the Skin becomes moist: But the most peculiar Sign of this Evacuation, is a full soft Pulse, which rises and falls like a Wave. Add to this, if the Patient grows costive a little before the Crisis, and has a Stoppage of Urine at the very Time of it, and the Paroxysm begins with a sort of a Shuddering, warm

(4) Prænot. 41. 46. Coac. P. 556. and Lib. 1. Epid. Galen de Cris. Lib. 3.

(5) Aph. 6. Sect. 3.

Sweats will generally flow plentifully over all the Body, within the Paroxysm: And this is the best Sign of all (6).

But we may expect a Diarrhæa if the Constitution of the Year is moist, if it is in the Autumn, if the Epidemical Fever is apt to pass off by Stool, as it happened to Persons of advanced Age, in the third Constitution of the first Book of Epidemics; if in bilious Fevers there are frequent Urgings to vomit in the Beginning, but no Vomiting; if when the Crisis is known to be at hand there appears no Sign of any other critical Evacuation, and the Urine is discharged but sparingly.

The Purging is preceded by a rumbling Noise in the Guts, a Swelling of the Belly, Gripes and a Pain about the Loins (7). Such critical Stools are esteemed best as are loose, but not watery, and have somewhat the Appearance of purulent Matter well mixed with Excrement, and it is not a bad Symptom if there is a small Matter of Blood with them.

By these Evacuations, Fevers which are critically terminated within fourteen Days,

(6) *Galen Lib. 3. de Cris. Hip. de Prænot.*

(7) *Aphor. 73. Sect. 4. Coac. Præfag. 138.*

by a sudden Change, and with much Perturbation, are principally carried off. But by Expectoration and Urine, Fevers are for the most Part gradually removed; such of these last Discharges as from the Beginning grow daily more and more concocted, and become perfectly so on the Critical Days, will most safely put an End to the Disorder (8).

The forementioned Signs of a good Concoction promise a perfect Crisis; so that if these have appeared, we have no Reason to be afraid how great soever the Perturbations are which attend the Paroxysms on the Critical Day; for the Discharge is at hand, and to be foreseen by its proper Signs, which will intirely free the Patient from his Fever, if so be that it is in a due Quantity, of a proper Quality, and adapted to the carrying off the Disease, as a Hæmorrhage is in young People, and in violent Fevers, and as a Vomiting in bilious Fevers, &c. Moreover it is of great Consequence that such Evacuations should come upon the Critical Days of the Pa-

(8) Lib. de Cris. 53.

the Paroxysm

roxyfm; and at the Height, we may be certain the Crisis is perfect, if the Patient rests quietly the Night following, if his Heat is but little more than natural, if his Tongue is soft and moist, if his Thirst is allayed, if his Appetite returns, and his Spirits are free: Lastly, if his Pulse and natural Discharges differ but little from what they were in Health. During the Time of a good Crisis, and after a perfect one, we ought to leave Nature to herself; for in this Case she will intirely free the Patient from his Disorder.

But if Nature, being too much irritated, endeavours to move and expel the morbid Matter before it is concocted, or at an improper Time, or through inconvenient Passages, or in too small a Quantity, a perfect Crisis will seldom succeed; for either the Patient will not get rid of the Disease, or if he does, it will be only for a short Time; for the morbid Matter remaining within, will occasion its Return (9). This sort of Crisis is by far the most frequent, and we have almost as

(9) Lib 2. Epid. Sect. 1. Aphor. 27. Sect. 2. Prænot. 45. De Judio. 54. Galen Lib. de Cris. 4.

many Instances of it in *Hippocrates*, as there are Histories of Cases in the first and third Books of *Epidemicks*; I shall however produce one, which is that of *Anaxion* (1). “ This *Anaxion* was seized
“ with an acute Fever, attended with a
“ continual Pain in the right Side, a dry
“ Cough on the first Days, and tormented
“ with Thirst and want of Sleep; his
“ Urine was of a good Colour, in a large
“ Quantity, but fine. On the sixth Day
“ he became delirious. Fomentations
“ were of no Service. The seventh was
“ a very troublesome Day, for the Fever
“ increased, the Pain did not abate, his
“ Cough was vexatious, and his Breathing
“ difficult. On the eighth a Vein in the
“ Arm was opened, the Patient bled well,
“ and in a large Quantity.” This was
the first Evacuation, made indeed by Art,
but required by Nature, since she made
no Attempt in the first Septenary towards
removing the vehement Fever, or relieving
the Pain in the Side. Accordingly
the Distemper was lessened by Bleeding.
Thus the History goes on. “ The Pain

(1) *Ægrot.* 8. *Seçt.* 2. *Lib. Enid.* 3.

“ was certainly eased, but the dry Cough
“ continued : On the eleventh the Fever
“ was milder, a little Sweat appeared a-
“ bout the Head, the Cough still remain-
“ ed, and the Disease began to be moist.
“ On the seventeenth he began to spit up
“ a small Quantity of concocted Matter,
“ and was relieved.” This second Eva-
cuation was very convenient : On the ele-
venth Day he began to expectorate, from
which Time to the seventeenth, the Mat-
ter seems to have been gradually maturat-
ing, and being then concocted, this Dis-
charge very likely relieved the Cough, the
Difficulty of Breathing, and the remain-
ing Pain. “ On the twentieth, Sweats
coming on, he was free from the Fever.”
This is the third Evacuation mentioned,
which came on upon a Critical Day, after
the Concoction of the expectorated Mat-
ter on the seventeenth, and in the Manner
it ought. There is as yet no mention
made of the Urine, except in the Begin-
ning of the History. If any Alteration
had appeared in it, *Hippocrates* would
certainly have told us ; the Urine was
therefore crude, and the expectorated
Matter,

Matter, tho' kindly, yet was not discharged in a proper Quantity. " After
" this last Crisis he was better, but very
" thirsty, and the Expectoration did not
" go on as it ought. On the twenty-se-
" venth the Fever returned, he coughed
" and discharged a great deal of concocted
" Matter, and his Urine dropt a large
" white Sediment, he was free from
" Thirst, and breathed well." Here then
at length the Signs of perfect Concoction,
both in the Urine and expectorated Mat-
ter, appeared in the first Period of the
second Vicenary: But concocted Urine,
and expectorated Matter, are likewise cri-
tical Evacuations, and they put an End to
this Patient's Thirst and Difficulty of
Breathing, of which, till then, there were
some Remains. " On the thirty-fourth
" Day, falling into a universal Sweat, he
" was freed from the Fever, and had a
" perfect Crisis."

It might indeed have been easily foretold,
that the Fever would not run beyond this
second Period of the second Vicenary,
when there appeared a perfect Concocti-
on, both in the Urine and expectorated
Matter,

Matter, the Septenary before. In this Patient Nature made all her Efforts on the Critical Days, and every Evacuation took off something from the Distemper; so that the Disease was entirely crippled by them, before the Sweat on the thirty fourth Day totally destroyed it. It may therefore justly be said, that the Disease was critically carried off by all these Evacuations; and *Hippocrates* has pronounced the same Judgment on proper Evacuations thus succeeding one another, for in the third Constitution of the first Book of Epidemics, he says, The Sick were chiefly saved by one of these four Circumstances, either by a plentiful bleeding at the Nose, or by a large Discharge of Urine, with a copious laudable Sediment, or by loose bilious Stools happening seasonably, or by a Dysentery. However, it was found by Experience, that many had their Fever carried off, not by one of these Discharges singly, but by all; these indeed seemed to be worse, yet all to whom it happened did well.

Since we are upon the Subject of Excretions, it may not be improper to treat

of those which sometimes come on of their own accord, at the very Beginning, or during the Increase of a Fever: Now whatsoever Evacuations happen at this Time, we may depend upon it, they will not entirely carry off the Fever. But some Symptoms frequently join themselves to Fevers, which add Strength to the Fever, torment the Patient, lengthen the Disease, and heighten the Danger; these however are not inseparable from the Fever, tho' oftentimes occasioned by it, since they are sometimes mitigated, or removed by a convenient Evacuation coming on of its own accord, before the Fever is arrived at its Height. Thus violent Pains in the Head, Giddiness, burning Heat, and such like Symptoms, are frequently carried off by a plentiful bleeding at the Nose in the Beginning of the Disorder. So likewise Vomiting, by discharging the corrupted Humours which lay in and about the Stomach, frequently removes a Nausea, Gnawing at the Mouth of the Stomach, Oppression of the Breast, Anxiety, &c. This happened the second Day to *Nicodemus*, the tenth Patient

Patient in the second Section of the third Book of Epidemics: But *Larissa* received Benefit by loose Stools on the third and following Days. Therefore the Rules laid down by *Hippocrates* concerning Sweats, may properly enough be adapted to other Evacuations, which are these: In acute Diseases, those Sweats are best which happen on Critical Days, and intirely carry off the Fever; but such are good as exhale from the whole Surface of the Body, and make the Patient bear his Distemper more easily. So every other Evacuation is likewise good, if it be proper for the Disease, if it is in a sufficient Quantity, and the Matter itself is kindly, and the Distemper is thereby lessened. And this I believe is the Sense of that Aphorism which says “ In Loosenesses, and “ Vomitings, and Evacuations of the “ Vessels, which happen spontaneously, “ if those Things are purged off which “ ought to be purged, such Discharges are “ of Service, and easily born: But if not, “ the contrary” (1). Therefore if the Pa-

(1) Aphor. 2. Sect. 1.

tient bears any Evacuation well, if he is relieved by it, and is not like to suffer from it in the Sequel, it is a Sign that such Matter is discharged as ought to be discharged. Here also we ought to have a Regard to the Climate, the Season of the Year, the Age of the Patient, and if it be proper or not for the Disease; for we ought to put greater Confidence in those Evacuations which relieve the Patient agreeable to Reason, and less in those which do not.

All those Evacuations which are improper for the Patient or the Disorder, and which do not at all alleviate the Symptoms, are to be reckoned among the Signs of a dangerous Distemper; if they add to them it is much worse, but worst of all, and most fatal, when the Matter discharged is much vitiated, and especially if it succeeds some pernicious Symptoms about the State of the Disorder. Such Kind of Evacuations proceed chiefly from a very great Corruption of Humours, the Violence of the Fever, or total Relaxation of the Fibres: Sometimes these Discharges are in too small a Quantity to be

of any manner of Service, sometimes in too large a one for the Strength of the Patient to sustain, and sometimes their Matter is very bad; of this Class are Drops of black Blood, partial cold Sweats, bilious, acrid, greenish, or black Stools, and Vomitings of the same Kind, such as frequently appeared in the Pestilential Constitution, and are often mentioned by *Hippocrates* to have happened at the Crisis of fatal Fevers.

But those Fevers are wont to be critically terminated by Abscesses, which increase slowly, which run out to a considerable Length, and are attended with good Symptoms: Where neither the Urine is kindly, nor the Matter expectorated easily, nor Sweats appear opportunely, nor any Hæmorrhage, Stools or Vomiting come on critically. These Abscesses, for the most Part, happen in Fevers during the Winter, at which Season they are less liable to return back, and more generally seize such as are under the Age of thirty five. Those which break out upon the superior Parts appear soonest, generally before the twentieth Day. In a Disease
then

then inclineable to an Abscess, if the Hypochondria are soft and free from Pain, and a Difficulty of breathing rushes on suddenly, and soon goes off again, and a Heaviness and Pain of the Head, and Sleepiness succeed, it is likely there will be an Abscess near the Ears. But after the twentieth Day, if a great Heat is felt about the Præcordia, or if it moves down towards the Extremities, if a Heaviness, Tension, Pain, or Inflammation seizeth either of the Joints, or any of the lower Parts, there will be the Seat of the Abscess. Where the Patient has had a Pain in any particular Part, before he was seized with the Fever, the morbid Matter will generally form an Abscess upon that very Part; as it happened to those in *Perinthus*, who were ill of Coughs and Quinsies. Moreover if such Patients as are recovering from a Fever, have fixed Pains about their Hands or Feet, it may be expected that an Abscess will be formed there (2).

That Abscess is salutary which breaks out at a Distance from the more noble

(2) Prænot. 43. 44. 45. Aph. 31. 32. 33. Sect. 4. Coac. Præfag. de humor. 49.

Parts, or seizes a less useful Part of the Body, if it rises quickly, if its Size is equal to that of the Distemper, and not too large for the Patient to bear; if when it comes out it removes the Disease, or at least alleviates it; if it keeps its Station; when it is a pure Inflammation; if it soon suppurates, and contains laudable Matter; when an Erysipelas, if it does not suddenly go back; when fixed upon the Joints, and causing violent Pain, if it does not leave the Part before the morbid Matter is perspired.

Besides this, we ought to consider the particular Consent which has been observed between some certain Parts of the Body; for the morbid Matter will more easily form an Abscess upon the Parts of the same Side than upon those of the opposite. In a Difficulty of Breathing, Abscesses about the Legs are most beneficial. Coughs are remarkably carried off by a swelling of the Testicles. Piles much swollen and very painful, give Relief in a Phrensy. In the very worst Kind of Quinseys, hardly any recover but those
who

who have a Redness thrown out upon their Breast or Neck. A bilious Diarrhæa is stopt by the coming on of Deafness. Comatous Symptoms, in ardent Fevers, are dispelled by Tumours arising near the Ears. A violent Oppression at the Breast, with a sudden Weakness of Body and Lowness of Spirits, arising from the Præcordia's being affected, but without Inflammation, are removed by the Eruption of Pustules on the Skin, sooner than by any other Kind of Abscess.

But if Nature in vain attempts to form an Abscess, or if when formed, it goes back again without Reason, and is not succeeded by a plentiful Discharge of thick Urine, or by some other convenient and considerable Evacuation, or by another Abscess, it is generally fatal; but it is reckoned beneficial if an Abscess rising upon the lower Parts of the Body, carries off another that was forming about the Head, or near the superior Parts. Abscesses have been found to be very happily dispersed by a large Discharge of thick Urine dropping a copious Sediment, by an Hæmorrhage, by bilious purulent Stools,

Throat

and a plentiful kindly Expectoration. However bleeding at the Nose is the best Cure of an Abscess in the Beginning, especially if it accompanies an acute Fever, and is seated about the superior Parts; those about the Breast or ~~Hands~~, whether inflamed or suppurated, are best carried off by Expectoration: All of them are removed by kindly Stools and Urine; but it is safest for those to be carried off by Urine, which are not situated about the Hypochondria or Belly (3).

Moreover cutaneous Eruptions are undoubtedly to be classed with critical Abscesses. Those smaller Swellings, saith *Hippocrates*, are good, which break out and form an Abscess on the Skin, such as Boils containing an ichorous or purulent Humour, or Ulcerations, or any other Kind of cutaneous Pustules, Desquamations, or scaling and peeling of the Skin, white opake Eruptions, small watery Bladders, and such like, when they are thrown out suddenly, and almost at

(3) Lib. de humor. 51. De Judicat. 55. Aphor. 74. Sect. 4. Lib. 1. Epid. 956. Coac. Præf. 151. Lib. 1. Enid. Constit. 3. Galen Lib. 3. de Cris.

once,

once, and not gradually and by Halves—and if their Bulk is sufficient to receive the morbid Matter (4). *Hippocrates* has here omitted some Conditions of a good Abscess, a Thing very usual with him, for cutaneous Eruptions when critical, are bound by the same Laws as other Abscesses of the same Denomination; they ought therefore to come out seasonably, which in one Constitution happens on the fourth Day, in another on the seventh, in another later, but generally on one of the Critical Days; but if they appear sooner or later than is usual for the Nature of the Disease and Epidemick Constitution, it is bad; and so it is likewise if they go back in less Time than is usual for that particular Sort of Eruptions. It is expedient that Pustules should be prominent: and Petechiæ florid. If the Eruptions coming out, mitigate the bad Symptoms, the morbid Matter is thrown off from the inner Parts upon the outer; if they do no manner of Service, it is likely that the vitiated Humours abound in the internal

(4) Lib. 2. Epidem. 1002.

Parts, as well as the external; if they increase the fatal Symptoms, Nature is vanquished by the Disease. Small black Spots denote a Gangrene of the Humours, a Disorder hardly curable. The favourable Sort of Fevers are seldom or never attended with Spots. But Spots, or Petechiæ alone, are seldom sufficient for carrying off any great Distempers; tho' this is a Thing which has sometimes happened. Such as escaped from the Petechial Fever which was epidemical at *Modena* from the Year 1693 to 1696, recovered by means of Petechiæ appearing about the seventh Day, spreading over all the Body, even to the Extremities of the Limbs, and disappearing slowly, and this too without any sensible Evacuation (5): But generally some other Assistance is wanted. In a certain Constitution, *Hippocrates* observed, that Pustules breaking out over the whole Body, was a mortal Symptom, if not attended with some purulent Abscess; and that was generally seated near the Ears (6). And *Galen* tells us, that

(5) Ramazini Constit. Epid. Annor. 1693, &c.

(6) Coac. Præfag. 133.

those who recovered from the pestilential Disorder which raged in his Time, had a Diarrhæa, and sometimes a Vomiting with it, before the Eruptions appeared (7). But, according to *Hoffman*, a Diarrhæa coming seasonably after the Petechiæ, carries off the Fever (8). However, the most secure Crisis is, when the Patient, upon a Critical Day, after a kindly Eruption of Pustules, falls into an universal Sweat, and makes Water that is well concocted. This *Donckers* experienced in the Petechial Constitution which appeared once and again at *Cologne*.

Bile, likewise, thrown out on the Skin, and occasioning a Jaundice, on the seventh, or any other Critical Day after that, provided the right Hypochondrium is not hard, successfully, and sometimes without any other Abscess or Evacuation, takes away the Fever (9).

But when any Matter, which is critically forming an Abscess, goes back unseasonably, it frequently seizes the more noble

(7) Lib. 5. Method. Cap. 12.

(8) Med. rat. Syst. Tom. 4. Sect. 1. Cap. 10 & 11. Ballon. Consil. med. Lib. 2. Comm. ad Histor. 5.

(9) Aphor. 62. Sect. 4. De Judicat. 53.

Parts ; if the Head, it presently produces a Phrensy, Coma, or some other Disorder of the Brain ; if the Lungs, a Difficulty of Breathing ; if the Præcordia, a Pain, Distention, burning Heat, or an Oppression in these Parts, Straitness at the Pit of the Stomach, Hiccup, Vomiting, Lowness of Spirits, Anxiety, a small frequent Pulse, or other the like Symptoms : All which, when they proceed from the going back of an Abscess, are generally fatal.

Those who are more than thirty Years old, are seldom critically freed by purulent Abscesses : But where such have Fevers of a long Continuance, they frequently run into Intermittents ; and this we may expect, if the Fever remits and returns at uncertain Hours ; if it is in the Winter Season, and the Patient's Constitution is cold by reason of Age, the Intermittent will most likely be a Quartan (1).

Hitherto I have endeavoured to explain whence acute Diseases have obtained so

(1) Lib. de Franot. 45.

great a Variety of Names; what are the Signs of Crudity and Concoction; what the Tokens of Recovery, Danger, or Death; what the Prefages of a Crisis; what Helps Nature herself makes use of for expelling a Fever; what Disorders each Evacuation is most suited to remove; and lastly, among those Evacuations and Abscesses, which are not critical, what are serviceable, what dangerous, and what fatal. I shall next proceed to the Method of curing acute Diseases: And here no one will deny, but Art must be directed so as to imitate Nature. The Artist therefore ought to know when the Matter is turgid, or ready prepared for Expulsion; which Way it is most inclinable to pass, and through what Passages it may most commodiously be carried off; otherwise in administering Evacuations, Art will very badly imitate Nature.

But before I treat of artificial Evacuations in particular, it may not be amiss to shew in what Manner Persons in Fevers ought to be managed with regard to Diet; for this is a Thing highly necessary to be known.

known. *Hippocrates* insists much on this Part of the Cure; of which he was, as to the greatest Part, the Inventor: And in *Celsus's* Judgment, Food seasonably given, is the best Medicine in a Fever.



COM.



COMMENTARY V.

Of the Method of Diet in acute Diseases.

THE Diet in Fevers, ought to be neither too sparing or thin, nor on the other hand, too plentiful or substantial; for the Patients sink under the former, and are overcharged by the latter. We ought therefore to consult the Strength and Nature of the Disease, and Constitution and Way of living of the Patient, not only with regard to eating, but likewise drinking (1).

A moist and thin Diet is proper for all Persons in Fevers (2), but of this there are three Degrees, viz. thin, exactly thin, and extremely thin. Ptisan, or Barley Gruel is the thin; the Cream of

(1) Hip. de rat. vict. in morb. acut. 390.

(2) Aphor. 16. Sect. 1.

Ptisan,

Ptisan, or Barley Gruel strained, the exactly thin; and Water sweetened with Honey, or any other medicated Potion, containing no more Nourishment, is the extremely thin Diet: So that here are so many Sorts of moist and thin Diet, as there are different Degrees in the Acuteness of Fevers; and, in general, one is accommodated to the other. Concerning the Virtues of Ptisan, hear *Hippocrates*.

“Ptisan seems justly to be preferred before all other Seed Diet, at least in acute Diseases; and I commend those who have preferred it; for it has a Viscidity which is mild, pleasant, lubricating, and moderately diluting; and besides this, is a good Detergent; it neither astringes, nor creates Disturbance, nor does it swell in the Stomach; it is also a light Food, and easily digested” (3).

Ptisan was prepared in the following Manner: They took the best Barley cleared from the Husk, and boiled it slowly, but a pretty while, in the softest Water. The Barley, perhaps, was ad-

(3) De rat. vict. 385.

ded in such a Quantity, as to make the Water, after sufficient boiling, of the Consistence of Cream; whence the strained Liquor had the Name of Cream of Ptisan; but when it was not strained, they called it Ptisan, and sometimes Entire Ptisan. Besides, it is not sufficient to know what Sort of Food is proper for the Distemper in general, and to administer that throughout its whole Course; for Fevers seldom continue at the same Height from the Beginning to the End; “but when
“they are most violent, then the thinnest
“Diet must be made use of” (4). Therefore when the Fever is most violent about the State, the Diet should be most thin and sparing; and the farther it is from the State, the more plentiful. “If such
“a Fever is very acute, it will presently
“be at its State; we must therefore immediately order the thinnest Diet: But
“when it is sometime before the Fever
“will arrive at its State, we must lower
“the Diet at the Time of the State, and
“a little before: In the Beginning the

(4) Aphor. 8. Sect. 1.

“ Patient is to be nourished more plenti-
“ fully, lest his Strength should fail” (5).
In Fevers which are continually increasing
till the Crisis, after the Manner of those
which are exquisitely ardent, these Rules
are to be observed; in others not: For it
is a Rule without Exception, the stronger
the Fever, the thinner the Food. “ But
“ in some Patients the Fever is most vio-
“ lent, and in its utmost Strength, at the
“ very Beginning; and more remiss near
“ the Time of, or at the very Crisis: In
“ others it is very gentle, and hardly per-
“ ceivable at the Beginning, but daily in-
“ creases and gets Strength; and a little
“ before, and at the Crisis, runs very high.
“ In others, again, it begins moderately,
“ increaseth and becomes violent, and be-
“ ing got to the Height, goes back a-
“ gain before the Crisis, and even at the
“ very Time of the Crisis. These Things
“ happen in all Sorts of Fevers, of which
“ we ought to make a right Calculation,
“ and regulate the Diet accordingly” (6).

(5) Aphor. 7. Ibid.

(6) Lib. 1. Epid. Sect. 3. 963.

Moreover, nothing ought to be given to, or forced upon, such as have their Fevers augmented periodically, during the Paroxysm; but their Allowance is to be lessened just before its coming on: This, therefore, is to be observed from the Beginning, and through the whole Course of the Disease, That if at any Time the Feet grow cold, which usually is a Sign of an approaching Paroxysm, the Patient should abstain from Food; but when, afterwards, his Feet grow hot, he may take in Nourishment, for then the Paroxysm is in its Declension. In continual Fevers, if there are any Intervals in which the Patient is easier, that is the Time for him to eat (7).

Besides these Things, we ought to have a Regard to the Patient's Age, Constitution, Climate, and Custom, and likewise to the Season of the Year, and Symptoms of the Fever. "With respect to Age, "old Men; with respect to Constitution, "those who are cold and phlegmatick,

(7) Apher. 11. Sect. 1. de rat. vict. acut. morb. 386. 398. 403.

“ most easily bear Abstinence ; but Chil-
 “ dren, especially the most lively, with
 “ the greatest Difficulty : In the middle
 “ Age the Πικρόχολοι (that is, such whose
 “ Stomachs overflow with a deal of bitter
 “ acrid Bile) ; and those of a hot Consti-
 “ tution and lean Make (8). In Spring
 “ and Winter, the inner Parts are natu-
 “ rally hottest, and the Sleep longest,
 “ therefore at that Time Meat is soonest
 “ digested (9). In Summer and Autumn
 “ People can least bear with Meat, and
 “ badly digest it” (1). This indeed is
 true, if the Meat is strong and substantial ;
 but at this Time the Bile is secreted in the
 greatest Quantity, and is most acrid, and
 Persons are hottest. Now those who are
 bilious and hot, bear Abstinence most dif-
 ficultly ; therefore in the Summer it is ne-
 cessary to eat often, but then it should be
 a light easy Food. From hence it clearly
 appears what Sort of Food is proper for
 every Climate. Moreover, these Circum-

(8) Aphor. 13. Sect. 1. de rat. vict. in morb. acut.

389.

(9) Aphor. 15. Sect. 1.

(1) Ibid. 18.

stances in Fevers, deserve particular Observation. “ Where the Belly has been
“ recently stuffed, if a Mess of Gruel is
“ given before the Patient has a Stool, it
“ will increase the Pain about the Præcor-
“ dia or Side, if there is any; and if
“ there is none, it will contribute to the
“ bringing it on presently, and render the
“ Breathing quicker; which is a bad
“ Thing, for it drieth the Lungs, fatigues
“ the Diaphragm, Præcordia, and Abdo-
“ men (2). Again, if more of the Food
“ remains within than there ought, after
“ it has been digested, and this is not
“ brought off before some other is thrown
“ in upon it, the Body being filled up
“ with both, is heated, and the Man
“ grows feverish on this Account; for
“ when the Body is filled up, and the
“ Vessels oppressed by this Fulness, both
“ Heat and Pain are brought on, sooner
“ indeed in Summer, and later in Win-
“ ter (3). Besides, when there is a con-
“ tinual Pain of the Side, and no Expec-

(2) De rat. vict. in morb. acut. 385. 398.

(3) Lib. 4. de morb. 504.

" toration, whoever sets about nourishing
 " his Patients, without first lessening the
 " Distemper, either by bleeding or purg-
 " ing, will soon put an End to their
 " Lives (4). For in inflammatory Dis-
 " eases of the Lungs, the freer the breath-
 " ing is, and the easier the Expectoration,
 " the more plentiful the Diet should be ;
 " and by how much the drier the Distem-
 " per is, and more violent the Suffocation,
 " by so much the thinner and more spar-
 " ing (5). A great Want of Sleep, like-
 " wise, requires lighter Food ; for this
 " Symptom prevents Digestion, both of
 " Meat and Drink, and occasions their
 " remaining crude (6). Lastly, if the
 " Fever is accompanied with Anxiety,
 " and the Præcordia are distended, and
 " the Patient can't lie long in any one
 " Posture, he should have nothing given
 " him but Water with Oxymel, and by
 " no means Gruel, till the Urine is con-
 " cocted, or the Fever is in its Declen-

(4) De rat. vict. &c. 386.

(5) Ibid.

(6) De rat. vict. &c. 392.

" sion.

“ fion (7). Where the Belly is loose, a
 “ thicker and more plentiful Diet is con-
 “ venient” (8).

As to the Time which is most convenient for taking of Food, Physicians have very much disagreed; for some, before *Hippocrates*, prescribed Abstinence to their Patients in the Beginning of Fevers; others kept their Patients from Food till the seventh Day, and others till after the Crisis. After *Hippocrates*, *Erastistratus*, and his whole School, from the Authority of their Master *Chrysippus*, substituted Fasting in the Room of Bleeding and Purging. After that again, about the Middle of the 39th Century, *Asclepiades* (that celebrated Physician, who altered the ancient Methods of Cure, for the greatest Part, and brought the Art of Physick into high Esteem and Reputation at *Rome*, where it was formerly so much despised) allowed his Patients no Food till the fourth Day. Herein he was followed by the whole Sect of Methodists, who

(7) De rat. vict. &c. 392.

(8) Ibid.

first fed their Patients on the fourth Day, and after that, on every other Day only, and that on the equal Days *. But the very learned Author of the History of ancient Physick *D. le Clerc*, and the Commentator on *Cælius Aurelianus*, call *Galen* in Question, for saying, that the fourth Day, and all the equal Days afterwards, were the Days appointed by the Methodists for giving their Patients food (9) : For *Cælius* every where enjoins Food to be given, on what the Sect calls *Diatriton*, that is, the third Day. There is strong Authority on both Sides ; for *Galen* was conversant with the Methodists, and *Cælius* was one of them. He likewise professes to interpret *Soranus*, the Prince of his own Sect ; nor can any Doubt be made about their Words. But if Food be given on the third Day of the Disease, and afterwards every other Day, that is, on the unequal Days, they must needs intend to nourish their Patients, and to administer their grand Remedies in the Paroxysms of the Fever, or at least at the Time they are expected, which is a

* Celsus de Med. Lib. 2. C. 4.

(9) Method, Med. Lib. 10. C. 6.

Thing they order most religiously to be avoided. This Reason, therefore, is sufficient to overturn the Opinion of these learned Men, tho' not sufficient to reconcile the Methodists with themselves. But supposing they began their *Diatriton* from the second Day of the Disease, the whole Difficulty will be solved; and this they did, if we may credit *Celsus*. But of late (says he) *Themison* regarded not when the Fever began, but when it ended, or plainly abated; (that is, as soon as the first Paroxysm was over) and from that Time, waiting for the third Day, when, if the Fever did not come on, he immediately gave Food; if it did come on, he waited till the Fit was over; or, where the Fever was continual, till it was abated. (This *Themison*, it is well known, founded the Sect of Methodists in his old Age). *Celsus* also agrees with *Asclepiades* in this Affair, as also in many other Things which relate to the Method of Cure; for he would have the Vessels emptied, and the redundant Matter lessened by Abstinence on the first Days; and when no Necessity hindered, he thought the fourth

Day the fittest for the Patient to begin to eat; he likewise ordered the Disease to be combated by Abstinence every other Day afterwards, and the Patient's Strength to be recruited by Food the intermediate Days (1).

Against the Authority of all these, the great *Hippocrates* urges very weighty Reasons (2), namely, "That every sudden
 " extraordinary Change whatsoever, is
 " prejudicial to a Man that is healthy and
 " strong, much more to one who is sick-
 " ly and weak; so that a faulty Way of
 " living, as to eating or drinking, which
 " is uniform and consistent, is safer with
 " regard to Health, than if the Person
 " was to make a sudden Change to ano-
 " ther which is better. Nay, any great
 " Changes in taking one's usual Meals, oc-
 " casion Uneasiness; so that if those who
 " are accustomed to eat Suppers only,
 " should feed heartily for Dinner, they
 " would presently find themselves out of
 " Order, and become sluggish, heavy, and
 " dull; if, besides this, they should eat

(1) De medicin. Lib. 2. Cap. 4.

(2) In Lib. de rat. vict. in morb. acut. 388.

" Suppers,

“ Suppers, they will, perhaps, have acrid
“ Eructations, and some will fall into a
“ Diarrhæa; and if they should make
“ three Meals a Day, the Symptoms will
“ be still more violent: But there are ma-
“ ny who easily bear three plentiful Meals
“ a Day, because they are used to it. On the
“ other hand, those who are accustomed
“ to eat twice a Day, are weak and feeble
“ without their Dinner, and have no In-
“ clination to engage in Business, and are
“ troubled with a Pain at the Mouth of
“ the Stomach; their Guts seem like-
“ wise to be drawn up, their Urine is hot
“ and high coloured, and their Excre-
“ ment is baked: Some also have a Bit-
“ terness in their Mouth, their Eyes are
“ heavy, their Head aches, and their Ex-
“ tremities are cold (these are Signs of
“ the Stomach’s being disordered with
“ Bile, or some other vitiated Humour):
“ And there are many, who, when they
“ have gone without their Dinner, have
“ scarce any Inclination for Supper; and if
“ they should sup, have a Load at their
“ Stomach, and pass the Night more rest-
“ less than if they had dined. Now, if
“ such

“ such great Uneasiness ariseth from the
“ Change of half a Day’s Diet only, from
“ common Custom, what would be the
“ Consequence for a Person to be kept
“ whole Days from Food, and more espe-
“ cially if, after he has been so treated,
“ he be suddenly filled with it? And if
“ this is the Case with healthy Persons,
“ how much more will those suffer by it,
“ who are in a strong Fever, and very
“ much weakened? For Instance, if any
“ such should empty their Vessels by Ab-
“ stinence on the first Days, and after-
“ wards on the fourth or fifth suddenly fill
“ them up again by taking in Food, espe-
“ cially of a stronger Nature? For be-
“ sides their being, by this Management,
“ guilty of a double Fault, in making
“ great and sudden Changes, they go
“ from emptying the Vessels, to taking in
“ of Nourishment, at a Time when they
“ ought, for the most Part, to proceed
“ gradually from nourishing to emptying
“ the Vessels; for as it hath been said be-
“ fore, when the Fever is most violent,
“ the Diet should be most sparing and
“ thin. On account of this bad Manage-
“ ment

“ ment of Diet, if the Fever is not a
“ flight one, crude Humours are some-
“ times attracted by the Head, and bilious
“ Humours by the Thorax; and in con-
“ sequence of this, Watchings come on,
“ which hinder the Concoction of the
“ morbid Matter, the Patients are very
“ pensive and fretful, and go out of their
“ Senses, their Eyes sparkle, and they
“ have a Noise in their Ears, their Extre-
“ mities grow cold, their Urine is crude,
“ their Spitting thin, salt, and in small
“ Quantity; they sweat about the Neck;
“ they are oppressed with Anxiety; they
“ breathe short and hard, and catch in
“ their Breath; their Eye-brows seem
“ drawn out: Moreover, they become
“ faint, and throw off the Cloaths from
“ their Breast; they have a twitching in
“ their Hands, and sometimes a trembling
“ of the lower Lip. When such Symp-
“ toms follow a good Concoction, they
“ betoken an immediate Crisis; but at the
“ Beginning of a Fever, a violent Deliri-
“ um. Few indeed of these escape; and
“ they that recover, are saved either by
“ means of an Abscess, or bleeding at the

“ Nose, or Expectoration of good thick
“ Matter, and no other Way. When-
“ ever, therefore, a Physician is called to
“ those who are weakened by Abstinence,
“ he ought to prescribe them at first an
“ exceeding thin Diet, in a moderate
“ Quantity, and to keep them quiet ; and
“ then to ascend gradually to that Diet
“ which the Distemper requires.”

Accordingly, after it has been determin-
ed, on a due Consideration of all Cir-
cumstances, what Sort of Food is most
proper, whether Barley Gruel, with the
Barley in it, or Barley Gruel strain'd off, or
any convenient Drink ; it should be given
according as the Patient has been accus-
tomed to eat, either once, twice, or oft-
ner, in the first Day of the Disease, if
nothing particular forbids it ; and that
Time is the most proper for it, at which
the Patient used to eat, provided the Fe-
ver is not then higher : But when the Fe-
ver comes on by Fits, the best Time for
eating is at the Declension of the Fit ; and
if the Patient should want Nourishment
in the Fit, we must support him with
the thinnest Spoon-meat or Gruel, when
Drinks

Drinks are not sufficient. Besides, in the first Day of the Distemper, Gruel ought not to be given in a large Quantity, nor made very thick, but that for the Sake of Custom something may be taken in, and that the Vessels may be not too much emptied. Those who have been accustomed to eat once a Day, (if any Addition seems necessary to be made) should have Food given them twice a Day; at the second Meal little should be given at first, but it may be gradually augmented (3).

Before I dismiss this Subject, it may be proper to take Notice of a Question which *Lommius* hath proposed, *viz.* Whether or no Barley Gruels, which were proper for the *Greeks* in Fevers, are sufficient for those of our Climate? He denies it; but *Sydenham* found by Experience, that our Countrymen could be very well supported under Fevers simply acute, with our common Water Gruel and Barley Water; which is not more nourishing than the Cream of Ptisan, recommended

(3) De rat. vict. &c. 385.

by the Antients: For tho' our Climate may require a fuller Diet on account of its Coldness, yet the *English*, on account of a more phlegmatick Constitution than the *Greeks*, bear Abstinence easier. But, in general, a Diet which is a little too plentiful, is much safer than that which is too thin and sparing (4).

Drinks in common Use, being a Part of Diet, it will be necessary therefore, to enquire into their several Qualities. *Hippocrates* allowed his Patients divers Kinds of Wines, but, without doubt, diluted with Water, according as the Antients commonly drank them. In his Book of Regimen in acute Diseases, he treats of one Sort of Wine which is sweet, of another which is strong, of another white, and another black (5). “ Amongst these, “ the Sweet is the greatest Promoter of “ Expectoration, and most easily passes off “ by Stool, but it is not so good to allay “ Thirst; it likewise causes Flatulencies in “ the Stomach, and upper Intestines; “ and if there is abundance of Bile, it

(4) Aph. 5. Sect. 1.

(5) 392.

“ occasions a Distension of the Præcordia;
“ but the stronger white Wine, makes
“ chiefly to the Bladder, and promotes
“ Urine: This Sort of Wine is therefore
“ most serviceable, when that Discharge
“ is to be encouraged: (*Rhenish* and *Mos-*
“ *selle* Wines have certainly these Quali-
“ ties :) The small white Wine allays
“ Thirst, affects the Head the least of
“ any, especially if it is inodorous, light,
“ and very thin. Lastly, the rough
“ black Wine, not much diluted, is best
“ when the Intestines want to be strength-
“ ened, and the Stools checked; there-
“ fore in a Looseness and Dysentery it is
“ preferable to the other. But when the
“ Head is loaded, or Mind disturbed, or
“ Expectoration difficult, or the Urine in
“ small Quantity, this Sort of Wine is
“ entirely to be avoided; and indeed all
“ Sorts of Wine are prejudicial to the
“ Head, when affected with Pain, Hea-
“ viness, or any other Disorder.” Yet if,
at such a Time, any Symptom should re-
quire the Use of Wine, we should give
that which is white and inodorous, and
order Water to be drank after it; for by
this

this Method the Strength of the Wine will least affect the Head and Senses. In very strong Fevers, likewise, Wine seems improper. From what has been said, any Person of Judgment may perceive what Sort of our Wines will be the most proper for his Patients, when the Weakness of their Body, or Lowness of their Spirits require it.

But of the common Sorts of Drinks, Hydromel, or Water and Honey, seems to be most used by the Antients: This was prepared either by mixing Water and Honey together, or boiling the Mixture, and taking off the Scum. “ Boiled Hydromel is more pleasing to the Eye, is “ weaker and less purgative: Water and “ Honey is very useful in Fevers which “ will not admit of Spoon-meats, and preferable to other Drinks: It is more nourishing than white Wine, if it does not “ purge, and a greater Allayer of Thirst. “ Hydromel consisting of a good deal of “ Water and little Honey, mollifies the “ Lungs, promotes Expectoration, and “ the Discharge of Urine. But when it “ has more Honey, it will purge and “ scour

“ scour the Intestines: When it causes
“ very frothy, bilious, and acrid Stools, it
“ is prejudicial; for such Stools do not in
“ the least abate Heat and Tension about
“ the Præcordia, but in reality increase
“ them, and bring on Anxiety and Restless-
“ ness. Besides, Hydromel is also impro-
“ per when the Stomach is troubled with
“ Bile; for in such a Case it distends the
“ Præcordia with Flatulencies (6).”

By mixing Vinegar with Water and Honey, is made the Drink called *Oxymel*. Of this there were three Sorts, *viz.* exceeding four, moderately four, and what had only the Taste of Vinegar. “ That
“ Sort which is very four, given to a Pati-
“ ent who is not able to expectorate, is no
“ trifling Medicine; for if it can discharge
“ that Matter which causes a hoarse Rat-
“ tling in the Throat, and lubricate, and,
“ as it were, dilate and free the Wind-
“ pipe, it also will ease the Lungs, as
“ soon as their Driness is gone: When
“ these Effects follow, it doth great Ser-
“ vice; but, sometimes, in this Case, it

(6) De viſt. Rat. &c. 393.

“ doth not in the least promote Expecto-
“ ration, but renders the Matter more
“ glutinous, and is hurtful. Thus it hap-
“ pens to those chiefly, who, besides be-
“ ing *otherwise dangerously ill*, are neither
“ able to cough, nor expectorate the Mat-
“ ter which clogs their Lungs. In regard,
“ therefore, to the giving this Kind of
“ Oxymel, we ought to consult the Pati-
“ ent’s Strength and Circumstances; and
“ if there is any Room for Hope, to give
“ it him. In this Case, it must be taken
“ very warm, and not much at a Time,
“ but by little and little. Oxymel that is
“ a little sour, moistens the Mouth and
“ Throat, promotes Expectoration, allays
“ Thirst, and agrees with the Præcordia,
“ and the neighbouring Viscera. For Vi-
“ negar corrects the noxious Quality of
“ the Honey, by taking off what is bilious
“ in it; it also makes the Wind break off
“ upwards, and promotes Urine; howe-
“ ver, it is apt to bring on a Purging, and
“ a Dysentery. Sometimes also, in acute
“ Diseases, it is hurtful, for it hinders the
“ Wind from breaking off downwards,
“ and brings it upwards: Besides this, it
“ some-

“ sometimes weakens the Patient, and
“ makes him cold in his extreme Parts.
“ But a small Quantity of such Sort of
“ Drink may be conveniently taken at
“ Night, and in the Morning, upon an
“ empty Stomach, just before the Barley
“ Gruel; tho’ nothing forbids the drink-
“ ing it at any other Time, if it be at
“ some Distance from the taking the Gru-
“ el. But when the Patient is kept only
“ on Drinks, and allowed no Gruel, Oxy-
“ mel is not proper to be drank for a
“ Constancy, and that chiefly for fear of
“ irritating and abrading the Intestines;
“ for this will sooner happen when the
“ Intestines are without Fæces, and the
“ Patient’s Vessels have been emptied.
“ After all, Hydromel is less nourishing
“ by having Vinegar mixed with it:
“ However, if you judge the frequent
“ Use of this Drink will be of Service
“ throughout the whole Disease, add a lit-
“ tle Vinegar to the Hydromel, but in so
“ small a Quantity only, as just to be dis-
“ tinguished: By this Means the Hurt
“ usually done by Oxymel will be avoided,
“ and the Good expected from it be ob-
G 2 “ tained.

“ tained. But in general, the Sourness of
“ Vinegar is more proper for bilious Con-
“ stitutions than for melancholick, for in
“ these the Humours about the Præcordia
“ are acid and fretting; the bitter bilious
“ Humours lose their Nature, and are
“ converted into Pituita, when worked up
“ with it; but the black bilious Humours
“ are fermented, worked, and augment-
“ ed: For Vinegar exalts melancholick
“ Humours. Vinegar is far more prejudi-
“ cial to Women than Men, and for this
“ Reason, because it occasions Pains of
“ the Womb; and this happens when it
“ brings a Dysentery upon Women with
“ Child, from which there is Danger of
“ Abortion (7).

“ As for Water, it is drank in acute
“ Diseases, but I have nothing to say in
“ its Recommendation; for it neither mi-
“ tigates a Cough in Inflammations of the
“ Lungs, nor promotes Expectoration, or
“ not so much as the other Drinks, where
“ it is constantly made use of. But if a
“ small Quantity of Water be drank be-

(7) De rat. vict. &c. 393.

“ between the taking of Oxymel or Hydro-
“ mel, it promotes a Spitting, its Quality
“ being altered by the Mixture with the
“ others; otherwise it doth not allay
“ Thirst, but increaseth it; for it is bili-
“ ous in bilious Constitutions, and bad for
“ the Præcordia; and if it be given on an
“ empty Stomach, it is still more hurtful
“ and most bilious, and greatly impairs
“ the Patient’s Strength: it likewise in-
“ creaseth Inflammations of the Liver and
“ Spleen; it fluctuates in the Stomach,
“ and does not go downward; for being
“ cold and crude, it passes through the Bo-
“ dy slowly, and neither promotes the
“ Discharge by Stool nor by Urine:
“ And besides, it is somewhat bad, be-
“ cause it supplies no Matter to the Ex-
“ crements. But if it be drank when the
“ Feet are cold, it will do much more
“ Hurt in every one of these Cases. Yet
“ in those Diseases where it is suspected,
“ there will be a violent Pain of the Head,
“ or Disorder of the Mind; and where
“ Wine is intirely to be avoided, Water
“ may be made use of; or after small

“ White Wine is given, a little Water may
“ be drank” (8).

Besides these, there is mention made of other Drinks in the Book of Regimen in acute Diseases, which do not properly belong to Diet, but to Medicine. A Description of the Preparation and Virtues of some medicinal Potions, may be seen in the third Book of Diseases (9).

But this Part of Physick which relates to the curing Diseases by Diet, is not attended to, with that Care it deserves, by those who are unacquainted with the Observations of the Antients. Such, for the most Part, allow the same Food to all Persons, in all Kinds of Fevers, or, perhaps, enjoin nothing in this Case, but Abstinence from the grosser Kinds of Food, and so commit the whole Management of this Affair, to the Care of an old Nurse. And very few, indeed, are so solicitous, as to make a Calculation of the Length of the Fever, that they may regulate the Diet thereby. But the same bad Symptoms, now a-Days as heretofore, are brought

(8) De rat. vict. &c. 394.

(9) 395. 496. & 97.

upon the Sick by improper Diet; though the generality of People do not perceive it; for such are not capable of distinguishing what Symptoms proceed from the Disease, what from the Physician, and what from the Patient; (to discover this, was a Task worthy of *Hippocrates* :) So let what will happen amiss, or prove fatal, it is imputed to the Disease and its Malignity. And this is one of the crafty Devices Ignorance makes use of to keep itself concealed.





C O M M E N T A R Y VI.

The Introduction.

AS Fevers are scarce ever carried off by Nature without some remarkable Discharge, so they are rarely cured by Art without the Assistance of some seasonable Evacuation. He is arrived to the utmost Perfection in curing all Sorts of Fevers, according to *Sydenham*, who certainly knows by what Way the febrile Matter ought to be expelled, *viz.* Whether by Bleeding, Sweating, Purging, or any other that is more proper (1). And it is Dr. *Freind*'s Opinion, that scarce any violent Fever whatever, can be cured by Medicine, without having recourse to Evacuation. For which Reasons, a Physician ought, above all Things, to know what

(1) De morb. Epid. Hist. S. 6. Cap. 1.

Symptoms require Bleeding, what Purg-
ing, what Sweating, or any other Evacua-
tion (2).

The general Rule is this: "Evacuate
" the Matter which ought to be evacuated,
" by those Passages it tends to, if they are
" convenient for the Purpose (3). That
" is, when the Matter which wants to be
" discharged, and whose Discharge is con-
" ducive to the removing of the Disease,
" gives Notice of its Presence, and Na-
" ture, notwithstanding, does not expel it
" of her own accord, Art finds out some
" proper Passage, through which Nature
" may be compelled to discharge it: Or,
" Nature remiss and languid, plainly
" points out to the skilful Artist, what he
" ought to do (4)." However, in order
to the right Management of Evacuations,
there is need of a great deal of Circum-
spection; and many Things are to be con-
sidered, which are briefly touched upon
by *Hippocrates*, in the Beginning of his

(2) Sub fine Comment. ad Hipp.

(3) Aph. 21. S. 1.

(4) Aph. 2. S. 4. de Arte 7.

Treatise *De Humoribus*. But this, in general; I shall now treat of each Evacuation in particular, and endeavour to explain how it may be practised according to the Intention of Nature; and shall first of all begin with Bleeding.



of

Of BLEEDING.

Bleeding is of use in those Disorders where an Hemorrhage, happening of its own accord, is beneficial. Now, in violent Fevers, when the Patient has Youth and Strength of his Side, a Flux of Blood from the Nose, more frequently happens, and is of the greatest Service (5). The same Discharge removes violent Pains about the Head, Neck, Loins, and even the lower Parts, and especially such of them as are attended with Throbbing (6). it likewise carries off intense Redness and Swellings about the Face, Neck, and Fauces; Giddiness of the Head, a Phrensy, Inflammations of the Eyes, and that Tenderneſs of Sight which prevents the Patient's bearing the Light (7); Distorsion of the Spine (that is, such a Bending of the Spine as is voluntary, and in order to ease a Stitch of the Side;) also a Difficulty of

(5) Lib. 1. Epid. Stad. 3. Coac. Prænot. 140. 142.

(6) Prædit. Lib. 1. 80. Coac. Prænot. 185. 136. 143. 145. 151. De Judicat. 55.

(7) Coac. Præſag. 164. 172. 207.

Breathing (8): Distention, Heat, and Pains about the Præcordia (9). Lastly, it soon removes an Abscess; I suppose he means one that is recent and inflammatory (1).

But in these, and the like Circumstances, it is not to be left to Nature to bring on an Hemorrhage; because in acute Fevers, when the Patient is strong and full of Blood, there is much Danger of a great Inflammation, or, perhaps, of a Vessel's bursting about some of the more noble Viscera; which Evils are much more easily prevented, than remedied after they have happened: Besides, when there is any great Inflammation formed immediately at the Beginning of a Disease, it is much oftner brought to Suppuration, than dissolved by Nature; provided the Disease doth not kill the Patient before. “More-
“over, these Things which use to miti-
“gate bad Symptoms after they appear,
“will prevent their coming on, if used in
“Season (2).”

(8) Coac. Præfag. 168.

(9) Præfag.

(1) Predict. Lib. 1. 108.

(2) Lib. de Humorib.

Here then, when Nature is labouring, Art comes in happily to her Assistance. In acute Diseases draw off Blood, says *Hippocrates*, if the Disease be violent, and the Patient young and strong (3); agreeably to this, the cautious old Man would have Blood drawn only when the Patient was in the Vigour of his Age, because a spontaneous Hemorrhage very seldom happens advantageously at any other Time of Life. But succeeding Physicians venturing farther, have discovered, by Experience, that Blood may be safely drawn from Persons who are not in the Vigour of Life, where the Disease requires it, and the Strength permits: So that this Remedy may be securely administered to a lusty young Child, and a strong old Man: Besides, Women with Child, contrary to the Precepts of this Author, not only bear bleeding very well in Fevers, but also, sometimes require it when there is no Fever, on account of a Redundancy of Blood: In this Case, there is not a more efficacious Remedy against Abortion. So that

(3) De rat. vict. in Auct. 396.

we may conclude, those Persons whom *Hippocrates* observed to miscarry after Bleeding in Fevers, miscarried not by Means of Bleeding, but on account of the Fever. *Celsus*, therefore, adviseth us, first of all to examine the Patient's Strength (4); and this we may make a better Estimate of from the Blood-vessels, than from the general Appearance of the Body. A violent Fever, a Redness of the Body, and Fullness of the Veins, in his Judgment, require Bleeding. But *Galen* judged of the Patient's Strength, by the Pulse of the Arteries, rather than by the Appearance of the Blood-vessels; and if the Pulse was full and strong, he ordered Bleeding in the same Kind of Disorders (5): And all Physicians since his Time, have regarded this as a principal Indication for drawing Blood.

But when the Artery lies deep, or the Patient's Breathing is difficult, or his Head or Præcordia are much oppressed by the

(4) Lib. 2. Cap. 10.

(5) Lib. de curand. Rat. per Sang. Miss. Cap. 13.

Disease, this Sign is fallacious (6). It has besides a great many provisional Cautions, because the Arteries, as *Celsus* observes, treating of another Subject, move slower or quicker, according to the Difference of Age, Sex, and Constitution. And, generally, in a Person tolerably healthy, if his Stomach be out of Order; and sometimes, also, at the first Attack of a Fever, the Pulse sinks and flags, so that a Man may seem to be weak, who has a violent Paroxysm coming on, which he is well able to bear. On the contrary, Fear, Anger, and any other Passion of the Mind, frequently quickens them: So that at the first Entrance of a Physician, the Patient's Concern what the Doctor may think of him, may possibly hurry his Pulse. For which Reason, a Physician ought not to seize his Patient by the Hand immediately, at his first coming in, but to sit down by him, and with a cheerful Countenance, enquire how he finds himself; and if he is under any Fear of Danger, to encourage

(6) Boerh. in cap. de Peripneu. Sydenham. Sched. mon. Galen. Lib. 4. de Præfag. ex Puls.

him with proper Discourse, and then feel his Pulse (7).

But to return to the Precepts of *Hippocrates*. Inflammations of the Præcordia, Diaphragm, Lungs, Pleura, and of the other Parts of the Body; in short, all morbid Collections, *i. e.* (as *Galen* interprets it) all Kinds of Inflammations whatever, cannot be cured, if, through Imprudence, purging Medicines are given; since, in these Disorders, Bleeding is the principal Remedy (8). *Hippocrates* seems to be afraid lest the Patient's Strength should be so reduced by purging, that after it there would be no room for bleeding, and I do not remember, that he ever makes use of it after Purging. Moreover, every Inflammation is truly an Abscess, whose Signs are Redness, Heat, Swelling, and (if the Part is sensible) Pain: But a plentiful Flux of Blood, as hath been observed before, soon removes an Abscess.

Therefore, when an Inflammation hath seized the Head, Brain, Fauces, Breast,

(7) Lib. 3. Cap. 6.

(8) De rat. vict. 396. 397. 386. 387. Prædict. Lib. 2. 108. &c. p. 180.

Præcordia, Pleura, or Loins, and hath produced a Swelling and Redness about the Face, Eyes, or Ears, Pains of the Head, Giddiness, Delirium, or other Disorders of the Brain, or a Difficulty of Swallowing or Breathing; or hath caused excruciating Pains of the Breast, Sides, Loins, or Præcordia; or when the Præcordia are drawn in, or swell out, with sharp Pain and Throbbing, what Physician in his Senses would not immediately make use of this great Remedy which Nature has pointed out to him, provided the Patient's Strength will bear it?

And when a Patient, labouring under any of these Complaints, is very weak, and is like to perish without the Assistance of a desperate Remedy, *Celsus* tells us, it is the Duty of a good Physician, to declare what little Hope there is of the Patient's getting over the Disorder without Bleeding; and at the same Time to confess, what great Danger there is in it; and then, if it is desired, to bleed him (1). *Aretæus* used the like Scheme; so that

(1) Lib. 2. cap. 10.

when there is any considerable Inflammation in the Præcordia or Liver, he orders Blood to be drawn, tho' the Patient be constantly fainting. But those pay more Regard to their Reputation, who, in such a dangerous Case, decline the Experiment of a doubtful Remedy, lest they should be thought, by some, to have killed the Patient, whom by their Art they could not save. This, indeed, is the Part of a cunning Physician; but the other, of an honest Man.

Although Bleeding gives a more speedy and present Relief in Inflammations of the upper Parts of the Body, than in those of the lower, yet, nevertheless, in these likewise, it is the best Remedy: "For
" a Flux of Blood carries off acute Pains
" of the lower Parts." Therefore, in order to remove Inflammations, wherever seated, and ease the violent Pains occasioned by them, Blood is to be drawn.

As to the Quantity to be taken away, that is to be regulated by the Habit of Body, the Season of the Year, the Age of the Patient, and the Colour of the Blood. When all these are favourable,

we ought, without Hesitation, to take away a larger Quantity : And if a violent Pain about the superior Parts, together with an acute Fever, require Bleeding, we should bleed even to Fainting (2). This was also the Opinion of *Aretæus* and *Galen*. In a Quinsy, the former orders a Vein of the Arm to be opened with a large Orifice, that the Blood may rush out with Violence, and be discharged in a large Quantity, within a small Time ; for running out in this Manner, it is more efficacious to allay the Heat, remove the Suffocation, and remedy all the other bad Symptoms. Nor is it of small Advantage to continue drawing off the Blood till the Patient begins to faint, provided he does not faint quite away. For there are Instances of some who fainting from Loss of Blood, have died in the Operation. *Galen* also, in his Commentary on Aphor. 23. Sect. 1. writes thus : Fainting, which happens by Means of the Evacuation, is in this Passage, said by *Hippocrates*, to be the Thing that should regulate the Evacuation in

(2) De rat. vict. in morb. acut. 401.

the greatest Inflammations, the most ardent Fevers, and violent Pains : We ought indeed (as he himself says) to practise so large an Evacuation on Patients in their full Strength : And I have found, by manifold Experience, that this Remedy is of very great Service ; for, by drawing off Blood, in very ardent Fevers, till the Patient faints, the whole Body is presently cooled, and the Fever extinguished : A great many hereupon fall into a gentle Looseness, and a Sweat ; after which some immediately grow well, the others bear the Disease more easily, and recover in a little Time. Besides, in the greatest Inflammations, and most violent Pains, I have known no better Remedy. We have the History left us, by the Person last quoted, of two young Men on whom this Practice was tried ; on the one, towards the End of the second Day ; on the other, at the Beginning of the third : In the first Case, the Fever was removed immediately ; in the latter, it abated gradually, and on the seventh Day was quite gone (3).

(3) Method. medend. Lib. 9. Cap. 4.

But I would be a little more particular in this Affair: We may observe, when the Patient faints, that those Parts of his Cheeks and Lips which before were red, grow pale, and the whole Surface likewise of his Body loseth its Colour, and becomes cold; at the same Time the Skin is all over bedewed with Sweat. These Symptoms are caused by a paralytick Disposition of those Fibres which constringe the extreme Arteries, and by the Blood's running back from the capillary Vessels. If the same Thing should happen to Arteries that are inflamed, the Inflammation would immediately be removed; and likewise that Kind of ardent Fevers which has its Rise from almost a general Obstruction of the Arteries. Both Analogy and Experience strongly persuade us, that this will be the Case, provided the Blood is not yet condensed in the obstructed Vessels, and the Vessels themselves are sound. It is very common for weak Persons, who have been long confined to their Bed, to faint away when they are took out and set upright; in such the Blood-vessels being exhausted, the Humours fall downward

by their own Weight, into the Veins and Arteries of the lower Parts; and at the same Time the Blood which tends upward to the Head, meets with a new Resistance, whose Force is equal to the Pressure of a Column of Blood, the Height whereof is the Distance between the Heart and the Brain. The same Symptom attends those also, who have a large Quantity of Water, or Pus, suddenly drawn out of the Abdomen; for it being the Nature of Fluids to run where there is the least Resistance, the Blood, in this Case, will flow into the relaxed Vessels about the Abdomen, and be diverted from the Head: The Liver too seems to help something towards it, by drawing the Diaphragm downwards by its Weight, and so injuring the Action of the Lungs. From these, and other Experiments, we learn, that the Reason of an Animal's fainting, is not owing barely to the Quantity of Blood drawn off, but likewise to a Diminution of its Impetus upon the Brain. Hence, likewise, we understand why a Man faints with a far less Quantity of Blood flowing in a full Stream, out of a large Wound made in a wide Vessel, or
several

several Vessels at the same Time, than if it trickles gently out of a small Orifice; and why he should faint the sooner for being in an erect Posture. On these Accounts *Aretæus*, wise by Experience, always drew Blood from a large Orifice, when the Patient wanted to be brought down much lower (4); and on the contrary, if a Patient that was weak required Bleeding, he ordered a small Puncture (5). But this drawing away Blood till the Patient faints, is not of use in inveterate Inflammations; in a Phrensy and Diseases of the Brain, nor in a Difficulty of breathing (6); from an Inflammation of the Lungs of long standing; and in every Disease where the Strength is wasted, it is not safe. Moreover, there is some Danger from this Method, lest the crude inflammatory Matter should retire from the Vessels of the Pleura (for Instance) and fall in upon the Lungs (7), or the Brain; then the Pain of the Side goes off sud-

(4) Cap. de curat. Angin.

(5) De curat. cardiacor.

(6) *Aretæus* decura. advers. Phrenit. & Peripneum.

(7) Id. de Pleurit. curation.

denly, and a Peripneumony or Phrensy succeeds ; which I have known prove fatal within a few Hours.

The first Days of a Disorder are reckoned the most convenient for bleeding ; for which Reason, its Assistance is to be used as soon as ever the Symptoms require it ; and it is to be repeated again and again, if Things continue the same. But if the Blood is thin and dissolved, repeated Bleeding is seldom necessary : On the contrary, when it is thick and fizy, it is often required. Where the Patient is any way weak, it is better to err by drawing off less Blood than is necessary, than by taking away too much ; for if there should be Occasion for a larger Quantity to be drawn, a Vein may be opened again. A great many Physicians hardly ventured to bleed after the fourth Day ; but critical Discharges of Blood generally happen after that Time ; and *Hippocrates* on the eighth Day successfully opened a Vein of his Patient *Anaxion*, who was ill of a dry Pleurisy, because his Fever increased on the seventh Day, and the Pain did not abate, and his Cough was violent, and
Breath.

Breathing difficult. Whence I admire that *Celsus*, who regarded the Strength more than the Age of his Patients, should not likewise consider the same more than the Time of the Disease. However, when a violent Inflammation has exceeded the fourth Day, it is hardly possible to prevent its coming to a Suppuration; but even here, Bleeding after the fourth Day will contribute towards rendering this purulent Abscess smaller; and likewise towards allaying the Fever, and easing the Pains.

The Antients used to open different Veins in different Diseases, with a View of intercepting the Defluxion of Humours upon the Parts affected; or of drawing off the vitiated Juices from them. Herein, however, they disagreed, and there were great Debates what particular Vein should be opened almost in every Disorder. But this Contention is quite ceased since *Harvey's* Discovery of the Circulation of the Blood: And that Vein which lies most convenient for the Lancet is now opened, except sometimes when, for the Sake of
Derivation

Derivation or Revulsion, we chuse to bleed in the Jugular or Saphœna.

To draw Blood likewise by puncturing an Artery is no new Thing ; and it is an ancient Practice to destroy this Kind of Vessels, as well by an Incision Knife as by a Caутery. But Wounds of the Arteries have been much dreaded, chiefly on account of an Aneurism which usually ensues when the Artery is not entirely divided ; and therefore Surgeons were very cautious of touching an Artery with the Lancet. For the Blood is driven into them with such great Force, that at each Contraction of the Heart, their Coat is distended with an Impetus eight Times greater than that of the Veins (8) : For which Reason Wounds of the Arteries are continually burst open, insomuch that it has been thought, when an Artery was cut, it would never unite or heal again. But no Reason can be given why Wounds of the Arteries should not unite, as well as those of other Parts, equally nervous ;

(8) Hales's Hæmæstaticks Ex. 22. S. 8. and 10. and Table 42.

provided

provided the Force so strongly distending them be removed, which may easily be done wherever the Artery runs near the Skin and Bone, as about the Temples; for upon applying to these Parts any hard Body, and binding it on pretty tight, the Course of the Blood through the Vessels is intercepted. This every one may easily experience in himself, for if he compresses the temporal Artery with his Finger, it will have no Pulsation beyond the Finger. After this Manner the *Ægyptians* (who are frequently used to open the Arteries about the Head, and that between the Forefinger and Thumb) when they have drawn off a sufficient Quantity of Blood, apply a Piece of Copper Coin, putting first a little Cotton under it, which they bind tight upon the Wound, and let it remain on for three Days, after which Time they take off the Bandage. And *Alpinus* never saw one out of a vast Number thus treated, who upon untying the Bandage, had occasion for any farther Assistance, all of them being perfectly healed (9). Some

(9) De medicin. *Ægypt.* Lib. 2. cap. 12.

of the *European* Surgeons formerly made use of this Method with Success, tho' a great many were afraid of it: But of late skilful Surgeons with us, open the Arteries of the Head without Hesitation or Danger: And it is to be hoped, that People will in Time be accustomed to this Operation. This Remedy has been generally approved of in chronical Distempers; but it is likewise of exceeding great Service in acute Diseases, when the Blood is accumulated in the Arteries, and cannot pass through their extreme Capillaries, either by Reason of the Constriction of the Vessels, or Thickness of the Humours. In such a Case, the opening a Vein is of no Manner of Service, but rather very prejudicial, by taking away the thinner Part of the Blood contained in the Veins, and which alone is in a Condition to circulate. But all those Symptoms which preface an approaching Flux of Blood from the Nose, plainly shew the Vessels about the Head to be over and above loaded with Blood, which is very probably occasioned by an Obstruction about the capillary Arteries: For these Vessels are widest at
their

their Beginning, and grow narrower continually to their Extremities; but it is quite otherwise with the Veins. In some ardent Fevers likewise, the Heat, Redness, and Dryness of the whole outward Habit of Body seem to spring from the same Cause. Lastly, the Dissection of Persons who have died of these Kind of Fevers, has discovered, that the greatest Part of the Blood was lodged and accumulated within the Arteries, being very thick and congealed, and but a small Part of it in the Veins, which was thin: Whereas, otherwise, it is well known, the Veins ought to contain the greatest Part of the Blood after Death. When, therefore, this is the Case, there is hardly any Recovery without an Artery is opened by Incision, or its spontaneous Bursting. To these may be added another very great Advantage from Arteriotomy, *viz.* That by it is made the most powerful Derivation, where it can be performed with Safety, as it may about the Head.

Art hath found out yet another Method of drawing Blood, namely, by making Incisions on the Skin, and then applying
Cupping

Cupping Glassess. *Hippocrates* frequently made use of Cupping Glassess, both with and without Incision: When used without Incision, they were supposed to draw out Wind, and divert Defluxions. A Cupping Glass is mostly made use of when the Disorder does not equally affect the whole Body, but is fixed in some particular Part, the draining off the Humours from which, is sufficient to remove the Disease. Therefore in Fevers, Cupping Glassess are applied near the pained and inflamed Parts. If an erysipelatous Matter seizeth the Fauces, Lungs, or any other internal Part of the Body, they should be applied as soon as possible, to attract the morbid and turgid Matter towards the external Parts (1): But when we have to do with a genuine Inflammation, they are better reserved till after drawing Blood from the larger Veins, and the more powerful Remedies.

In a Pleurisy *Aretæus* hath observed, That Cupping is of great Service after the seventh Day; for which Reason we ought

(1) Hip. curat. Augin. Lib. 2. de morb.

not to be too hasty in the Use of this Remedy: Nor are those Diseases of a mild Nature which require cupping before that Time. Thus he (2). The Methodists, who were very much in Love with this Remedy, made use of it somewhat later; for in a Phrensy, *Cælius Aurelianus* tells us, they applied it on the tenth Day. Moreover, in acute Diseases, where the Disorder requires bleeding, and the Patient's Weakness will not permit the opening of a Vein, Cupping is necessary; for this Remedy hardly sinks the Patient, and is never dangerous at any time in Fevers, insomuch that *Aræteus* had recourse to it in a Syncope from an Inflammation of the Præcordia, when the Patient's weakness absolutely forbade the opening of a Vein. But according to the Advice of *Celsus*, let us consider, that as it carries no Danger with it, so it is a less powerful Remedy; and that a violent Disorder requires as violent a Remedy (3).

(2) Lib. 2. de curat. acutor. morb. & Cap. 10.

(3) Lib. 2. Cap. 12.



COMMENTARY VII.

Of Purging and Vomiting.

WE read in *Hippocrates* of some in Fevers who were gradually relieved, and others who were immediately cured by a Looseness. We know, likewise, that the Parent of Physick, copying after Nature, was frequently wont to purge in Fevers; and that after him the greatest Masters of the Art have approved of the same Remedy in the like Distemper, and more especially the Antients, who, not only in Fevers, but in almost every Disease, were for frequent Purging, and employed a Variety of Medicines for this Purpose (1).

But this Method of Cure in acute Diseases, according to the Opinion of a Man no less eminent for his Skill in Physick than Language, to be rightly practised, re-

(1) Celsus, Lib. 2. Cap. 12.

quires Attention to such a Number of Circumstances, that no exact Rules are laid down concerning it; nor indeed can be, without a great deal of Application and Discernment. For it is no very easy Matter, even for a skilful Practitioner, so to guide himself by his own Judgment, as not to err in Practice, and exceeding difficult to explain it in such a Manner, that others may not be led into Mistakes. For which Reason, he determined to leave it entirely to Physicians to acquire this Knowledge, by their own Practice and Observation (2). This great Man's Opinion almost deterred me from my Design; but I was desirous of knowing, without hazardous Experiments, when Purging was required in Fevers. In order, therefore, to come at some Rules for purging, I carefully examined in what Circumstances of these Disorders, *Hippocrates* made use of this Remedy. What I found in him, and others the most celebrated in the Profession, may possibly be of Use to those, who have not yet made themselves

(2) Freind Comment. 7. ad Lib. Epid. Hipp.

Masters of this Method of Cure by their own Experience ; for which Reason, an Essay on this new and difficult Subject, will, I hope, meet with a favourable Reception.

The Præcordia, then, or Stomach, with the Viscera contained in the Hypochondria, and the uppermost Part of the Intestinal Tube, are most conveniently purged by Vomiting ; but the Belly, or lower Part of the Intestines, by Stool. On Account of the near Affinity between these two Evacuations, I shall connect the Rules for Purging and Vomiting together. But first, I shall shew in what Manner the Patient should be managed with regard to going to Stool, where Purging is not necessary. *Hippocrates* was desirous that the Stools should always incline to be loose in Fevers, except toward the Crisis. This careful Observer of Nature remarked, that Persons who are naturally loose, are no way subject to those acute Diseases (3). But that those who are costive must necessarily be liable to them (4). And besides

(3) Hippoc. Lib. de Aere, &c. 281.

(4) Id. ibid. 282.

this, he had taken Notice, that very dangerous Symptoms, elsewhere described, happen in Fevers from Costiveness. If, therefore, the Patients don't go to Stool so often as they used to do when in Health, he would have them assisted by Art. His Rule is this, " If a Fever seizes a Person
" when costive, or soon after a full Meal,
" whether accompanied with a Pain of
" the Side, or without it, he ought to ab-
" stain from every Kind of Food, till
" what he has eaten be passed down into
" the lower Part of the Intestines: If
" the Fœces have reached near the End of
" the Intestines, and remain there, a Hea-
" vinefs will be felt about the Loins; and
" the Wind, when it breaks off, will
" smell much. This being the Case, if
" a Stool doth not soon follow, it ought
" to be procured either by a Suppository
" or Clyster. If the Excrements are not
" near the Rectum, but are lodged in some
" Part of the Intestines higher up, a
" Draught of Water and Honey, or, in
" bilious Constitutions, Oxymel ought to
" be given, in order to carry them down;
" If, by this Method, it should be moved

“ to the End of the Guts, and yet stop
 “ there, a Clyster, or Suppository will be
 “ necessary. When the Patient is young
 “ and strong, Clysters are most conveni-
 “ ent; when weak, Suppositories. And
 “ this Method ought to be made use of,
 “ in case there should be no regular Stools;
 “ not only in the Beginning of the Fever,
 “ but all along, till towards the Crisis;
 “ about which Time the Patient should be
 “ kept a little costive, unless the Disease
 “ be inclined to go off by Stool. But if
 “ the Patient should not go to Stool at all,
 “ let him not begin upon Ptisans till some
 “ Day after the Seizure, supposing he
 “ should want this Sort of Food to sup-
 “ port his Strength: If otherwise, let him
 “ leave them till after the Crisis, provided
 “ that does not fall beyond the seventh or
 “ ninth Day. And when there is Occasi-
 “ on for Ptisans, let them not be given in
 “ too great a Quantity, or of too thick a
 “ Consistence (5).”

By this Means, the Intestines being kept empty, at least free from a Load of

(5) Hip. Lib. de ratione vict. in acut. 386. & 398.

Fœces, the Diaphragm will have nothing to hinder its Descent towards the Abdomen, when it contracts itself; for of all the Organs concerned in Respiration, the Action of this one is of the greatest Moment towards a due Expansion of the Lungs. But this is not the only Advantage gained hereby, for the Blood Vessels throughout the whole Abdomen, as well large as small, are kept free from Compression; so that the Blood has an easy Circulation through them: Besides, the Excrements are not only evacuated before they have contracted any vicious Quality, but the Way is open to Nature, if she is endeavouring to discharge any noxious Matter from the Blood, through the Intestines. On the contrary, when the Intestines are loaded with Fœces, the Diaphragm has not room to descend; hence a short, quick, and difficult Respiration; the muscular Action of the Diaphragm is more frequent and laborious. The Lungs, the Liver, and other Viscera in the Hypochondria are compressed and obstructed, and their several Secretions disturbed, and all the Blood Vessels in the Abdomen

strait'ned; whence the Blood is impelled in greater Quantity, and with greater Violence towards the superior Parts, *viz.* the Head and Thorax. Hence appears the Reason of this Observation of *Hippocrates*, That when the Fœces are pent up, and Food is given without a previous Evacuation, if there be a Pain of the Side, it will increase it; if there be none, it will soon bring it on, and cause a quicker Respiration, which, indeed, is mischievous; for it drieth the Lungs, and gives Trouble to the Præcordia, Abdomen, and Diaphragm (6). Hence, likewise, the Reason of the following Precept of *Celsus*; Where the Belly is costive, and Inflammations, Dizziness, Pains in the Head, or other Disorders of the superior Parts are thereby increased, a Stool is to be procured by Medicine (7). Lastly, the Fœces being long retained within the Intestines, where the Air has free access, are by the feverish Heat rendered very sharp and putrid, from whence the more subtle Parti-

(6) Lib. de viēt. in morb. acut. 385.

(7) Lib. 1. Cap. 3.

cles insinuating themselves into the Blood, are alone sufficient to produce a putrid Fever, and much more to augment one already produced from any other Cause; whilst the grosser Part of the Excrement remaining behind, causes griping Pains in the Intestines, and stimulates them like a strong Purge. Of such a Diarrhœa, it is not an uncommon Thing for the Patients to die; but they frequently fall into Fainting Fits, both from the emptying the Blood Vessels, and the sudden Evacuation of such a Quantity of the Fœces from the Intestines; for this Symptom generally happens when the Patient's Strength is almost exhausted by the Fever. Some Physicians observing such bad Consequences following a Diarrhœa, endeavour with the utmost Care to keep the Patient costive, especially in that Kind of Fevers, which are wont to go off by Sweats; but surely, very imprudently; for such a Method will bring on that very Accident which they endeavour to prevent. In a putrid Fever, which raged here in *England*, in the Year 1719, a Diarrhœa happened to a great many about the twelfth Day,

which exhausted their Strength, and very seldom alleviated their bad Symptoms. This came on even tho' the Patient had been vomited; and such a Quantity of Humours flowed through the Intestines on a sudden, that the Patient's Strength was quite unable to support the Discharge: But the Case was different with those who were moderately lax through the whole Course of the Disease; for tho' the Fever seldom went off this Way, yet they were not so much oppressed with Heat, Inquietude, or Delirium; nor was such a gentle Evacuation any hindrance to the Crisis; but by alleviating the Symptoms, brought it on the sooner. For Sweats coming on about the sixteenth Day, generally put an End to the Fever (8).

But even purging Medicines are sometimes necessary in the Beginning of Fevers, tho' if injudiciously given, those at least of the stronger Kind, they are not without Danger. Concerning these, *Hippocrates* gives the following Rules; In

(8) Clifton Wintringham. Comment. Nosolog. Constat.
1719.

acute Diseases Purging is to be used but seldom, and then at the Beginning, and this with great Care and Circumspection (9). And again, Humours that are concocted ought to be moved and purged; not those that are crude, nor at the Beginning, unless they become turgid, which happens to few (1). The turgid Matter then, is that which requires purging in the Beginning of Fevers. But what this turgid Matter is, our Master has not defined. The Word *ῥογαῖν*, which we render to become turgid, is explained by *Galen*, in divers Places: Its proper Signification, is to be passionately inclined to Coition; this hath been transferred from Animals strongly stimulated to Venery, to the Humours: For as those Creatures cannot be quiet on account of the Ungovernableness of this violent Passion, but are in continual Motion and Agitation: So when the morbid Humours, in the Beginning of a Fever, range from Place to Place, and shift themselves per-

(9) Aphor. 24. Sect. 1.

(1) Aphor. 22. Sect. 1.

petually

petually from one Part of the Body to another; they harrafs the Patient, and render him unquiet and restless; and this occasioned by the ranging about of the Humours, and the Impetus with which they are moved (2). He also, in another Place, says, that ὀργᾶν signifies to swell, to press forward, and hasten to get out; and that it is attributed to Humours duly prepared, and pressing forwards for a Discharge (3). From the Authority of *Galen*, the whole Tribe of *Hippocrates's* Commentators explain this Word in the same Manner, and doubtless they have given its genuine Signification: But upon making a diligent Search among almost all of them, to find out some certain Mark of the Matter's becoming turgid, that I might know when Purging ought to be made use of, I found my Labour was in vain. In order therefore to discover such a Mark (for this is the Thing which is wanted), I tried another Method, and by searching the Writings of *Hippocrates*, endea-

(2) *Galen Comment. ad. Aph. Stat.*(3) *Vid. Fœf. Oecon. Hip.*

voured to learn what Symptoms of Fevers he would have treated with purging Medicines; for these will be the Signs of turgid Matter, for as much as when it is not turgid, he forbids Purging at the Beginning of Fevers. To this End, I shall extract a few select Sentences from *Hippocrates*, which seem to comprehend the whole Affair.

“ If that bitter Humour, which we
“ call yellow Bile, is collected in the
“ Stomach, what Heat, Anxiety, and
“ Faintness does it produce! Now, as
“ soon as this Humour is discharged by
“ a timely Evacuation, whether excited
“ by Nature or Medicine, the Complaints
“ vanish; but as long as it is retained,
“ and remains crude and undigested, no
“ Art can remove the Complaints, or put
“ an End to the Fever. Moreover, if a
“ sharp, acrid, greenish Humour infests
“ the Stomach, what Anguish of Mind,
“ Dejection of Spirits, and acute Pains
“ about the Thorax and Bowels, doth it
“ occasion! Nor will these Complaints
“ cease, till the offending Matter is purg-
“ ed and carried off, or corrected by be-
“ ing

“ing mixed with other Humours (4).”
 By the Pains of the Thorax, I believe is meant a Pain of the Præcordia; for all that Space which is furrounded by the Ribs, *Hippocrates* called the Thorax; and the Liver is by him said to be seated in the Thorax (5).

“All the Bile is prepared in the Stomach or Gall-Bladder; that which happens to be in the Stomach when a Fever comes on, passeth off sometimes downwards, but more frequently upward; for which Reason Vomitings happen on the first Days of the Disorder, or the fourth and fifth.

“Those who feel a Heaviness all over their Head, with a Gnawing at the Mouth of the Stomach, and a Sick-ness, vomit up bilious and pituitous Matter (6).

“The Fevers called *Leipyriæ*, (he means, I suppose, those of them which arise from vitiated Humours in the Stomach and Bowels, and not from an In-

(5) De Arte.

(6) Lib. Epidem.

flammation or Ulceration of their Coats)
“ will not give way, unless a Cholera
“ succeeds (7).

“ If in a bilious Fever the Patient doth
“ not purge either upward or downward
“ of his own Accord, and there is a
“ painful Weariness all over the Body
“ on the third or fourth Day, let him be
“ purged downwards with some gentle
“ Medicine (8).

“ An ardent Fever ariseth when the
“ Blood-vessels being dried, have attract-
“ ed acrid and bilious Humours, the Fe-
“ ver is then violent, and the Body pain-
“ ed all over, as from Weariness of the
“ Bones; the Tongue dry, rough, and
“ black; the Belly griped, the Stools ve-
“ ry liquid and bilious, which are accom-
“ panied with intense Thirst, little or no
“ Rest, and sometimes a Delirium. In
“ this Disorder let the Patient drink as
“ much as he pleases of simple Water,
“ and of Water and Honey boiled toge-
“ ther: If the Mouth is bitter, it is pro-

(7) Coac. Prænot. 134.

(8) Lib. de Affection. 519.

“ per to give a Vomit, and likewise Clyf-
 “ ters; but if the Complaints be not car-
 “ ried off by this Method, let the Pati-
 “ ent be purged with Asses Milk boil-
 “ ed” (9) &c. He orders Asses Milk, if
 neither the Vomiting nor Clysters remove
 the Bitterness of the Mouth, and griping
 of the Belly; for the Cure of the Fever
 is expected from a different Evacuation,
 as may be seen in the Place quoted.

“ A Pleurisy ought, for the most part,
 “ to be treated as a Phrensy and Perip-
 “ neumony.—But if on the first or se-
 “ cond Day the Stools are intirely bilious
 “ or slightly so, and in small Quantity,
 “ inject an Infusion of *Thapsia* by way
 “ of Clyster; and if there are Stools in
 “ the Night after it, and the Day follow-
 “ ing Pains or Gripes, let the Clyster be
 “ repeated. But if the Patient is of a
 “ bilious Constitution, and should not
 “ have been purged within a short Time
 “ before he was attacked by the Disorder,
 “ let him have a Purge to carry off the

(9) De vict. in morb. acut. 396.

“ Bile, before he begins to expectorate
“ concocted Matter (1).

“ In Fevers we should examine the
“ Præcordia, whether they are painful or
“ swoln, or have any unevenness or ful-
“ ness, or if there be any Pain of the
“ Side, if that Pain be attended with a
“ slight Cough, or if the Patient be grip-
“ ed, or has any Pain of the Belly; for
“ when any of these Symptoms appear
“ about the Præcordia, it is very conveni-
“ ent to give Clysters, and for common
“ Drink a Decoction of Water and Ho-
“ ney warm (2).

“ Pains and Tumours about the Præ-
“ cordia, if recent and without Inflam-
“ mation, are removed by a rumbling
“ Noise about those Parts, and more es-
“ pecially if the Wind breaks off in go-
“ ing to Stool or making Water (3).

“ If a Pain seizeth the Parts that lie
“ immediately below the Diaphragm,
“ and doth not extend itself upward to
“ the Clavicle, the Patient should be
“ gently purged with black Ellebore or

(1) Lib. 3. de morb. 494.

(2) De rat. vict. in morb. acut. 400.

(3) Coac. Prænot.

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“ Peplium; with the Ellebore mix Wild
 “ Carrot, or Hartwort, or Cummin, or
 “ Anise, or some other aromatic; but
 “ with the Peplium mix Asafœtida. El-
 “ lebore is the best Purge about the Crisis,
 “ but Peplium is a greater Discusser of
 “ Flatulencies; both of them assuage the
 “ above Pain, and so do many other
 “ purging Medicines, but these more ef-
 “ pecially; the laxative Medicines also
 “ which are given in Ptisans, and which
 “ are not very disagreeable, are of use
 “ likewise in this Case (4).

“ In a bilious Fever, when the Mouth
 “ is freest from a bitter or nauseous Taste,
 “ but the Belly violently griped, give a
 “ purging Medicine, and afterwards Asses
 “ Milk, or Whey, Barley-Water, or
 “ something of this kind (5).

“ Spontaneous Vomiting commonly
 “ happens in Fevers on the unequal Days,
 “ and a Purging on the equal, provided
 “ the Type of the Fever, and the Man-
 “ ner of its Paroxysms be such as they

(4) De rat. vict. in acut.

(5) Lib. 2. de morb. 473.

“ ought,

“ ought: And when this is the Case, dis-
“ charges are generally of use. But when
“ the Paroxysms return on the equal Days,
“ the Vomiting happens on the equal, and
“ the Purging on the unequal. However,
“ such Fevers don’t often occur, and are
“ more difficultly removed (6).

“ The Time for purging, either upward
“ or downward, is when the Matter is
“ prepared, and in a readiness to be dis-
“ charged. When the Matter is moved
“ downward, it is proper to give a Purge:
“ This may be known by the Patient’s be-
“ ing freed from Anxiety, and Heaviness of
“ the Head; and by the Abatement of the
“ Heat, and going off of the Paroxysm.
“ But a Vomit is to be given in the very
“ Paroxysm; for the Stomach and neigh-
“ bouring Parts are most loaded and op-
“ prest, when the Patient labours under
“ Anxiety and Pain of the Head (7).

“ If an ardent Fever comes upon one
“ who has a loose Belly, if a purging Me-
“ dicine is thought proper, it ought not

(6) De Humorib. 48.

(7) De Morb. vulgar. lib. 5. 1156. & lib. 7. 1226.

“ to be given on the three first Days, but
 “ on the fourth (8).

“ When the Matter tends downward,
 “ it ought generally to be purged off by
 “ Stool; yet this should not be done near
 “ the Crisis, but at a distance from it:
 “ Violent Purges, however, are seldom
 “ proper in acute Fevers (9).

“ When you have a-mind to give a purg-
 “ ing Medicine in the beginning of Fevers,
 “ do it before the fifth Day, if there's a
 “ Rumbling in the Belly; otherwise it is
 “ better not to give any: But if there is,
 “ and the Stools are bilious, you should
 “ gently purge with Scammony (1).

From these Quotations we may collect,
 that the turgid Matter of *Hippocrates* is
 something offensive to Nature, lodged in
 the first Passages; which may, for the
 most Part, be carried off by Vomiting
 and Purging: And it is not uncommon
 for this Matter itself, to irritate the Sto-
 mach and Intestines, to make those Dis-
 charges by which it is expell'd. Of this

(8) De rat. vict. in morb. acut.

(9) De humorib. 49.

(1) De rat. vict. in morb. acut. 401.

Sort is, acrid, yellow, green, and black Bile, and every other kind of sour, putrid, acrid, and noxious Humour, lodged within the Cavity of the Stomach or Bowels; as likewise Flatulencies distending the Stomach and Intestines. The Signs of turgid Matter about the Stomach are, universal Weariness, a sudden Weakness, Shiverings, a foul Tongue, a Bitterness in the Mouth, coating of Food, Sickness at Stomach, Uneasiness about the Præcordia, and Tumours of the same Part; which easily yield to the Pressure of the Fingers, Straitness and Oppression of the Breast, Pain of the Stomach, and likewise of the Side, below the Diaphragm, and confin'd within the Ribs, but not inflammatory; (this is sometimes termed by *Hippocrates*, a Pain of the Thorax, and sometimes a Pain of the Side, not extending up towards the Clavicles) a Coldness of the Extremities, Heaviness and Pain all over the Head, a Giddiness, Mists before the Eyes, Lowness of Spirits, Faintness, Inquietude, Anxiety, restless Tossings, (provided there be no Inflammation). When the turgid Matter is situated below the Stomach, and infects

the Intestines, it discovers itself by a Heaviness of the Knees, Pain about the Loins, Distention of the Belly, Rumblings, Gripes, liquid, clear, fetid and acrid Stools. Now all these bad Symptoms, and likewise the Fevers produced from the same Cause, cannot be removed by any Art, till the turgid Matter be sufficiently alter'd or expell'd by proper Evacuations. Therefore, according to the Precept of the greatest Master in Physick, when the Matter is turgid in the Beginning of Fevers, it must be purged off: If it has a Tendency upward, it is to be discharged by Vomit; and if downward, by Stool; for the morbid Matter is to be carried off the nearest Way possible, provided it be a convenient one. Besides in this, we follow Nature as our Guide: But it is by no means to be expected, that by these Evacuations, Fevers which are crude will be brought to a Crisis; but there is reason to hope, that those grievous Symptoms which indicate the turgid Matter, will be alleviated; whereby the Patients will be better able to bear up under their Fever, and the Fever itself will be sooner brought to a Termination.

Thus

Thus in the Case of *Theotimus's* Wife, when in a semi-tertian Fever, Anxiety, Vomiting, and Shiverings, came on together with the Fit, Hydromel was given her; with which, when she had vomited, the Shiverings and Anxiety left her (2).

Moreover, I find *Hippocrates* approved of Purging in the Beginning of acute Diseases, in order to expel the morbid Matter from the internal Parts of the Body; for he gave purging Medicines in inflammatory Disorders, in order to discharge the phlogistick Matter from the Parts affected: And in Inflammations about the Region of the Head and Fauces, he never omits them; (but it is to be observed, that *Hippocrates* does not call those Diseases, arising from an Inflammation, Fevers). However, when a violent Fever, or an Inflammation of any particular Part, requires Bleeding, a Vein is always to be opened first; and after that, a Purge may be given, if necessary.

Hear the Words of our great Master himself, “ If a Patient is ill of a Quinsy,

(2) Epid. lib. 7. 1234.

“ or a pleuritick Disorder, give him a
“ Purge; but if he has been weakened
“ by plentiful Bleedings, let a Clyster be
“ thrown up every third Day, till he is out
“ of Danger (3). When there’s a Swel-
“ ling about the Præcordia, not occasion’d
“ by a Stoppage of the Wind; when the
“ Diaphragm performs its Office with
“ Difficulty and Pain; when the Breath-
“ ing is laborious, with the Neck erect,
“ and nothing at all expectorated, nor any
“ purulent Matter collected in the Lungs;
“ when the Liver is violently pain’d;
“ when there’s a great Heaviness in the
“ Spleen, or a constant intense Heat seiz-
“ eth any other inward Part; when acute
“ Pains settle above the Diaphragm; or
“ when any other Kind of inflammatory
“ Disorder has seized a Patient; if a Phy-
“ sician should at first order purging Me-
“ dicines, he will render the Distemper
“ incurable: But in such Cases, Bleeding
“ is the principal Remedy; afterwards
“ Clysters are to be given, unless the Dis-
“ order be great and violent, and requires

(3) De rat. vict. in morb. acut. 396.

“ Purging ; which, after taking away
“ Blood, should be attempted with Mo-
“ deration, and by gentle Medicines. For
“ those who endeavour to remove an In-
“ flammation at the Beginning by purging
“ Medicines, carry off nothing from the
“ Part inflamed, since the phlogistick Mat-
“ ter cannot be dislodged whilst the Dis-
“ ease is crude ; whereas, what remain’d
“ within in a healthy Condition, and made
“ head against the Disorder, is thereby
“ corrupted : In consequence of this the
“ natural Strength is weakened ; so that the
“ Disease gets the Superiority of Nature,
“ and then the Case is desperate (4).

“ Wherefore, in the Beginning of in-
“ flammatory Diseases, it is not proper im-
“ mediately to purge, but to wait till the
“ Violence of the Inflammation is removed
“ by Bleeding, unless the turgid Matter be
“ very offensive : Then, indeed, Purging is
“ to be made use of as soon as possible, espe-
“ cially if the Fevers are of the most acute
“ Kind ; for in this Case Delays are dan-
“ gerous (5).” But even then, if there
be need of Bleeding, that is to take Place ;

(4) Ibid. 396.

(5) Aphor. 10. S. 4.

for *Hippocrates* was always afraid to bleed after Purging. 'Tis also equally bad to defer Purging till the Fever is become violent, and the Patient's Strength almost worn out by the Disease, and the Crisis at hand; for during the Operation of purging Medicines, (at least those strong ones which the Antients used) the Fever is greatly augmented, the Body and Mind disturbed, the Strength greatly diminished, and the critical Evacuation, if tending another Way, diverted.

For which Reason, that Interval is to be chosen for Purging at the beginning of the Disease, in which the Patient is most free from the Fever. On all these Accounts, if Fevers run higher on the unequal Days, as they ought, and the Disease is not of the most acute Kind, the fourth Day is the most proper for Purging; wherefore, that Day is generally chosen by *Hippocrates*. Yet notwithstanding this, a purging Medicine may and ought to be given at any Time of the Disease, if Necessity requires, and the Strength of the Patient, the Fever and its Symptoms, permit.

For

For these are always more to be considered than the Time of the Disease.

Vomits likewise are given with greater Safety after Bleeding, when that is required. These ought to be given on the first Days. But this Evacuation usually happens at the Beginning of a Paroxysm; because at this Time the bilious Humours flow more into the Stomach, which is distended, as well as the neighbouring Parts, with redundant Humours: For which Reason, unless the Distemper be very violent, a Vomit ought to be given at the Beginning of a Paroxysm; or rather, perhaps, a little before it, so that the Operation may be over before the Paroxysm comes on.

“ But violent continual Fevers do not
“ so commodiously admit of purging Me-
“ dicines, because they have no free In-
“ tervals. In these, therefore, we ought
“ not to purge till the Fever begins to
“ remit; but if it should not remit, we
“ ought not to give a purging Medicine
“ within fourteen Days; for when the
“ Patient’s Flesh, as well as the Viscera
“ contained in the several Cavities of the
“ Body, are violently hot, they imbibe
“ the

“ the Medicine, but are not purged by
 “ it ; hence the Fever is augmented, the
 “ Complexion changed, and they look
 “ like Persons in a Jaundice ; for the Bile
 “ being moved and not purged off, the
 “ Patient has no Inclination either to eat
 “ or drink, but loaths all Things, and
 “ generally dies (6).” But this is to be
 expected, as I hinted before, from the vio-
 lent Purges which the Antients made
 use of, when not operating by Stool, they
 mix with the Blood. “ Moreover violent
 “ Fevers and Inflammations very badly
 “ bear Purging, before they have been
 “ abated by Bleeding ; and likewise acute
 “ Diseases, where the Urine is thin and
 “ limpid, especially if attended with
 “ Watchings, Giddiness, or Pulsations in
 “ the Head (7) ;” for by Purging, the U-
 rine is prevented from concocting, and
 the Fever will run on without Sweats, or
 any other Crisis ; and so continue, pro-
 vided it be not fatal, a great deal the lon-
 ger. Purging is likewise to be avoided,
 where a bitter Taste in the Mouth, a

(6) Lib. de purgant.

(7) De rat. vict. in acut.

Coldness of the Extremities, or any other Symptoms indicate corrupted Humours to be lodged in the Stomach; for the nearest Exit for these is upwards through the Mouth. Purging is also very improperly used, where a Coldness of the Extremities presages an approaching Paroxysm. It is likewise very dangerous to those, where the Parts about the lower Belly are thin and emaciated (8); but in Diseases of the Breast, after digested Matter begins to be expectorated, it is fatal; for it puts a Stop to Expectoration, whereby the Patient, about the Time the Crisis was expected, is suffocated (9). Lastly, every artificial Evacuation which obstructs Nature, when she is herself endeavouring to make a beneficial Discharge, is of very bad Consequence.

When, therefore, it is judged necessary to give a Purge, and any of these Circumstances forbid Purging, we must have recourse to Clysters. This Remedy is never dangerous; for in violent Fevers, in the Paroxysms, and at the Beginning of

(8) Aphor. 35. S. 2.

(9) Lib. 3. de morb.

the Disease, and near the Crisis; nay, even when a critical Evacuation begins to appear, this Remedy may be administered (1). But *Hippocrates* did not confine the Use of Glysters only to the evacuating those Humours which are turgid about the Abdomen, and to the drawing off redundant Humours from the superior Parts; but he ordered them likewise with a View of abating the Fevers themselves.

“ In a Peripneumony, says he, we ought
 “ to keep the Belly lax the first four or
 “ five Days, or somewhat more than lax,
 “ to the End the Fever may be kept down
 “ and the Symptoms mitigated: But
 “ when the Patient has been weakened
 “ by Evacuations, the Belly should be re-
 “ laxcd every third Day; so that the up-
 “ per Parts may be kept free from re-
 “ dundant Humours, but the natural
 “ Strength not impaired: For if a Quan-
 “ tity of Humours flows downward after
 “ the fifth Day, the upper Parts are dried,
 “ Expectoration is stopt, and a Suffoca-
 “ tion brought on: The Belly therefore,

(1) As appears from the forecited Places.

“ ought not to be kept very costive, lest
“ the Fevers become acute, nor too lax,
“ lest Expectoration be stopt, and the Pa-
“ tient’s Strength wasted (2).” So that
on one Hand the Violence of the Fever
is to be considered, on the other the
Strength of the Patient, and the critical
Evacuation, if Nature is seasonably endea-
vouring to promote any; for this forbids
purging Stools, the other requires them:
Wherefore, from a due Estimate of these
Circumstances, a prudent Physician will
easily judge when Clysters are expedient.

Moreover, Clysters have different Effects,
being compounded of different Ingredi-
ents: Those of an emollient Nature
cleanse and foment the lower Part of the
Intestines; if acrid, they draw from the
superior Parts; so that a treble Dose of a
purging Medicine given by way of Clyster,
will operate almost as strongly as if the
same was swallowed in a proper Quantity.
From what has been said before, we may
judge of what Ingredients a Clyster ought
to be composed, when there is one re-
quired.

(2) Lib. de morb. 3. 493.

Aretæus, who was inferior to none but *Hippocrates*, both in the Art of Healing and Writing, pursued the Method of his Preceptor so closely, that *Boerhaave* thought he took most of his Matter from *Hippocrates*. He always orders the Intestines to be kept empty in acute feverish Diseases; when that was his only View, the Composition of his Clysters was of an emollient Nature, as a Decoction of Linseed, Fænugreek and Mallows: This he directs in inflammatory Disorders about the Heart, and the Vena cava. Sometimes, indeed, when besides barely procuring Stools, he proposed a Revulsion of Matter from some superior affected Part, or a Discharge of Flatulencies from the Præcordia, as in the Cure of a Phrensy and Peripneumony, he made perpetual use of stimulating Suppositories, or acrid Liniments. But if the Patient continued costive for some Time, he injected Hydromel, Oyl, and Nitre. In an Apoplexy, he orders very sharp Clysters, which, besides Nitre, contain a Quantity of Euphorbium and Colocynth. He likewise gives purging Medicines after Bleeding,

ing, in order to allay Inflammations, as in an Angina. He also prescribes evacuating and purging Medicines to be used in acute Diseases, long before the Crisis (3).

All the antient Physicians, except the School of *Erasistratus*, from *Hippocrates* down to *Asclepiades*, made it a constant Rule to purge off the morbid Matter by Stool. But though *Asclepiades* forbore giving purging Medicines, yet he kept the Belly lax with proper Food and Drinks; and in almost every Disease, not often indeed, but once or twice procured a Discharge by Clyster (4). “ This Remedy he made use of if the Head was heavy, if there were Mists before the Eyes, if there was a Cholick, or Pains in the lower Part of the Belly, or just above the Hips; if there was any bilious Matter over-loading the Stomach, or if any slimy or watery Humours were lodged there, if the Wind did not break off easily, if there was no sponta-

(3) De curat. acutor. morbor. Lib. 1. cap. 1.

(4) Celsus in Lib. 2. Cap. 12. & in Lib. 3. Cap. 4.

“neous Discharge downwards, if the
“Fœces stopt near the Anus ; or if the
“Wind when it passed off was fetid, or
“if the Stools were corrupt and putrid,
“or if the first Abstinence had not re-
“moved the Fever, or if the Patient’s
“Strength would not bear Bleeding when
“necessary, or if the Time for it was
“elapsed, or if he had drank hard be-
“fore the Attack of the Disease, or if
“from having frequent purging Stools,
“either naturally or by Accident, he
“suddenly became costive. But it is
“to be observed, that Clysters are not to
“be used before the third Day, nor when
“any Crudity is subsisting in the Sto-
“mach, nor when the Patient is infirm,
“and has been exhausted by a long Sick-
“ness, nor where the natural Evacuation
“is sufficient, nor where the Stools are
“loose, nor in the Height of the Pa-
“roxyſm, because what is then injected
“will be retained ; and getting up in the
“Head, makes the Danger greater : But
“the Patient ought to use Abstinence the
“Day before, that he may be prepared
“for such a Remedy ; and the same
“Day

“ Day a few Hours before the Clyster,
“ to drink warm Water to moisten the
“ superior Parts ; if weak Clysters are suf-
“ ficient, use warm Water ; if somewhat
“ stronger, Hydromel ; if emollient ones
“ are required, take the Decoction of Fe-
“ nugreek, Barley or Mallows. Of the
“ acrid kind is Sea-water or other Water
“ with Salt dissolved in it, both are the
“ better for being boil’d, and may be made
“ more acrid, by an Addition of Oyl, Nitre
“ or Honey. The more acrid it is the
“ more it will bring off, but the Patient
“ will not so easily bear it (5).”

In this Affair *Asclepiades* used a vast deal of Caution, and indeed a great deal was necessary, when by an absolute fast of three entire Days, the Patient’s Vessels had been emptied, his Juices consumed, and his Strength wasted by that, as well as by being continually expos’d to the Light and kept waking ; for those who have been weaken’d by such a Method, can but poorly bear any great Evacuations by Stool. Wherefore all who followed *Asclepiades*

(5) Celsus loc. citat.

in his Method of Diet, have condemned purging Medicines, and refrained from frequent and acrid Clysters. As may be seen in *Celsus* and *Cælius Aurelianus*. But *Chrysippus*, the Preceptor of *Erasistratus* was the first of all who threw aside Bleeding and Purging because he was persuaded, that the Body was altogether as well emptied by fasting as it was by the use of these Remedies (6).

Vomiting likewise in those Fevers which proceed from Bile was judg'd necessary by *Celsus*; he therefore thought it useful to all those who were seized with Shivers and Tremblings, before the Paroxysms, to those who had a Cholera, and likewise to those who were delirious, and at the same Time disposed to Mirth. But he tells us there's no need of the rougher Medicines; and from the same Author we learn, that when any kind of Matter is vitiated and corrupted, 'tis best to expel it the nearest Way we can, therefore when there are bitter Belchings with a Pain and Load at the Stomach, we must immediately have

(6) Galen de V. S. advers. Erasistr.

recourse to vomiting, which is likewise useful, if the Patient be troubled with heart-burning, and his Mouth runs with Water, or he be sick at Stomach, or if he has a noise in his Ears, or his Eyes be moist and watry, or his Mouth bitter (7).

These gentle Methods are, 'tis true, safer than the more violent ones used by the Antients. But then it must be consider'd, that as they are attended with no Danger, so the Benefit received from them is less; nor can a violent Disease be cured without as violent a Remedy. But I shall more largely explain and confirm the Precepts of *Hippocrates*, which relate to the purging off the turgid Matter in Fevers from the Observations of the Moderns.

In that Fever which *Sydenham* thought the most genuine of any which had fallen under his observation; and *Hippocrates* wou'd certainly have called a bilious Fever, “ The Patient was extremely ill, had
“ a constant Inclination to vomit, his
“ Tongue was black and dry; there was a
“ great and sudden failure of Strength, a

(7) Cels. Lib. 1. Cap. 3. and Lib. 2. Cap. 18.

“ Driness of the Skin, the Urine in all
 “ was either turbid or clear, both of which
 “ are Signs of Crudity. In the Declension
 “ of the Disease a Diarrhæa came on, un-
 “ less the Physician took care to prevent
 “ it in the Beginning, whereby the Disease
 “ became more stubborn, and afflicted the
 “ Patient longer, but its proper Nature
 “ and Genius was such, that it seldom
 “ continued beyond the 14th or 21st Day,
 “ at which Time a Sweat coming on, or
 “ rather a gentle Moisture of the Skin put
 “ an End to the Disease.

The Method of Cure was this “ Where
 “ the Fever is violent, and the Patient
 “ young and strong, the first Remedy
 “ (says our Author) I make use of is
 “ Bleeding. After Bleeding, I carefully
 “ enquire whether the Patient has vo-
 “ mited, or had any Urgings to vomit
 “ when the Fever came on. If he had,
 “ I then order a Vomit, unless the Pati-
 “ ent’s tender Age, or some remarkable
 “ Weakness forbids it. Certainly to give
 “ a Vomit, when such Inclination to vo-
 “ miting has preceded, is so absolutely ne-
 “ cessary, that unless the Humour occasion-
 “ ing

“ ing it be evacuated, it will lay a Foun-
“ dation for many dangerous Symptoms,
“ which greatly perplex the Physician dur-
“ ing the whole Time of the Cure, and
“ put the Patient in no small Danger of
“ his Life. The chief and most usual of
“ these is a Diarrhæa, which for the most
“ Part appears in the Declension of the Fe-
“ ver, if Emetics were omitted when there
“ was a plain Indication for them. For in
“ the Progress of the Fever, when Na-
“ ture has somewhat subdued the malig-
“ nant Humour in the Stomach, and car-
“ ried it downward into the Intestines,
“ they are so fretted by the continual Flux
“ of an acrid Humour from this Fountain
“ in the Stomach, that 'tis impossible but
“ a Diarrhæa must ensue. And the Dan-
“ ger in such a Sort of Diarrhæa consists in
“ this, that the Patient being already much
“ weaken'd by the Disease, is hereby ren-
“ dered still weaker; besides, the gentle
“ Sweats which use to terminate those Fe-
“ vers, are by this Evacuation quite pre-
“ vented.

“ And to remove all Doubt that this
“ Humour lurking in the Stomach, un-

“ less it be discharged by vomiting, will in
 “ a short Time after produce this Trage-
 “ dy, I mean a Diarrhœa, you will al-
 “ ways find upon Enquiry, if at any Time
 “ a Diarrhœa accompanies this Fever, that
 “ the Patient inclin’d to vomit in the be-
 “ ginning of the Disease, and no Vomit
 “ was given. You’ll likewise find that
 “ though the Inclination to vomit hath
 “ been long since over, yet upon giving an
 “ Emetic the Diarrhœa will for the most
 “ Part cease.

“ The Emetic which I generally pre-
 “ scribed was Infus. Croc. Metallor. ʒvi
 “ Oxym. Scillit. Syr. scabios. comp. āā
 “ ʒß (which by the Way is one of the
 “ roughest Sort.)

“ I have often wondred how it came
 “ to pass that the Patients should find so
 “ great Relief from hence ; for after the
 “ Vomit was over, those severe Symptoms,
 “ Sickness at Stomach, Anxiety, Rest-
 “ lessness, deep Sighings, Blackness of
 “ Tongue, &c. which tormented them
 “ and terrified their Attendants, did usu-
 “ ally abate and vanish, and the Patient
 “ com-

“ commonly bore the Remainder of the
“ Disease with good Spirit.

“ A Vomit ought to be given in the
“ very Beginning of the Fever, if we
“ cou’d have our Choice; for by this
“ Means we should guard against those
“ terrible Symptoms which owe their Rise
“ to the vitiated redundant Humours lodg-
“ ed in the Stomach and Parts adjoining,
“ nay, and what is more, very likely crush
“ the Disease in its Infancy, which other-
“ wise wou’d increase and be protracted
“ to the great Danger of the Patient, the
“ Disease being nourished by those mor-
“ bid Humours which are either trans-
“ mitted in Substance through the Vessels,
“ and so are mixed with the Blood, or
“ being greatly corrupted and almost en-
“ venom’d by their long Stay in the first
“ Passages, do from thence communicate
“ their malignant Effluvia to the Blood
“ as it is passing by. Of this we have an
“ Instance in the Cholera Morbus, for if
“ we unseasonably stop the Vomiting in
“ that Disease, the acrid and corrupt Hu-
“ mours which ought to have been eva-
“ cuated, being by this Means pent in,

“ do exert their Force and Fury on the
“ Blood, and kindle up a Fever, which
“ as 'tis wont to be of a malignant Na-
“ ture, and attended with very dangerous
“ Symptoms, so it can hardly be removed
“ without giving an Emetic, though the
“ Patient have then no Propension to vo-
“ mit.

“ But if it shou'd happen, as it fre-
“ quently does, that we are called in too
“ late, and have not an Opportunity to
“ give a Vomit in the beginning of the
“ Fever, yet surely I should think it neces-
“ sary to do it at any Time of the Disease,
“ provided the Patient's Strength will bear
“ it.

“ To allay the Hurry occasion'd by the
“ Vomit in Fevers, an Opiate is necessary.

“ The Vomiting being over, if it should
“ be farther necessary to lessen the Vio-
“ lence of the Fever, I order a Clyster
“ the Day after the Vomit, and if the
“ Effervescence of the Blood be too
“ great, I repeat it every Day, or every
“ other Day, as the Case requires, even
“ to the tenth Day of the Disease. But
“ if the Patient has lost a great Quantity
“ of

“ of Blood, or is of an advanced Age, I
“ then refrain from Clysters, even tho’
“ the Effervescence of the Blood should
“ be very great; for ’tis to be feared they
“ will abate the Force of the Blood to
“ such a Degree as to render Nature in-
“ capable of expelling the Disease by a
“ proper Crisis. But after the 10th Day
“ when by these proper Evacuations the
“ Patient is out of Danger with regard to
“ those Symptoms which are occasion’d
“ by too great an Ebullition, I take care
“ to keep him costive; and Things at
“ that Time tending towards a Separation,
“ I think warmer cordial Medicines ought
“ to be more liberally indulged, by which
“ Concoction is promoted, and a Crisis
“ sooner brought on, which by such a
“ Method generally happens about the
“ 14th Day. But if cooling Medicines
“ have been used too late, and by their
“ Means the Effervescence is lessen’d, ’tis
“ no wonder if the Fever runs to the one
“ and twentieth Day, and in weak Con-
“ stitutions, ill treated, much longer.

“ This is moreover worthy of Observa-
“ tion, it sometimes happens that by the
“ Use

“ Use of Clysters, or other purging Me-
 “ dicines, unseasonably prescribed, about
 “ the Declension of the Disease, the Pa-
 “ tient seems to be a little relieved, nay
 “ sometimes to be perfectly freed from all
 “ feverish Symptoms; yet a Day or two
 “ after you shall perceive a new Fever to
 “ be kindled, which will run the same
 “ Course as the former, unless it happens
 “ to change into an Intermittent (8).”

I have quoted thus much from *Sydenham*, because he so exactly conforms to the Method used by *Hippocrates*, that one might swear he had taken it from him; or if he did not (as is generally imagined) 'tis more than probable that both learned their Art from the same Mistress, *viz.* Nature.

But to pursue the Advantages of this Method somewhat farther, I shall show what ill Consequences flow from neglecting to purge off the turgid Matter or injudiciously attempting it.

In those Years wherein the Fevers described by *Sydenham* were Epidemical

(8) De febr. Contin. An. 1661. &c.

in England, almost the same Kind seized on abundance of People at *Pisa* in *Italy*, and were generally mortal. *Borelli* has given us this Account of them; “ These Fevers much resembling simple Tertians generally begin “ with a Heaviness of the Head, Pain of “ the Stomach, Bitterness of the Mouth; “ on the 7th Day the Fever does not intermit, on the 11th it becomes malignant, and where a Diarrhæa does not “ follow, they die sometimes before, and “ sometimes after the 14th Day. And “ indeed a Diarrhæa does not set them “ out of Danger, unless it discharges a “ Quantity of Bile. Moreover, not only “ in those Fevers, but in all other Diseases, which are now common, no one “ has recovered without a Diarrhæa, either natural or procured by Art. Great “ Numbers of People who had no Fever, “ complained of a Bitterness in the Mouth. “ In four dead Bodies at whose Dissection I was present, we perceived no remarkable Disorder in the Lungs, except “ a Driness which perhaps was caused by “ the Heat of the Fever; in other Respects

“ pects they appeared quite found. In
“ like Manner the Mesentery with its
“ Glands, were neither putrid nor cor-
“ rupt, as was suspected; the Substance
“ of the Liver likewise and Spleen was no
“ Way disordered. Only the Gall Blad-
“ der was remarkably turgid, and the Sto-
“ mach also abounded with the same bi-
“ lious Humour, and in some the Intes-
“ tines were found tinged with a yellow
“ Colour. This is the whole of what has
“ been hitherto observed in those who
“ have died of the Disease. All of ’em
“ were very thirsty, and had a Pain in
“ the Belly. Some who had a Delirium,
“ Bitterness in the Mouth, Vomitings and
“ great Restlessness, were relieved by a
“ Diarrhæa.

“ ’Tis plain, Bleeding was of no use,
“ for none who died were lost for Want
“ of it, nay even repeated to the third
“ Time. Nor were Blisters more service-
“ able, for all were carried to their Graves
“ with their Arms, Feet, and other Parts
“ ulcerated. Large Evacuations by purg-
“ ing Medicines were not tried with us,
“ therefore we can’t say what good Effect
“ they

“ they might have produced. But we en-
“ deavour’d to correct the Bile with Spi-
“ rits of Vitriol and Sulphur, and to draw
“ it downwards by the Help of Clysters,
“ and sometimes we ventured to give a
“ gentle purging Medicine ; if by them
“ a Quantity of Bile was discharg’d, there
“ was some Hope, if little or none, there
“ was Reason for Fear. This appears
“ from the History of *Antonius* ; for when
“ he was purged, the Physician was con-
“ cern’d because he did not perceive those
“ Effects which he expected from his Me-
“ dicines ; but afterwards a great Quan-
“ tity of Bile being discharg’d by Stool,
“ and so likewise the Day after by ano-
“ ther Clyster, he became free and cheer-
“ ful, his Head was clear, and the Fever
“ abated (9).”

How improper Bleedings and Blisters were to evacuate the corrupted Humours lodged about the Stomach, is plain to every one. Clysters likewise avail but little, or even what they call gentle purging Medicines, to discharge the Bile from the

(9) Ex Epist. Borell. in Oper. Posthum. Malpigh.

Gall Bladder; but if Nature had already conveyed it into the Intestines, they wou'd then, no doubt, have been of use to carry it downwards; but this was not always the Case, and many died notwithstanding the Use of this Remedy, and even upon this very Account, because they did not plentifully evacuate the Bile. For upon the Discharge of this, solely depended the Cure. I'm surprized indeed that those very ingenious men, *Malpighi* and *Borelli*, so well skilled in the Dissection of human Bodies, and so knowing of the Use of its Parts, shou'd never once think of pressing out the Bile from the Gall Bladder (when they found that the whole Disease was confined to the Bile) by a Vomit, which at the same Time would discharge it from the Stomach. Surely 'tis reasonable to think from the History of the Disease, that many died thro' a neglect of an Emetic. But 'tis more surprizing that none of their Physicians had learn't from *Hippocrates* (whose Name is in every Physician's Mouth) to discharge the turgid Matter in this Fever, by a proper Evacuation.

But sometimes other Humours besides the Bile become turgid, and produce as bad Effects. Those Diseases which afflict and destroy the greatest Part of Infants, owe their Rise to an acid Humour lurking about the *Primæ Viæ* according to Dr. *Harris*, and his Method Physicians happily follow in the Cure of these Diseases, by giving alkaline Medicines to correct the Acid, and then afterwards carrying it downwards by Stool. When the turgid Matter is acid, the Stomach and adjacent Parts are afflicted with sharp Pains, or the Belly with Gripes.

Corrupted Pituita likewise may infest the Stomach and Intestines, as is evident in that Disease call'd the *Colica Damnoniorum*. For which Reason, and on Account of the near Affinity which it has in some Respects with another Disorder hereafter to be treated of, I shall not think it much to give a brief Description of it, as it is related by an Author who has greatly merited of his Country.

“ This Disease appears every Autumn
“ in *Devonshire* and *Cornwal*, but in some
“ Years 'tis very epidemical; when it is
“ most

“ most so, it seizes none but such as have eat
“ plentifully of Apples, or drank great
“ Quantities of new Cyder; those who
“ are Costive suffer most severely.

“ It began with a violent Pain of the
“ Stomach and upper Part of the Belly, a
“ weak and unequal Pulse, a cold Sweat,
“ the Tongue was furr’d with a greenish
“ or dark Mucus, and the Breath exceed-
“ ingly fetid; these Symptoms were suc-
“ ceeded by an enormous Vomiting of
“ green and sometimes black Bile, which
“ was always accompany’d with a great
“ Quantity of Pituita, exceedingly acid
“ and very viscid. After this had conti-
“ nued one or two Days, the Patient be-
“ came very costive, and then the Vo-
“ miting abating, the Pain got lower
“ down and griped severely about the
“ Navel, and afterwards seized the Spine
“ of the Back and Loins; when the
“ Gripes of the Belly went off, the Pains
“ increased about the Spine, and spread
“ all over the Back, so high up as the
“ Shoulders, and soon after seizing the
“ Arms, it generally fixed on the Joints,
“ and intirely destroyed the Use of the
“ Hands;

“ Hands the Thighs and Legs at the same
“ Time suffered the same Tortures. Whilst
“ the Disease was passing from the Intes-
“ tines to the Limbs, the Pulse had a
“ stronger Vibration, and the Patients
“ were slightly feverish. In this State of
“ the Disease, some were delirious, and
“ such made limpid Urine, and if thro’
“ the whole Course of the Disease, the
“ Water was pale and without Sediment
“ the Patient was generally seized with
“ Convulsions, a Delirium or a Palsy of
“ the Hands. When the Disease had once
“ seized the Limbs, plentiful, stinking sour
“ Sweats mitigated their Pains, and if any
“ Pain of the Belly yet remained, it va-
“ nish’d upon the coming on of those
“ Sweats. But notwithstanding a plenti-
“ ful Sweat, some had their Hands ren-
“ dred paralytick. Sometimes there came
“ out with a kindly Sweat, many red
“ itching Pustules all over the Body, and
“ then all the Pains soon vanish’d. This
“ indeed was the most favourable Crisis;
“ but far more frequently the Colic Pains
“ were succeeded by a Rheumatism, and
“ the Rheumatism by the Pains of the
M “ Bowels,

“ Bowels, and thus for a long while they
“ alternately afflicted the poor Patient,
“ the Disease sometimes seizing on the
“ Limbs, and sometimes on the Intes-
“ tines. Some, tho’ but a few who were
“ a long Time severely handled by the
“ Disease, were taken with Epileptic fits
“ and died.

“ In order to assuage the violent Pains,
“ Bleeding was tried and found to be of
“ no manner of Service, but it brought
“ on great Faintness. The best Remedy
“ was a Vomit given every other Day, and
“ sometimes repeated to the fourth Time,
“ by Means of which the greatest part of
“ tough pituitous Matter accumulated a-
“ bout the Stomach and upper Part of the
“ the Intestines was evacuated and the
“ corrupted Bile entirely carried off. Some-
“ times as soon as the Vomiting was end-
“ ed, the Pains of the Limbs would cease,
“ at least for a Time. When the Stomach
“ is settled after vomiting which may be
“ soon effected by Paregoricks, purging Me-
“ decines with Opiates must immediately
“ be given and repeated often; for if any
“ other Disease requires frequent purging

“ and

“ and the Belly to be long kept loose,
“ this certainly doth. Moreover to cure
“ the Disorder which is got into the Blood,
“ we must dilute plentifully; and promote
“ copious Sweats.” (So far Dr. *Huxam*) (1).

In this Disease 'tis plain to every one that the morbid Matter first affects the Stomach and then the Intestines; from whence the vitiated Juices are conveyed into the Blood, and afterwards seize the Joints, where they particularly affect the Nerves; afterwards these same Humours are rendred fit to pass off thro' the Skin; for Sweats and red itching Pustules terminate the Disease. The Urine also where the Sediment is large, carries off something of it. The corrupted Pituita in this Disease, on Account of the acid Acrimony it is impregnated with from the Apples, produces some particular Symptoms. But without the Use of Apples or acid Fruits, a feculent slimy Matter is frequently collected about the Stomach and Intestines. Every one conversant in Medicine hath doubtless observed what great Quantities

(1) J. Huxam in *Opuscul. de Colic. Damnon.*

of this Pituita or Slime have been discharged by Vomits given to those who have a weak Stomach and bad Digestion. And 'tis well known that steel Medecines will not pass into the lacteal Vessels of Girls in the Green-sickness, till the *Primæ Viæ* have been cleansed from the Pituita. That 'tis possible for this Matter to be corrupted, no one will deny, but that from hence flow nervous Fevers are frequently produced, scarce any one I believe will easily admit (because the Hypothesis is new). But the History of that Disease, and the Symptoms which accompany it, have made it at least probable to me.

For flow Fevers are most frequent in Climates inclining to cold, in a moist Constitution of the Air, and about damp marshy Places. They visit those mostly, who are naturally weakly, or who are rendered so by Grief or any other Accident; and also those who live upon a depraved crude Diet, especially if they eat plentifully of Melons and Cucumbers. The same Sort of people accustomed to the same Way of living, particularly if subject to be costive, are in particularly

Germany afflicted with the miliary Fever (2). And 'tis very remarkable, that in *Scotland* about *Dumfries*, when slow nervous Fevers were most epidemical, not one was seized who lived well, and drank freely of Wine (3). And very few besides the lower Class of People are seized with the spotted Fever which is now raging with us.

In some the Disorder comes on very gradually; they loath their Food, or else badly digest it, and their Spirits flag before the Fever makes any visible Attack; but for the most Part they are seized at the beginning, with slight Shiverings and gentle Heats, which return at no certain times; these are attended with Weariness, Drowsiness and Yawnings; afterwards come on an Oppression of the Præcordia, Sickness and Heaviness or Giddiness of the Head. The Pulse is frequent, and generally weak and irregular. There's never any remarkable Heat, but whilst the superior Parts are hot, the lower are cold.

(3) Medic. Essays. T. 4. Art. 23.

(2) Hoffman. Med. rat. syst. T. 4. S. 1. Cap. 9.

Afterwards as the Disorder creeps on, a Diarrhœa comes upon some with Gripes, and many have partial Sweats (with which the Disease is not at all abated) and a great Weakness of Body: In all, the Distemper daily affects the Head more and more, till at last they don't care either to speak or move, but are either excessively sleepy, or surprizingly watchful and restless; they talk madly; there's a subsultus of the Tendons, cold and inconstant Sweats, which sometimes are very profuse and clammy, and before their Death frequently very cold; they fumble about the Bedcloaths, and pick as it were Straws, and have a small creeping Pulse; at the last, perpetual cold Sighs indicate that Death is nigh. The Tongue in these Fevers is furr'd with a whitish Mucus, and appears moist, except in the middle Part, where it is dark and dry. The Urine is generally pale, at least not of a higher Colour than it ought to be in perfect Health; sometimes it is limpid, at other times blackish, and often drops a ragged whitish Sediment.

A plenty

A plenty of red florid Pustules, or turgid miliary Eruptions appearing in the State of the Disease is a good Omen, especially if there is a constant plentiful Spitting, or a large thick Sediment in the Urine. But sometimes when the first Crop of miliary Pustules is over, a second Eruption comes on, and this is sometimes repeated again and again, for the Space of several Weeks; then indeed the Fate of the Patient is very dubious. A gentle Diarrhœa towards the Crisis is frequently of use, and more frequently a kindly warm Sweat equally diffused over all the Body. When a compleat Crisis comes on, the Pulse is full, strong and regular, and if it is not so, the Patient seldom recovers, or at least relapses. The same thing concerning the Pulse was observ'd by *Hoffman* in the miliary Fever (4). This indeed is peculiar to these Fevers; for in acute and ardent Fevers, where the Præcordia are not affected, the Pulse before the Crisis is very full and strong, but after it weaker and calmer.

(4) Med. Syst. T. 4. S. 1. Cap. 9. S. 6.

A slow nervous Fever is always fatal, where there's an Appearance of black Aphthæ, dark Petecriæ, or black Spots, especially if attended with a dark, black or colliquative Diarrhœa or greasy Sweats.

This is the Description of the slow Fever (5); all things tending towards bringing it on are well known to load the Stomach and Intestines with cold slimy Matter. And almost every Symptom which attends the Fever in the beginning, is laid down by *Hippocrates* among the Signs of turgid Matter, except the Pulse, which he always neglected; but *Galen* remarks that a small irregular Pulse, is a Sign of the Stomach's being overcharged with crude Humours (6). In this Disease likewise as in the Colic before mentioned, the first Part of the Tragedy is acted about the Stomach by the corrupted Pituita. But Gripes in the Bowels do not constantly happen, because here are no such acid Salts; for of all vitiated Humours, the acid are most adapted to cause Pain; but

(5) This Account is chiefly taken from Dr. *Huxam's* Dissertation on nervous Fevers, and the *Scotch* medical Essays, Tom. 4. Tract. 23.

(6) Meth. medend. L. 12. C. 3.

still such Pains have been sometimes observed ; in the Petechial Fever which raged at *Cologne*, the sick were generally troubled with a Pain in the Hypochondria and especially the left, which darting upwards by the Loins and Spine of the Back, extended so high as the Scapula, and this was frequently attended with a Pleurisy or Quinsy. This Pain, according to *Donckers*, is occasioned by vitiated Juices and Flatulencies, after they have got down from the Stomach into the Intestines ; and besides that Part of the Intestines, which rising forward from the left Kidney is bent into various turnings, suffers more than the rest, the Passage of the Matter thro' that Part being more difficult, and from thence the morbid Matter entering the lacteal Vessels, and passing up to the subclavian Vein, causes a Pain along the Loins and Spine, and at last being mixed with the Blood, frequently produces an Inflammation of the Lungs, Pleura or Fauces, or attacks the Brain, or is more happily thrown out upon the Skin (7).

(7) *Idea feb. Petech.*

Add to this, that 'tis the Opinion of *Hoffman* that Child-bed-Women so frequently fall into eruptive and miliary Fevers, because the *Primæ Viæ* have not been cleansed by a proper Purge from the feculent Matter they contracted during the Time of Pregnancy; for when the first passages are clogg'd with impure corrupted Humours, a slight Passion of Mind, as Anger or Fear or taking cold, by putting this Matter in Motion, and carrying it into the Blood, will soon produce an eruptive Fever (8). Or perhaps, as appears likely to me, the Agitation, Heat and Hurries which happen in Child-birth, or the Fever which precedes the coming of the Milk, chiefly dispose the redundant feculent Matter to corrupt. That vitiated Humours are disposed to pass from the Intestines to the Skin, was known of old to *Hyppocrates*, for he remarks that if upon the Suppression of a bilious Diarrhœa, there be a Loathing, cutaneous Eruptions will follow, and the Eyes be inflamed and watery (1). And in *Germany* it was ob-

(8) Med. Syft. T. 4. S. 1. Cap. 9. and ob. 5.

(1) Coac. Prænot. 208.

served that the Eruptions occasioned by this Means were sometimes miliary; for in acute Fevers, the small Pox and Measles, if the Patient continued long costive, or a Diarrhœa was stopt, a miliary Fever ensued (2). If malignant catarrhus Fevers, and eruptive ones were terminated by a Diarrhœa, the Patient continued free from miliary Eruptions, which otherwise frequently appeared at the Declension of the Disease and were very dangerous (3). In the Colic before mentioned, the vitiated Juices transferred from the Intestines to the Veins, seized immediately on the Joints, but in this nervous Fever they seem principally to attack the Head. Every kind of morbid Matter seems to have a particular Property which disposeth it to be thrown on this or that particular Part; this is a Thing easy enough to be observed, but difficult to be accounted for. Those who are perpetually sleepy in this Disease, have nothing near so slow and full a Pulse as is common in other lethargic Diseases, and perhaps for this Reason, because here the

(2) Hoffman L. c. obs. 7. (3) Id. ibid. Cap. 11. Obs. clin. S. 4.

Stomach is greatly affected, from the Disorders of which, a small, frequent and unequal Pulse is inseparable. Thus a slow deep Respiration is reckon'd one of the proper Symptoms of a Phrensy, but when a Phrensy is complicated with another Disease which renders the Breathing short, (as suppose an Inflammation of the Pleura) the Patient will breathe short, and not at all deep (4). Are the *primæ Viæ* then first reliev'd, when the Pulse about the Crisis becomes full and strong? Such a Conjecture is not very unlikely, for in the forementioned Colic, as soon as the Pain has quitted the Intestines, the Pulse grows stronger. And critical Evacuations do not carry off these Fevers, or if they do, it is only for a short Time, when the Pulse doth not rise; for as long as the Fountain in the *primæ Viæ* is not exhausted, new Matter will be derived from thence into the Blood, and supply the Place of that which has been expelled. We have then a good Reason why slow Fevers generally stick so long by the Patient, and so often

(4) Galen de diffic. Respir. Lib. 2. Cap. 4.

return, even after they have been terminated by a kindly Crisis; for since the redundant Pituita, or slimy Matter is corrupted by little and little at a Time, and so passes into the Blood, there will be a long Interval before the whole (provided there is any Quantity of it in the Intestines) be thus absorbed. And tho' that which is already mix'd with the Blood, be carried off by Urine, Sweat and Eruptions, yet a fresh supply from the *primæ Viæ* will soon again take its Place. This Experience likewise confirms; for from the Observations of the *Germans*, (to whom the miliary Fever is thought to have been known before it was to us) it appears that that Disease is recruited and protracted to a greater Length by keeping the Body costive (5). And some Physicians among us, have frequently seen miliary Fevers of two Months standing or more, when the Cure hath only been attempted by promoting Sweat, and the Patient was in the mean Time kept costive. Sweats I own expel the morbid Matter from the Blood,

(5) Hoffman L. c. Cap. 9. ob. Chin. S. 5.

but

but they will not hinder the vitiated Matter in the *primæ Viæ* from succeeding in its Room, nay they rather promote it. Moreover it is Dr. *Huxam's* Observation in these slow Fevers (6), that the whole Fauces are sometimes stuffed with a viscid pituitous Matter, and to such a degree as almost to threaten Suffocation, but upon giving a vomit at any Time of the Disease, it is surprizing what Relief is found by it, what a vast Quantity of glutinous Stuff is thrown up, not unlike the White of an Egg, and often much thicker, whereupon the Aphæ, Coma, Nausea, Hiccup and terrible Blackness of the Tongue soon vanish. And shall we in the least doubt, whether the Pituita occasions such bad Symptoms? Since when that is evacuated they almost perfectly cease. Of no less Service, according to the same Author, is purging towards the End of the Disease, giving proper Cordials and Paregoricks between, for it promotes the Crisis however imperfect; nay it often makes the Fever, which till then observ'd no certain Order,

(6) J. Huxam Dissert. de feb. Nervosa.

put on the Type of a regular Remittent or Intermittent. And 'tis so far from bringing on a Diarrhœa or Dysentery, which some are so much afraid of, that 'tis the best Way to prevent them; thus he. But in my Opinion we ought not to wait till the Pituita becomes so turgid as to appear in the very Fauces; for there are certain Signs of its infesting the Stomach soon after the Invasion of the Disease. But Physicians in vain attempt to free all the *primæ Viæ* from the tough viscid Pituita with a single Vomit, a plain Example of which (to go no farther) we have in the Cure of the Colic abovementioned. Nor shou'd the Patient be without the Benefit of purging Medicines till the Declension of the Disease, for at that Time the Patient's Strength being much exhausted, he will more difficultly bear Evacuations. But at any Time of the Disease, Purging is of use to carry off the vitiated Load from the Intestines, which is the very Source of the Fever, provided the Patient's Strength can bear it, and Nature is not busy in throwing out the Disorder upon the Skin. This we know to be the Case if Eruptions on the
Skin,

Skin, or warm Sweats all over the Body, have removed the Complaints about the Præcordia and rose the Pulse; for then we ought most carefully to abstain from purging, till the Pustules recede, or the Fever is quite over. For when the Eruptions are out, purging Medicines call back the vitiated Juices from the Skin to the Præcordia, which settling there, cause an Oppression and Straitness of the Breast, Restlessness, Anxiety, a small quick Pulse, Lowness of Spirits, and weakness of Body. But when neither Eruptions or Sweats forbid, I have ordered Purging at all Times of the Disease, whereby the Patients were not at all weakned, as is commonly apprehended, but on the contrary, I have often observed the Præcordia relieved, and the Pulse strengthened. I don't use to prescribe strong Purges, but now and then gently loosen the Belly, with Medicines composed of Rhubarb and Aloes, between which I order Blistering and some of the warmer kind of Medicines both to excite the Circulation of the Blood, and promote gentle Sweats; at the same Time the Patient is allow'd some Wine and Broth to support

support his Strength. By this Method I aim at expelling the morbid Matter both from the Blood and *primæ Viæ*. And I can affirm that it has happily succeeded with me, and dare promise will succeed with others who condescend to try it, better than the common Method, which consists of nothing else but keeping the Patient in a constant Sweat. I should chuse indeed to have Purging follow a Vomit immediately in the beginning, whilst the Patient's Strength is best able to bear it, and before the Disease has taken deep Root in the Blood, and then that those Remedies shou'd succeed, which quicken the Blood's Circulation and promote Sweat. If the Fever shou'd intermit after the purging (which is no uncommon thing when the Disease has been of long standing) it easily yields to the Peruvian Bark.

But this Method perhaps will not be approved of by some, because it is neither supported by the Sanction of Antiquity, nor by the Authority of a splendid name: To give some Sort of Satisfaction to such Persons, I'll endeavour to shew that this Disease though called by the new Name

of a nervous Fever was known of old, and treated by the best Physicians, much after the same Manner.

That some Sort of Fevers are occasion'd by corrupted Pituita, is acknowledged by Physicians in general. These, though not differing at all in their Nature, have been distinguish'd by different Names. Sometimes taking their Denomination from the daily Return of the Paroxysm, they are called *Quotidians*; when Heat and Cold attack the Patient together, *Epialæ*; but when the inner Parts are hot, and external cold, they are called *Leipyriæ* (7); when the sick are very apt to fall into faintings, *Syncopales humorosæ* (8). Sometimes they are denominated from the efficient Matter, as Fevers from Crudity (9), at other times from the Seat of the morbid Matter, as *Gastricæ* and *Mesentericæ* (1). Many other Names besides these are to be met with in the *Arabian* Writers. Yet nevertheless it is allow'd by all, that these Kinds of Disorders are caused by a

(7) Galen. Lib. 2. de feb. different. (8) Avicen
Lib. iv. Fen. 1. Tract. 2. Cap. 53. (9) Holler. de morb.
intern. Lib. 2. (1) Ballonius and Baglivi.

crude, heavy, viscid Humour, which is corrupted somewhere about the *primæ Viæ*, and that for this Reason the Persons most subject to them are such as are of a weak and cold Constitution, who use but little Exercise, digest badly, and are accustomed to a crude Diet.

Of this Sort of Disease *Galen* treats in *Lib. 12. Method. Medend. and Cap. 3.* Some, says he, begin to be feverish, with an Uneasiness ~~of~~ the Mouth of the Sto-^{at}mach, on devouring a great Quantity of crude Diet, or from Indigestion, or the like Occasion; their Præcordia are puff'd up, and the Body seems swoln; their Countenance is sometimes pale, and sometimes inclines to a livid Colour, their Pulse is always less than might be expected from the Heat one feels in their Flesh; it is obscure also, and quite unequal. With these Symptoms they are inclin'd to faint, and fall into fainting Fits on every slight Occasion. For (as he says in another Place) when Nature cannot expel all the morbid excrementitious Humour, on Account of its Thickness, Quantity or Viscidity, or of its Passage being stop't up, or by Reason

of her own Weakness, the Matter by its being long pent in must necessarily be corrupted ; for no other Humour in such a State, can continue the same as it was in the Beginning, much less this which is so vitiated, that it cannot be again restor'd by Nature to an healthy State (2). Add to this what *Ballonius* comments upon it ; therefore the Pituita like all other Humours by its long Stay in the Stomach acquires a noxious Quality, and on both these Accounts, becoming burdensome to Nature, seems immediately to affect the Springs of Life, especially if by Constitution or Accident the Mouth of the Stomach be somewhat sensible and tender ; and the more the Humour is fermented and corrupted, the more will the Patient suffer, so that from hence oftentimes his Strength seems quite spent and gone. This Symptom is very common in quotidian Fevers or those which arise from acid or vitreous Pituita ; in this Kind of Fevers there's a small Pulse, turbid and crude Urine, partial Sweats, Lowness of Spirits, and ex-

(2). Lib. 2. de different. Feb. Cap. 5.

treme Weakness; all which are terrible, and usually prevent Physicians from trying what efficacious Remedies will do. For as in tertian Fevers, Faintings are caused by acrid Bile collected in the Stomach; so in the Epialæ, Lowness of Spirits and Faintness, are occasion'd by a viscid Matter. For whatever Disease has its Seat in the Stomach, is always attended with great Weakness. The Head likewise in this Case most commonly suffers along with the Stomach (3).

Moreover Fevers which arise from Pituïta don't seize upon a Person suddenly and violently; but when they are genuine, use to come on gradually, and with a gentle Shivering, after this the Heat increases by little and little, and very unequally, so that the Patient shall sometimes be hot and then cold. Neither in the State of the Disease is there any great Heat or Driness of the Skin. The Colour of the Urine is generally pale, sometimes limpid, and seldom higher than in Health; 'tis often turbid, and drops a thick un-

(3) In tractat. de morb. mulier. Cap. de Epial. Feb.

even disunited Sediment (4). These Fevers happen often, continue long, and though they are generally not very violent, yet they are not without Danger. For if with a bad Colour of the Face, crude Urine, an unequal and small Pulse, there be a Heaviness and Sluggishness of the whole Body, a Defect of Reason, and Stupidity of the Senses, then, according to *Hollerius*, we ought not to think upon Remedies, but pass Sentence; and much more if there be an Inflammation of the Stomach or Liver; for in these Cases there's a great Redundancy of crude Juices, and a prodigious Weakness of the vital Powers, from whence a Syncope and Death is to be expected.

Since then those Disorders which the Ancients ascribed to corrupted Pituita, arise from the same Cause, seize the same Sort of Persons, and are attended with the very same Symptoms as the nervous Fevers, or at least with those of 'em which chiefly distinguish these Fevers from all other Kinds; for an Oppression of the Heart and Præcordia, a small and obscure

(4) Holler. L. C.

Pulse, sudden Weakness of Body, lowness of Spirits, proneness to fainting, Dulness of the Senses, a low, long, dangerous Fever, and pale crude Urine, are equally common to their phlegmatick and our nervous Fevers; since, I say, this is so, 'tis but reasonable to conclude that they differ only in Name, and not in Nature, and if in some Things a small Difference doth appear, it may arise from the Climate or Constitution, but principally from a quite different Method of Cure.

As to the Cure, 'tis generally agreed amongst the Antients, that these Disorders cannot bear Bleeding, unless there are some Signs of an Inflammation or an intense Fever; the *Arabians* therefore when the Urine was of a red Colour, ventured to bleed sparingly in the Beginning; but the *Greeks* don't so much as mention it, for they treated of the Disease only as it was simple. They likewise refrain'd from purging Medicines when the Pulse was small and unequal, and the Patient very weak, for Fear of bringing on a fainting Fit. Yet immediately at the Beginning they gave Hydromel, in which was boil'd

Hyfop, or something of the like Nature, in order to dissolve the Pituita, and purge it off by Stool; but if that did not answer, they had Recourse to Clysters; and when the Belly was once moved, they suffer'd it to continue lax, in order to carry off the unnecessary Load, as long as the Patient's Strength cou'd bear it, which they in the mean while supported with proper Nourishment and Wine; using at the same Time almost continual Frictions. But the *Arabians* who have wrote more largely of this Disease, when extreme Lowness did not forbid, would besides this, when there was a Nausea or ill Taste in the Mouth have a Vomit with Horse Radish to be given, as the chiefest Remedy. They likewise approved of Medicines which attenuate the Pituita and gently purge it off by Stool, and ordered Remedies to strengthen the Stomach and Intestines, and sometimes also Diuretics. And among the more modern Physicians *Ballonius* advises in the Declension of the Disease to promote Sweats; but according to the same Author, sudorific Medicines are not at all proper in the Beginning, because
they

they wou'd carry the crude Matter along with them into the Blood.

And now tho' so much has been already said concerning the turgid Matter, I should not think I had done Justice to the Subject, if I was wholly to omit, what that excellent Practitioner *Baglivi* has said on this Affair. I have not all along kept strictly to his Words for the Sake of Brevity, and have besides ranged his Matter in a different Order.

“ The Generality of Physicians, as well
“ as People, commonly call those Fevers
“ malignant, that are attended with a Va-
“ riety of very bad Symptoms, and which
“ as the Disorder runs on are continually
“ growing worse and worse. There are
“ no doubt sometimes Fevers produced
“ by a venemous Ferment, but such sel-
“ dom happen. The malignant ones
“ which appear with us, proceed from
“ an Inflammation of the Viscera, and
“ from a Collection of vitiated crude Hu-
“ mours, either in the *primæ Viæ* or Mass
“ of Blood. In those Patients which I
“ have the Care of my self from the Be-
“ ginning, I very seldom meet with a
“ malig-

“ malignant Fever, but when the Cure is
 “ begun by others, and not pursued ac-
 “ cording to the Indications of Nature,
 “ or the divine Precepts of *Hippocrates*, a
 “ thousand different and dangerous Symp-
 “ toms occur, which are frequently the
 “ Offspring of a wrong Method, and not
 “ of the Disease, tho’ they every where,
 “ and almost every Day are met with in
 “ Practice. It happens likewise, as I have
 “ often seen, that some Fevers, even in
 “ the Beginning, become immediately very
 “ bad and dangerous; these the Generali-
 “ ty of People call malignant, and on Ac-
 “ count of the Venom, presently fly to
 “ Aromatics, Alexipharmicks, and hot
 “ volatile Medicines of a thousand Kinds,
 “ by which Means they bring on and
 “ heighten that very Danger which they
 “ intend to prevent.

“ At *Rome* we frequently meet with
 “ vitiated crude Humours collected in the
 “ first Passages (but not often in the Blood)
 “ which produce these Fevers, I call Me-
 “ senterick.

“ Among the Signs which denote a
 “ Collection of such Humours in the *primæ*
 “ *Vie*,

“ *Via*, are the following, learn’d by pati-
“ ent Observation; a Bitterness in the
“ Mouth, a very ill Taste, a foul Tongue,
“ Sickness at Stomach, especially in the
“ Morning, a stinking Breath, foul and
“ furr’d Teeth, fetid Stools, and the Wind
“ which breaks off downward, smells
“ prodigiously. The Head sometimes is
“ heavy and scarcely to be held up, at
“ other Times ’tis continually in Pain, with
“ a Heaviness and Pulsation about the
“ Temples; which Symptoms are most
“ troublesome after Dinner and Supper; a
“ Noise in the Ears, the Urine is natural,
“ or very near so. The Fever likewise in-
“ creases after Dinner and Supper, and ob-
“ serves the Type of a continual double
“ Tertian. The Sick have a Heat in the
“ Palms of the Hands or Feet, or about
“ the Hypochondria, lose their Appetite,
“ look pale, and are costive. ’Tis most
“ remarkable that in those Disorders, the
“ Head suffers more than the Mesentery
“ which is the Seat of the Disease. In
“ Hypochondriacal Persons, and those
“ who have a weak Stomach, the Symp-
“ toms are much worse; for in such if the
“ Hu-

“ Humours are much corrupted, the
“ Tongue presently grows black, the Pulse
“ is small, and the Extremities are cold;
“ they are oppressed with Anxiety and such
“ like Symptoms, which are commonly
“ imputed to the Malignity of the Dis-
“ temper, but falsely here, because as soon
“ as the Humours which infest the
“ Stomach are corrected and expell’d, the
“ the Symptoms immediately vanish.

“ In the Cure of these Mesenteric Fevers
“ ’tis of no Use to observe critical Days,
“ for the Crudity of the Disease consists
“ in the Violence of the Symptoms, and
“ the Concoction in their Remission.
“ When I observe the Symptoms begin
“ ever so little to remit and abate, I im-
“ mediately order purging, and frequently
“ repeat it; I likewise inject Clysters, and
“ direct the whole Method of Cure to-
“ wards expelling by Stool the peccant
“ Matter lodg’d in the Mesentery, inter-
“ posing at the same Time Stomach Me-
“ dicines, as Aq. Theriacal. Rutæ, &c.
“ But there’s need of Patience, for the
“ crude Humours collected in the Glands
“ of the Mesentery (this it seems was his
“ Opinion)

“ Opinion) are brought off but slowly and
“ by Degrees, for which Reason I give
“ between the Purges digesting stoma-
“ chick Medicines, and this Way these Fe-
“ vers are successfully cured at *Rome*.”

But when Experience taught him better,
he somewhat alter'd his Method, “ In
“ the Beginning of Fevers, says he, when-
“ ever there is any Question about purging,
“ I usually take Notice, whether there be
“ a Load of vitiated Humours in the *primæ*
“ *Viæ*, and at the same Time very turgid ;
“ if I find this to be the Case, I approve
“ of purging, for the corrupt vitiated Hu-
“ mours will, unless they be seasonably eva-
“ cuated, severely hurt the Patient in the
“ Course of the Disorder ; at the same
“ Time those Medicines ought to be given
“ which are proper to attenuate and digest
“ the offending Matter. If there be any
“ Inclination to vomiting, Emetics are to
“ be given as well as purging Medicines,
“ but they don't now well agree with *Ro-*
“ *man* Constitutions; wherefore every Day,
“ or every other Day, I purge with a De-
“ coction of Sena and Syrup of Rhubarb.
“ If there be no Stools in five Hours after,
“ I give

“ I give a Clyster. I likewise foment the
“ whole Belly with a Decoction of Cicho-
“ ry, Agrimony, Althæa and Nitre. If
“ the Patient’s Strength won’t bear purg-
“ ing, I give a Clyster every Day. Every
“ Morning I order chicken Broth with
“ Cichory and Sem. Citri, bruised, and
“ also Aqua Theriacalis, or other Stoma-
“ chics. In this Way I keep the Patient
“ till the seventh Day; after which I take
“ Notice what Period the Fever observes,
“ and what Symptoms attend it, and direct
“ the Cure accordingly.

“ This I can affirm, that by the fore-
“ mention’d Method, those Fevers with
“ a Collection of Humours, which I call
“ Mesenteric, are removed about the four-
“ teenth, or at most the one and twen-
“ tieth Day. But Hopes of Recovery
“ begin to appear about the ninth or ele-
“ venth. In these Fevers the Cortex Peru.
“ is highly pernicious.

“ But on the contrary, if there appears
“ the least Suspicion of an acute Inflam-
“ matory Disease, the Signs of which are
“ a dry Tongue, high-colour’d Urine, a
“ great Heat all over the Body, with a
“ Driness

“ Driness of the Skin, great Thirst, &c.
“ I entirely refrain from purging. But
“ even in these Fevers if there be a Pain
“ about the Præcordia, and a Collection
“ of vitiated Humours, then though purg-
“ ing be improper in the primary Disease,
“ yet on Account of the turgid Matter,
“ the Cure must be begun with purging.”

(5). Of the same Opinion was *Ballonius*, for he remarks that some Fevers have their Seat in the Blood, and others about the Stomach; the former Sort soon give Way to Bleeding, the latter are not easily removed by it, but require purging (6).

Moreover, in the Petechial Fever, it has been found by manifold Experience, that purging in the Beginning of the Disease is the most certain Remedy; “ indeed the
“ Necessity of purging,” (to use the Words of a Physician, by far the most successful of any in curing that Fever)
“ and the good Effects of it, are not only
“ recommended by Reason, but have been
“ confirm’d to me by Experience so fre-

(5) All this is to be found in Baglivi Lib. 1. Prax. Med. Cap. de febris malign. & mesenter. & in Epist. ad D. Andry.

(6) Ballon. Lib. 2. Epidem.

“quent and so certain, that if this is false
 “or can be so, nothing is, or hath been,
 “or ever can be true,” (thus he) (7). I
 have used the same Method in the spotted
 Fever which is now epidemical with us,
 and the Event answer’d my Expectation.
 Nay I have sometimes known where the
 Giddiness and great Pain of the Head, the
 remarkable Oppression of the Præcordia,
 and the extreme Lowness of Spirits and
 Loss of Strength, which in this Constitu-
 tion came on violently with the Fever,
 were presently removed by this Method,
 and the spotted Fever crush’d in its Infan-
 cy; for so ’tis reasonable to think, since
 these are some of the principal Signs which
 any one can have of this Disease in the
 Beginning. And when the Fever is in an
 advanced State, moderate Discharges pro-
 cured by Rhubarb, especially where the Pa-
 tient was costive, have sometimes removed
 the Drowsiness, Delirium, Restlessness,
 and Starting of the Tendons, which yet
 soon return’d again, unless the Patient con-
 tinued naturally lax, or was now and then

(7) Donchers id. feb. petechial.

moved with a Medicine. But when the Disease became inveterate, this Remedy was less certain, especially if hot Medicines had for a long Time together kept the Patient costive, and occasion'd the vitiated malignant Humours to be carried from the Intestines into the Blood, and the Brain and Viscera in the Præcordia were much loaded with them. Then indeed the Disease very seldom submitted to any Remedy.

From all this it appears how different the Nature of the turgid Matter is, and what bad Effects it produces in Fevers, both whilst it remains in the first Passages, and after it is got into the Blood. But the Anxiety, Lowness and Oppression of Spirits, Restlessness, Weakness of Body, Pains of the Præcordia and Bowels, Heats and Fevers occasion'd by vitiated Humours collected about the Stomach, will not cease (as *Hippocrates* hath inform'd us) before the morbid Humour is qualified or discharged by proper Evacuations. Therefore according to the Precept of the same Author, when the Matter is turgid (and with us 'tis very frequently so) we shou'd

O

procure

procure proper Evacuations by Vomit or Stool, in the Beginning of the Distemper, as well to remove the bad Symptoms which arise from the Præcordia being infested by the morbid Matter, as to prevent those which may be expected from it after it is carried into the Blood.

But it may be proper to take Notice here, that an inflammatory or erisypelatous Disorder, seated about the Præcordia, Stomach or Intestines, as well as Aphæe ulcerating these Parts, have some Symptoms in common with turgid Matter, but Vomits and strong Purges are here very hurtful. Our *Sydenham* gave Emetics unsuccessfully for an acute Pain of the Head, and violent Urgings to vomit, when the Constitution was tending towards the Plague. In the pestilential Constitution described by *Hippocrates*, many had bilious, greasy and liquid Stools, attended with violent griping Pains; and likewise malignant twistings of the Guts, there being a load of Matter confin'd within the Body; but neither did spontaneous Stools remove their Pains, nor did they easily bear Medicines. For Purges made many of them worse,

worse, wherefore those who were so, died and most of them soon (8). 'Tis very likely that the Patients had an Erisypelas, which at that Time was very epidemical, in the Intestines.

Besides, that other Reason which *Hippocrates* had for purging, in order to abate Inflammations after Bleeding, is approved of by the greatest Physicians.

The best Surgeons likewise, as well ancient as modern, make use of purging in order to remove external Inflammations, after the Violence of the Heat has been taken off by Bleeding. Since then we have ocular Demonstration, that nothing more effectually takes off external Inflammations, we have Reason to conclude, that the same Remedy is the most proper for internal ones, when Bleeding cannot safely be repeated, or prudently admitted. But above all others, purging Medicines are most effectual in Inflammations of the superior Parts; but least of all proper in Diseases of the Lungs or Pleura, and perhaps because they hinder Expectoration. In a

(8) Lib. 3. Epidem.

Pleurify or Peripneumony a Diarrhæa is bad (1). In Inflammations of the Eyes, a Diarrhæa is good (2). A bilious Diarrhæa cures Deafness (3). Tumours about the Ears are carried off by a Diarrhæa.

But there's a certain Kind of Fevers, to which this Method of Cure is exceedingly well adapted. I mean that in which the Blood when drawn off is covered with a fizy Crust; but the Heat is not so violent, nor the Pulse so strong as is usual in genuine inflammatory Fevers (4). This Disease is almost every Year to be met with, especially at the coming on of the Spring, and in some Years 'tis epidemical.

The Disease here seems for the most Part to arise from a too great Disposition of the Blood to concrete, on which Account 'tis rendred unfit to circulate thro' the narrow Passages of the Brain, Lungs, and other Viscera; so that if it be violently urged on, it will cause Obstructions sometimes in one Part, and sometimes in ano-

(1) Hip. Aph. 16. Sect. 6. (2) Ib. Aph. 17.

(3) Aph. 28. Sect. 4. (4) Of this Disorder Sydenham treats in the Ch. of Peripneum. Noth. in his P. S. to the Treatise of Dropsy and Schedul. monitor. Likewise Ramazini in Constit. Epid. 1691.

ther. But if too great a Quantity of Blood be drawn off, the Humours will want a sufficient Force to surmount the capillary Arteries.

The Quantity of the Blood being less'n'd by opening a Vein, purging Medicines attenuate and dissolve this Lensor, without any great Agitation of the Humours, or Diminution of the Strength. *Sydenham* gave them in these Disorders every other Day for three Times with great Success. To allay the Hurry that might be occasion'd by the Purging he found Laudanum to be of great use. I shall without any Scruple produce the Judgment of this Author, who was then old, and had enjoyed the Benefit of a long Experience. "Whereas (says he) Purging as here ordered may to some
" seem improper in the Cure of this Fever,
" I affirm from Experience that nothing
" so certainly and effectually cools the Patient as purging when used after Bleeding"---and again, "for 'tis found by
" Experience that purging provided it be
" used after Bleeding, allays the Fever more
" certainly and successfully than any other
" Remedies whatever, &c. For these Rea-

“ sons therefore, I can, I hope, with good
“ Confidence, assert that the ‘foremen-
“ tion’d Method of Cure by Bleeding and
“ Purging will do more than any other,
“ towards conquering Fevers of various
Kinds.” (5).

But where the Blood in the Beginning of Fevers is of a florid Colour, and at the same Time, thin and too much dissolv’d, as in genuine putrid Fevers; those purging Medicines which dissolve the Blood, appear to be exceedingly prejudicial. But others of the more gentle Kind, which only empty the Bowels, or rather Clysters composed of Emollients, by moderating the Motion of the Arteries, and the Heat of the Blood are of great Service.

These are the principal Symptoms, as far as I can find, which require purging before the State of the Fever, or which bear it tolerably well, or will not admit of it. But about the Crisis, this Remedy is of use, when the morbid Matter is unfit to pass off thro’ the pores of the Skin, or when Nature does not attempt to discharge

(5) Schedul. Monitor, &c.

it by Urine, or throw it out into an Abscess. Bilious and purulent Matter indeed, never uses to be evacuated thro' the Skin, but to be carried off other ways; so those who on the sixth Day of the Fever were seized with a Jaundice, had it carried off by a discharge of Urine or loose Stools, or plentiful Bleeding at the Nose. Thus it happen'd to *Heraclides*, who was freed by Bleeding plentifully at the Nose, by purging Stools and by Urine (6). And during the pestilential Constitution it was observable in the Fever, that whenever an Abscess was forming, if any remarkable Diarrhæa came on, or a Flux of kindly Urine, the Disease went off that Way; but where none of these happen'd, or suddenly disappear'd without any Sign of Solution, it was generally mortal (7). Add to this the Observation of the celebrated Dr. *Mead*, that he scarce in all his large Practice saw any one violently seized with the small Pox recover, unless at the Declension of the Fever, they were saved by a great Flux

(6) Stat. 3. Lib. 1. Epidem. (951) (7) Stat. 3. Lib. 3. Epidem. (1083).

of Urine or a Diarrhæa (8). Lastly, purulent Abscesses are frequently carried off by Stools and Urine, but very seldom by Sweat. On these Accounts therefore when at the going off of the small Pox, the purulent Matter is plentifully mixed with the Blood, and is not separated by the Kidnies, nor thrown out in Swellings upon the Limbs in that Quantity which the greatness of the Disease requires, a Diarrhæa is always serviceable, especially seeing that in this Disease, the Pores of the Skin are so block'd up, as not to allow a Passage even for the perspirable Matter.

And not only in the small Pox is Purging of great Benefit, but in almost all eruptive Disorders, when the Eruptions, after having remain'd out a sufficient Time, are going off or gone.

Bilious Fevers likewise, which at the Beginning are attended with a Bitterness of the Mouth, Loathing, Sickness, Anxiety and Oppression of the Præcordia, and at the Increase and State of the Disease, with Watchings, Delirium, Restlessness,

(8) Epist. ad. J. Freind. de purgant. in variolis.

Deafness,

Deafness, and Yellowness of the Skin, if the bilious Humours accumulated about the Stomach have not been purged off, are terminated by a bilious Diarrhæa, either spontaneous or procured by Art. This plainly appear'd in the epidemic Constitution at *Pisa*, in 1661, as before observed. But 'tis abundantly better to discharge the turgid Matter in the Beginning of the Disease.

And lastly, Purging is of use after the Fever is over, to prevent any Part of the morbid Matter remaining within, from producing a Return of the Disease. Putrid Fevers, and those which happen in Summer and Autumn are more subject to return than the Inflammatory and those in the Spring. On the contrary, purging almost always calls back intermittent Fevers cured by the Bark.

But frequent, thin, copious Stools, if they don't abate the Fever, nor mitigate the Symptoms, are to be check'd. For they exhaust the Strength of the Patient, hinder the Concoction of the Disease, and divert the natural and critical Secretions: On which Account they either hasten
Death,

Death, or if the Patient recovers, they heighten and protract the Disease. But sometimes it happens in malignant Diseases, that bilious Stools are very prejudicial and yet a Suppression of them wou'd be more so. In such a Case, where Vomiting, Purging, and correcting the vitiated Juices have been used without Success, we must regulate the Stools in such a Manner, as to hinder the Destruction of the Patient's Strength on one Hand, and the Retention of the malignant Humours within the Body, on the other.





COMMENTARY VIII.

Of Expectoration, and the Cure of an Inflammation of the Lungs, and a Pleurisy.

IN Fevers where a Difficulty of breathing, an Oppression of the Breast, a continual Cough, and a hot Breath, made it apparent that the Lungs were inflamed, *Hippocrates* expected the Disorder to be carried off by Expectoration. In a Pleurisy likewise he carefully attended to the same Discharge. This Disorder is frequently accompanied with a Peripneumony, and then besides a Pain of the Side, it has the proper Signs of an Inflammation of the Lungs. In a Disease of this Kind, I have known first of all, the Pain of the Side removed upon the free Expectoration of digested Matter, and afterwards the difficulty of breathing, &c. And this without the Use of any other Evacuation or external Application to mitigate it. We

have *Hippocrates's* Authority for this, who observes that Pains of the Side in a Pleurisy vanish immediately upon the proper Discharge of good Matter by Expectoration (1). Expectoration therefore is of use to remove inflammatory Pains of the Side. But there is no Occasion to hunt after any particular Passages for conveying the Matter occasioning the Pain of the Side, from the Pleura to the Lungs, since the same Sort of Matter is sometimes thrown off from the inflamed Lungs, thro' no other Passages than the Veins and Arteries, upon the Legs and other Parts, or is carried out of the Body thro' the urinary Ducts, or Intestines. 'Tis true the Matter which causes a Pleurisy, cannot be discharg'd thro' the Lungs before it is first removed from its own Seat; for which Reason 'tis absurd to attempt the Cure by Expectoration, so long as the morbid Matter remains fix'd in the Side. On the contrary when the Matter dislodging from the Side hath enter'd the Lungs, and makes towards the

(1) De vict. rat. in morb. acut. (385).

Bronchia, the Attempt is rational and will be of service. The Signs of this are a Suffocation from the Lungs being stuff'd, and a Cough.

A Quantity of Matter is sometimes expectorated at the very Beginning of the Disease, which from that Time gradually becomes digested; but much oftner it does not appear till the fourth Day, and frequently later.

In the very beginning of these Disorders, or at least before the expectorated Matter is digested, we should bleed and purge the Patient as often as the Violence of the Fever, the Intenseness of the Pain and Inflammation, or the other Symptoms of the Disorder require. But when he begins to expectorate with ease well digested Matter, we should abstain from any considerable Evacuation whatever; notwithstanding, if the Fever runs too high, *Hippocrates* advises a Clyster to be thrown up now and then, in order to lower it (2).

If after the Use of proper Evacuations, that which ought to be expectorated re-

(2) Lib. 3. de morb. (493)

mains within the Breast, and the Patient is oppress'd with a great Difficulty of Breathing, and there are no Signs of Nature's endeavouring to discharge the morbid Matter either by Stool or Urine, or of throwing it out into an Abscess, then the most effectual Means to promote Expectoration must be tried. Therefore in a Peripneumony, as long as the Disease continues dry and violent, the Patient ought to be restrain'd from all Kinds of thicker Food, and even Spoon-meats; because such Sort of Diet will increase the Suffocation; for which Reason in this Disorder, the Diet shou'd be as extremely thin as in the most violent Fevers. Water and Honey mix'd together, to which it might not be amiss to add sometimes a little Vinegar, will be very near of itself sufficient: This Sort of Diet is very useful in promoting Expectoration, and making the Patient breathe freer. Besides this, sweet white-Wine may be allow'd (3). As to Medicines that which is composed of the Pine

(3) Hip. de rat. vict. in morb. acut. (386.) (393. and 94.)

Cone, Galbanum and pure Honey, or any others of the like Virtue, are proper (4). But when the Disease is very violent, and there's a great ratling in the Lungs, with either no Cough, or such a one as is not sufficient to pump up the Matter lodg'd within the Lungs, the sharpest Vinegar mix'd with Honey, and supp'd in very warm, is sometimes of Service (5). The last Remedy in such a Disorder is a strong Vomit. If, says *Hippocrates*, the Patient cannot expectorate as he ought, give him some Medicine or other to vomit; and again, give an Emetick on the sixth, seventh, and ninth Day, and let it be white Ellebore, &c. If from this a free Discharge by spitting doth not ensue, and the Breathing quickens, and the Vomiting doth not answer, we may pronounce the Patient past Hopes of Recovery, since Vomiting is able to do nothing (6).

The same Remedy is likewise made use of to raise the Matter by Spitting where Pus is already generated in the Lungs.

(4) Ibid. (402.) (5) Loc. citat. 393. (6) Lib. 3. de morb. 493.

Thus

Thus *Meton* who had a purulent Abscess in his Lungs, and no Discharge by Expectoration, had a Vomit given him, which brought up yellowish Matter. The third Day after taking the Medicine, he expectorated purulent Matter, and the fortieth from the Beginning of the Disease he was thoroughly cleansed, and within thirty five Days more he was perfectly well (7).

Moreover the great Parent of Physick frequently used in Pains of the Side to apply Fomentations to the Part affected. “ We shou’d try (says he) to discuss Pains
“ of the Sides, with Fomentations either
“ in the Beginning of the Disorder or af-
“ terwards ; one of the best of these is hot
“ Water in a Bottle, Bladder, or a brazen
“ or earthen Vessel. If ’tis put in a hard
“ Vessel, it ought to be wrapt up in some-
“ thing soft, suppose Wool. If a moist
“ Fetus is more proper, a large soft
“ Sponge taken out of hot Water and
“ wrung, may be conveniently used ; the
“ Fomentation shou’d be cover’d over with

(7) Lib. 7. Epidem. 1234.

“ the Bed-Cloaths, by which Means its
 “ Heat will last the longer, and its Steam
 “ be hinder’d from becoming troublesome
 “ to the Patient, unless any Advantage may
 “ be expected therefrom, for sometimes
 “ it is of Service. Besides, Barley and
 “ Vetches mix’d with Vinegar so diluted
 “ as to be a little sower than a Person can
 “ drink, well heated and put into a Bag,
 “ may be applied in the like Case. So
 “ Bran prepared in the same Manner is of
 “ Service. Salt and Millet Seed torrefied
 “ are used dry and put into a woollen Bag
 “ when applied. Such Sort of Fomenta-
 “ tions discuss not only Pains of the Side be-
 “ low the Diaphragm, but those also which
 “ reach upwards to the Clavicles”. (8).

This is not the only Sort of Disorder in which *Hippocrates* recommends Fomentations. It was prescribed for *Meton*, because after the Crisis he cou’d get no sleep, and talk’d madly; who after well bathing his Head rested, and became sensible (9). In Diseases of the Head, in Quinsies and

(8) De rat. vict. in morb. acut. 387. (9) Lib. 1.
 Epid. Ægrot. 7.

in a Word in all Pains and Inflammations, Fomentations are of use. There is indeed one of a particular Kind recommended by *Hippocrates* for a Quinsy and some Diseases of the Uterus, namely a Vaporary which is prepared from different Medicines adapted to the Nature of the Disease. The following Fetus of this Kind is ordered for a Quinsy seated about the Tonsils, and proceeding from viscid Humours, in which Disorder, after proper Evacuations, 'tis a most effectual remedy; for it procures plentiful Spitting, and strongly discusses the Tumour. It is composed of Nitre, Marjoram, and Cresses, put into an equal Quantity of Vinegar and Water, to which is added a little Oil. The Manner of using it is this, Fill an earthen Pot about two thirds full with this Composition, and let a Cover be exactly fitted to it, which is concave on the Inside, and has a Hole in the Middle; in this Hole a Tube of nine Inches or somewhat more is fix'd, (thus the Cover with the Tube will not be very unlike one of our Funnels), this done, the Pot is to be put over the Fire till the Liquor

quor boils ; then it must be taken off and set in hot Embers, so that the Steam may continue to rise, but not scalding hot ; this Steam is to be convey'd to the Part affected by Means of the Tube (1).

Besides, the Disorder which *Hippocrates* hints at relieving by the Steams of hot Water drawn in with the Breath, is if I may guess, a Peripneumony ; where the Matter being thick is brought up with Difficulty, or cannot be at all expectorated.

The Advantages likewise of those Baths by which the whole Body may be conveniently fomented are mentioned by *Hippocrates* in his Book *de vict. rat. in morbis acutis* ; but in his Time very few had an Opportunity of using them in such Kind of Diseases, and with us there is now hardly any such thing to be come at.

To return from this Digression. Where the Pain of the Side continues violent, notwithstanding a sufficient Quantity of Blood has been drawn off, and other proper Re-

(1) Lib. 2. de morb. 469. & Lib. 2. de morb. mulier. 648.

medies administred, we may have Recourse to Cupping with Scarification. *Celsus* recommends this Operation, when the Disorder has run to some Length : And *Aretæus* used it after the seventh Day (2). This latter directs a great deal of Flame to be kindled in the Cupping Glass in order to warm the Flesh, and provoke Sweat ; and when a proper Quantity of Blood is drawn off, to apply to the scarified Places, Salt and Nitre put upon a Rag smear'd over with Ointment, and the next Day to apply the Cupping-glass again ; for in his Judgment the second Cupping draws out the thin acrid Humours, and gives greater Relief than the former. But where it hath been improper to draw away Blood, on Account of the Vessels being emptied, and the Patient's being weaken'd, I have known dry Cupping-glasses and Blisters apply'd to the pained Part, do great Service. And in a stubborn Disorder, Blisters have been lain on the scarified Places after Cupping, with good Success.

(2) *Cels. Lib. 4. Cap. 6. Aret. acut. morb. curat. Lib. 1. Cap. 10.*



COMMENTARY IX.

Of the Discharge by Urine.

CRude Urine, tho' discharg'd in large Quantities, doth by no means carry off a Fever. But such smooth, white, even Matter as falls to the Bottom in well concocted Urine, always abates and removes this Disorder, provided it is made in a considerable Quantity, and for a Continuance. This is what *Hippocrates* chiefly trusted to, and on its appearing in a proper Manner, he expected the Disease would soon go off; and this Sign will very seldom deceive us if the Cure is managed according to his Directions. So that if there could be Medicines found, which would as certainly provoke Urine, as others purge, or raise a Sweat, yet still we shou'd reap but little Advantage from them in Fevers, unless at the same time they procured a good kindly Sediment; but that which principally conduceth to

the Concoction of the Urine, is a skilful Management of the whole Method of Cure.

However, if the febrile Matter tends to pass off chiefly thro' the Bladder, there is usually a very large, thick, and as it were purulent Sediment in the Urine, which frequently passeth with Difficulty. In this Case diuretic Medicines are to be given, together with large Quantities of proper Liquids; we should also endeavour to relax the urinary Passages with Fomentations apply'd externally near the Kidnies, and with emollient Clysters; in other Respects the Patient shou'd be kept somewhat costive and free from Sweat, lest the ferous Humours, with which the febrile Matter ought to be washed off, shou'd be diverted from the Kidnies.

But in order to carry off the acrid Salts, the urinous Oil, and the corrupted Serum, 'tis highly necessary in Fevers that the Urine should always pass off freely; for the constant regular Passage assigned to those by Nature, is thro' the Kidnies; and these Feculencies are generated in much greater Quantities in Fevers, than in Health,

as appears from the Experiments of *Helmont*, and *Browne Langrish* (1). When these therefore are retain'd in the Blood, which happens when the Urine is not secreted in a sufficient Quantity, or comes off limpid, the Head is threatened (as all Physicians know) with the worst Disorders. If it be only therefore to wash off these Kinds of excrementitious Matter, larger Quantities of Liquids are required in Fevers than in perfect Health.

(1) Of the different Weight of the same Persons Urine in a Fever, and in Health, see *Helmont*. Tract. scholar. humorist. Cap. 4. Art. 31. See chemical Analysis of the Blood and Urine both in Health and ardent Fevers in the modern Theory and History of Fevers. By *Browne Langrish*.





C O M M E N T A R Y X.

Of Sweating.

SWEAT, or at least a gentle moisture of the Skin, is always to be wished for, towards the End of a Fever ; for according to *Hippocrates*, acute Diseases are carried off either by the Mouth, or by Stool, or by Urine, or some such like Way, but Sweat is common to all (1). This is confirm'd by the Histories of his Patients in the first and third Book of epidemical Diseases ; for all those who recovered, except three, sweated ; so that the Cure begun and carried on by other Evacuations was for the most Part perfected by Sweat. It is observed of one of those who recover'd without sweating, that on the twentieth Day the Fever left him, but he did not sweat ; about the 27th Day, the morbid Matter

(1) De rat. vict. in morb. acut. (403).

which

which remain'd behind fell down into his Hip, but not staying long there, the Tumours which were by his Ears increased and were painful: From the thirtieth a Diarrhæa, Dyfentery and turbid Urine gradually carried off the Abscess and the Disease; at length about the fortieth, he had a Pain in the right Eye and became dim-sighted (2). So that the Crisis being here effected without Sweat was very troublesome and protracted. Another of those was not freed from the Disease till the eightieth Day (3), and the third not before the Hundred and twentieth (4).

Constant warm gentle Sweats bedewing all Parts of the Body, and coming on seasonably after a good Concoction of the Urine, will perfectly carry off a Fever without any other critical Evacuation. Examples of this kind are met with in the 6th and 10th History, Sect. 2. Lib. 3. Epidem.

But tho' plentiful and warm Sweats appear on the critical Days, they will not

(2) *Ægrot.* 9. Lib. 1. (3) *Ægrot.* 5. Lib. 1.

(4) *Ægrot.* 9. S. 2. Lib. 3.

however

however entirely remove the Disease, if the Urine is not concocted, at least not without some other Assistance. Thus it happen'd to those Patients mentioned by *Hippocrates* in Hist. 7. Lib. 1. Epidem. and 12th Sect. Lib. 3. The Disease went off on sweating and did not return, tho' the Urine was crude, but then one of 'em after the Crisis, bled frequently at the Nose, and the other had a discharge of the like Kind by the Uterus. His other Patients who fell into a Sweat whilst the Urine was crude, had not their Fever carried off by it, or at least only for a short Time.

Sweats however are of service if they mitigate the Fever, or make the Disease more tolerable to the Patient, unless they are otherwise more hurtful by thickning the Blood at the Beginning of the Disease, or preventing a more useful Evacuation at the State. Salutary Sweats for the most Part break out towards the End of the Paroxysm, and intermitting Fevers shew this to be the most convenient time for Sweats. Therefore in well-constituted Fevers (which are such as have their Paroxysms regularly on the unequal Days) *Hippocrates* always expected

expected Sweats on the unequal or critical Days; but if they happen'd on other Days, and out of the Paroxysm, he was afraid of a dangerous, troublesome and long Disease (5).

This most sagacious Physician hath likewise remark'd, that noxious Sweats do sometimes arise from a general Relaxation of the Body occasion'd by Weakness, and sometimes from the Violence of the Fever (6). And by late Experiments it is demonstrated, that when the Force of the vital Humour is by drawing off Blood diminish'd one third, viscid cold Sweats will presently appear (7). Such we generally observe Patients to have in fainting Fits, or when they are near dying. These are probably occasion'd by a paralytick Disposition of the muscular Fibres which surround the extreme Arteries and Pores of the cutaneous Glands. A small and unequal Pulse indicates the Sweat to proceed from this Cause; and this Sort of Excretion is frequently met with in slow nervous Fevers. As in a general Relaxation of the Body, Sweats are occasion'd by the weaken'd Vessels not being able to retain the

(5) Lib. prænot. (38) Coac. prænot. (209)

(6) Lib. prænot. (209) (7) Hale's Hamastat. Exper. 9.

Humours, so are they likewise at the Height of an ardent Fever, by the Humours being driven out thro' the extreme Arteries, by the Violence of the impelling Force. The Signs of this are a strong pulse or a very quick and frequent one with a great Heat of Body.

It wou'd have been incredible that so great a Quantity of Humours shou'd daily pass off imperceptibly thro' the Skin and respiratory Passages of healthy Persons, if it had not been demonstrated by the undoubted Experiments of *Sanctorius*. He likewise found that Heat greatly increases Perspiration; so that a Person perspires more plentifully in hot Countries, and more there in Summer time, and in Summer most in the hottest Days. But Heat not only increases the Quantity, but the Acrimony also of the perspirable Matter; wherefore in *Italy*, when its Evacuation is obstructed in Summer time, a troublesome Heat is immediately felt, and shortly after comes on a malignant Fever; but the same Accident in Winter produces no such Disorders (8). *Sanctorius* likewise discover'd

(8) *Sanctorius* Aph. 35. Sect. 2. & Aph. 78. Sect. 1.

that the perspirable Matter is rendred acrid, either by external Heat, or by a violent Motion of the Humours, or by long Continuance within the Body (9). Even the mildest Humours of Animals, when out of the Body, intirely diffolve and putrefy with Heat, and this will happen so much the sooner as the Heat approaches nearer, provided it doth not quite reach that Degree which coagulates the White of an Egg. Now Humours dissolv'd by Putrefaction, besides Water, consist of exceeding acrid, volatile, sulphureous and saline Particles, than which when highly exalted by Putrefaction nothing is more poisonous; for if the smallest Particle of a rotten Egg, be swallowed, it causes Shivering, Vomiting, Anxiety, Gripes, a Diarrhæa, Heat, Thirst, and dissolves the Blood like a pestilential Venom. Nay, the stinking Smells of dead Bodies are able to produce the same Effects (1). But 'tis altogether surprising that a Dog kept in a Heat not a third Part greater than the natural Heat of a healthy Man, should be killed within the

(9) Aph. 37. Sect. 2. (1) Boerhaav. Chem. Proc. 113.

Space of thirty Minutes; that in this short Space of Time his Humours should be quite dissolv'd, and turn'd into a putrid Sanies, of so noxious a Nature, that a strong lusty Fellow approaching too nigh, was almost struck dead with the bare smell (2). How speedily were the Juices within this animal Body dissolv'd only by Heat! how very acrid and venemous were they render'd! wherefore it seems likely that the hotter the Climate or Season is, the more violently do the Humours of all Animals tend to Dissolution and Putrefaction.

The Pores of the Skin, of the Wind-Pipes, and of the other Passages of the Breath, are form'd by Nature, for the Secretion and Excretion of such Particles, as being either ground down by Friction, or dissolv'd by Heat, are useless, subtilized, and wou'd soon become putrid. The active Particles of Sweat, as well as of that Humour which insensibly passes off thro' the Skin, are saline and sulphureous, to which Water serves as a Vehicle. Hence

(2) Boerhaav. V. i. (276)

we may make a probable Conjecture for what Reason a more plentiful Perspiration is necessary in hot Weather, and why such violent Diseases arise from a Defect of it. It will besides, I believe, readily be granted, that every excretory Organ easily admits that Humour only which is proper to it, and generally excludes those of every other Kind. Thus the Pores of the Skin are unfit to discharge the Urine, for which Nature hath appropriated the Kidnies; for in a Suppression of Urine from a Defect in the Kidnies, those Diseases which from thence affect the Head, will not be prevented by the Flow of ever so great a Quantity of Sweat. By diminishing the Redundancy of the Serum indeed, Sweats will partly make amends for the Stoppage of Urine, but the Salts and Oils which the Kidnies were formed to separate, remain behind. Neither do the Kidnies seem sufficient to separate that Matter which ought to be evacuated by the Skin. And for the same Reason, the febrile Matter can hardly be carried off either by the Kidnies, or the Skin, or any other Outlets, before it be assimilated to that Humour which is

wont

wont to be filter'd thro' those organs. Now that which is evacuated by the Skin is the most subtile of all the Excrements of the Body, therefore the febrile Matter which is to pass off this Way ought to be exceedingly well attenuated and concocted, for which Reason critical Sweats generally succeed other Evacuations. And this is conformable to the Opinion of the great Parent of Physick, who gives this Account of Sweats appearing in Fevers. "Where the Disorder
 "ends on the critical Days, and the febrile
 "Heat goes off at the same Time, the thinnest Part of the Pituita and Bile, (for these he esteem'd the febrile Matter) is
 "melted down and separated, and this is
 "partly carried out of the Body, and partly remains within; that which remains
 "within the Body is in Part attenuated by
 "Heat, becomes a Vapour and mixing
 "with the Spirit is discharg'd. Such is
 "the Nature of these Things, and from these arises Sweat." (3). But the febrile Matter scarce seems to require so much attenuation and Preparation to be rendred

(3) Lib. 1. de morb. (458)

of the Nature of Urine; for it is generally perceived concocted in the Urine before the critical Sweats appear; and if Sweats happen before, they seldom carry off the Disease. But from the Signs of a good Concoction in the Urine, we know that the febrile Matter is become fit to pass off by Sweat.

In this State, if the Fever was ardent and the Patient strong, if there was no Sign of an Inflammation, or of any obstructed Viscera, the Antients forced the Patient to pour down large Draughts of cold Water; from whence they expected either Vomiting or Purging, or Sweats; but this last always after the other Evacuations, which flowing according to Expectation, the Fever was presently removed (4). But this Method sometimes affected the Patient's Throat so that he cou'd hardly swallow; sometimes his Stomach or Liver, or Lungs or Diaphragm, or some other noble Part, was thereby greatly injured. On which Account this Method is not to be rashly made use of.

But besides the Marks of Concoction in the Urine, there are other Signs which

(4) Galen. meth. medend. Lib. 9. Cap. 5.

precede the Eruption of critical Sweats, viz. a considerable Heat, but not a burning one, is felt in the Skin and Extremities of the Body, and the Skin itself, which was before hard and contracted, begins to grow soft; the Tendons about the Wrist feel less tense, and the Tongue begins to grow moist; but the most infallible and proper Sign of an approaching critical Sweat, is a full, soft and pretty strong Pulse; for this shews that the Humours are fit to pass off thro' the Pores, and the Pores well disposed to transmit the Humours. A Physician then, who is the Servant of Nature, will not rashly busy himself in provoking Sweat, before ~~the~~ Signs appear, and when he perceives that a Crisis by Sweat is approaching, will wait for such a Pulse, and endeavour to procure it as soon as possible. But this cannot be obtained in all Cases without different and quite opposite Remedies; for in slow Fevers, where the Pulse, which was small and languid, grows stronger and fuller at the Approach of the Crisis, it is to be heightened by warm Medicines so far, till it comes up to the Degree prescribed by Nature. On the contrary,

its

trary, in acute and inflammatory Fevers, where the Pulse is too strong and hard, we should reduce its Excess by proper Evacuations, diluting Liquors, and nitrous Medicines, till it become soft and moderate. Having thus obtained the desired State of the Pulse, if Sweat doth not appear it ought to be raised, and the more so, if at that Time the Fever shou'd have a Return of its Paroxysm, and the Disease is wont to be terminated by Sweat. *Hippocrates*, when Nature is endeavouring an Excretion by the Skin, sometimes advises Sweats to be procured by the Steams of hot Water (5); and in this Condition, if the Skin be relaxed by the warm Vapour, the Patient will easily sweat, provided he be cover'd with a sufficient Quantity of Cloaths. However, this best of Physicians seems very rarely to have used any particular Remedy to raise a Sweat, but directing his Cure according to the Rules of Art, he waited till they flow'd of their own Accord. Of all that immense Tribe of internal sudorific Medicines which

(5). Lib. de Arte (7.)

have been brought into use by the Moderns, not one of 'em more certainly or with less Disturbance to the Body, promotes the cutaneous Excretion, than Opium and Camphire mixed: Opium perhaps relaxes the muscular Fibres which constringe the Pores, and Camphire exceeds all Aromatics in Subtilty, and is dispos'd to pass off thro' the Skin. Moreover, weak Infusions of aromatic Plants supp'd in hot, promote Sweat, wash off the febrile Matter, and at the same time hinder the Blood's being condensed by sweating. But this Method, (to repeat it once more) is most successfully practis'd when the Urine is concocted, and the Pulse is soft and full.

Notwithstanding all this, some having observed, that almost all Fevers are terminated by Sweat, and many of 'em (such as Fevers not lasting above a Day or two, and other slight ones arising from Errors committed with Regard to the six Non-naturals) are soon carried off by it, have imagined that Fevers of all Kinds are best cured by Sweating. Hence, from the Times of the *Arabians*, a great Variety of sudorific Medicines began to come into use, which
indeed

indeed we see given to all indiscriminately, immediately in the Beginning of Fevers, without any Regard to the Preparation of the febrile Matter.

This great and vulgar Error of Physicians was strongly opposed by *Sydenham*, who not only rejected the use of hot sudorific Medicines in Fevers, as well as loading the Patients with a great many Cloaths, but wou'd have the Sweats which flow'd of their own Accord in the Beginning of the Disease, prevented (6). For Experience had taught him, that the worst Kind of Symptoms were produced by such a hot Regimen, and that Fevers were to be cured, more certainly, expeditiously and agreeably, by a very different Method. For this the good Man was pursued by Envy and Calumny: There being in every Station of Life a detestable Sort of Creatures, who can do but little to deserve Praise themselves, such therefore make it their Business to rob others of their Reputation, that so when they are greatly outdone in their own Profession, it may not be perceived by the injudicious Part of Mankind.

(6) Sect. 2. Cap. 3.

By this Pest of Society it was invented, that *Sydenham* (wholly for the Sake of Contradiction) made it his only Point to overthrow that Method of Cure which others approv'd of; but Posterity is generally just to the Memory of those who deserve well of the Publick, and the most celebrated of our Profession have unanimously judged him worthy of the highest Esteem, nay superior to all Praise.

But if the Method of curing Fevers consisted only in raising and keeping up a Sweat, this Art would be soon learnt; for then the only Business of a Physician wou'd be to procure a Sweat as soon as possible, and to keep it on till the Disease was cured. Nor is there any Difficulty in the Choice of sudorific Medicines, since the Rule is to begin with the milder Sort, and gradually to proceed (if there be Occasion) to the strongest, and never to omit Blisters, when any bad Symptom happens. Since then there's not a great deal of Labour or Judgment required, to be Master of this Method of Cure, and an Apothecary's 'Prentice is as capable of conducting it as an old regular Physician, 'tis no Wonder that

that the more injudicious, indolent and illiterate Part of the Profession shou'd pursue this Method before all others. Indeed, if it was so successful in Practice as 'tis easy to be understood, 'twou'd be the most eligible of all; but what is to be lamented, this Method which is employ'd to expel the febrile Matter thro' the Pores of the Skin, is not only attended with more Danger, but likewise greater Trouble and Delay; for by it the Disease is very often protracted many Weeks, and the Patient by Means thereof brought to the Brink of the Grave, if he chance to escape Death; besides he is plagued with a Load of Medicines throughout the long Course of the Fever, in order to combat those Symptoms which an injudicious Management of the Disease produced. These are the Words of *Sydenham* (7), whose Judgment those great Lights of Physick, *Mead*, *Friend*, and *Boerhaave*, and many others of principal Note have confirm'd in their Writings. For those then who have the Care of the Health and Lives of their Fellow-Creatures to despise Admonitions of such great Importance, is highly criminal, but

(7) Schedul. monitor. de novæ febris ingressu.

knowingly to use a Method for protracting Diseases, in order to enrich themselves, is practising the Art of poisoning.

But whereas the hot Regimen is still too much in use, it may not be amiss to examine a little more narrowly, how it comes to pass that so many ill Consequences flow from it.

Nature then is scarce ever able to expel the febrile Matter by Sweat, before it has taken up a proper Time for its Maturation, except in the Plague; so that Sweats which of their own Accord flow largely in the Beginning of a Disease, do not carry off the Fever, but prognosticate a long and dangerous Disorder, or probably are the Occasion of it. They likewise render the Patient costive in the Beginning, and in putrid Fevers frequently cause a Diarrhoea towards the Crisis; whereas those Persons generally escape, and most easily get free from a Fever, to whom the very contrary of this happens, *viz.* When at the Beginning of the Disease the Belly is lax, but a little before and at the Crisis, costive. When the Patient is costive from the Beginning, the Forces are retain'd in
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the Body, the Intestines are distended, and a Passage denied the turgid Matter, in case there shou'd be any in the *primæ viæ*; what and how great Mischiefs arise from hence, has been explain'd above. And tho' at the Beginning there shou'd be no vitiated Juices in the first Passages, yet such will, in a short Time, be bred there; for the Bile, both Cystick and Hepatick, the Mucus of the Stomach and Intestines, the feculent Matter of the Humours and Food, which ought to pass off by Stool, are intercepted, dissolved and putrefied; from the first Passages they are carried into the Blood, (having first injured the Parts where they lodged) there they kindle up a new Fever, and with Difficulty surmounting the subtle winding Vessels of the Brain and Viscera, occasion Obstructions and Inflammations of the more noble Parts, and thereby bring on a Train of the worst Kind of Symptoms. This is generally the Case even when the Method succeeds according to their Expectation, nor will the bad Symptoms cease, before the corrupted Matter, which ought to have been carried off by Stool, is either thrown out in Pustules

Pustules on the Skin, or evacuated with the Sweat. Besides, if you open a Vein after copious Sweats, the Blood will be found thick, as being deprived of its Serum, and the whole condensed into a grumous Substance; for this we have the Testimony of the great *Harvey*. When Sweats then are forced out by hot Medicines in the Beginning of Fevers, especially inflammatory ones, where a fizy Lensor of the Blood is a great Part of the Disorder, the vital Humour will be prodigiously thicken'd, and by that Means rendred unfit to circulate thro' the extreme capillary Arteries, but being impell'd with Violence, will be forced into them, and there stick fast. If this happens in the Brain, the Consequence will be a Phrenzy or Lethargy; if in the Breast, a Difficulty of Breathing or Pain of the Side; if about the Præcordia, a Distension, Heat, Pain of these Parts, Oppression of the Breast, Anxiety, Restlessness, &c. Sometimes indeed the Event is more fortunate, and the Matter thrown upon the Joints and fleshy Parts; but from thence proceeds great Pain, or perhaps Lameness, occasion'd by a Rheumatism or Arthritic Disorder. That Symptoms of this Kind frequently

quently follow from such a Method of Cure, is confirm'd by sad Experience. In slow Fevers also, where warm Medicines are wanted to quicken the vital Motion, we must take care that we are not too busy with them. How exceedingly pernicious hot alexipharmick Medicines are in the miliary Fever, Experience hath too frequently taught us; by which it appears, that by Means of such Medicines, and keeping the Patients too warm, almost all died when the Disease made its first Appearance; whereas at present, Numbers under a temperate Regimen, escape, (8). In a neighbouring Town this Year, a great many in the petechial Fever were treated with hot Alexipharmics, and kept in a continual Sweat, of which scarce a third Part recovered.

But where the efficient Matter of the Disease is of a very subtile Nature, and is neither inviscated in thick Humours nor entangled in the Pores; and if it be moreover found by Experience, that it may be evacuated by the Skin, we ought to pro-

(8) Hoffman. med. rat. syst. Tom. 4. Sect. 1. Cap. 9.
Obs. Clin. Sect. 2.

cure Sweat as soon as possible, that the morbid Matter may be expell'd before it has altogether corrupted the Humours. In the Plague therefore, a plentiful Profusion of Sweat, excited by hot Medicines, with the Allowance of a large Quantity of diluting Drinks, is the chiefeft Remedy, if it be used before the Venom is obstinately fix'd on any particular Part. But this Method has been attempted in the Small Pox, with the Loss of a great many Lives; for that malignant Matter which occasions the small Pox, can never be expell'd thro' the cutaneous Pores along with the Sweat. Besides, in this Disorder the Patients seldom die for want of having the Venom expell'd from the Blood, but frequently on Account that the Abscess, consisting of the Pustules, is greater than the Patient's Strength can bear, which Abscess or Number of Pustules, is greatly increased by the Use of hot Medicines.

Notwithstanding plentiful Sweating before the Concoction of the Disease (except in the Plague) is generally bad, yet a more plentiful Perspiration, or sometimes a gentle Moisture of the Skin, is of great Service

Service, provided it is not occasioned by the Malignity of the Disease. For Persons in Fevers do always prepare a greater Quantity of perspirable Matter than those in Health, on Account of the more violent Motion of the Humours, and the great Degree of Heat; if this is retain'd within the Body, from its Stay, Motion and Heat there, it must soon become very acrid, which is abundantly sufficient to bring a malignant Fever upon a Man in perfect Health. A very dry Skin and parched Tongue, are very justly ranged among the bad Symptoms, but the same, soft and moist, among the good ones. For a moist Tongue is a Sign that Perspiration is well perform'd in those Parts thro' which the Breath passeth, and these are for the most Part in the same Condition as the external Habit of the Body; so that when the Skin is moist, the Mouth and Tongue will almost always be so too, unless some particular Disorder afflicting these Parts prevents it.

In these Climates there's no Necessity that Persons in perfect Health shou'd have a visible Moisture on their Skin, but in very

very warm Countries, in hot Days, this seems to be of great Service. In *Egypt*, during the second Part of the Summer, every one sweats profusely several times a Day, and at that Season the Inhabitants always enjoy the most perfect Health (9).

In *Italy*, in hot Weather, when Persons asleep either by Day or Night, perspire or sweat much, they become lighter, and are not molested with any Heat that Day (1). But to those who in very hot Weather do not throw off all the perspirable Matter, the Heat is troublesome (2). In acute Fevers, a gentle Sweat, especially in Time of Sleep, and not proceeding from the Violence of the Fever, nor a morbid Relaxation of the Body, generally makes the Patient bear the Disease more easily; for it removes the bad Symptoms superadded to those which properly belong to the Fever, from a Retention of the acrid perspirable Matter. Some of these are a Heaviness of the Head, a painful Weariness of the whole Body, Thirst,

(9) Alpin. de medic. Ægypt. Lib. 1. Cap. 18.

(1) Sanctör. Aph. 28. Sect. 2. (2) Sanctör. Aph. 78. Sect. 1.

Heat, Restlessness (3), but a more plentiful Perspiration or gentle Sweat now and then will prevent those bad Symptoms, which wou'd soon arise from that Cause. Such Sweats, according to *Hippocrates's* Observation, are best which come upon the critical Days after the Signs of Concoction, and carry off the Disease; but those are good which appear equally over all the Body, and make the Patients bear the Disease more easily. 'Tis likely therefore that the former expel the febrile Matter, and the latter the acrid perspirable Excrement only, whilst the Disease is quite crude. But, according to the Advice of the same Person, if those Evacuations or Eruptions, which are of Service when they happen spontaneously, do not appear, the Matter being kept in, they ought to be procured by Art; therefore when the Skin and Tongue are parched and dry, a prudent Physician will immediately attempt an Excretion of the perspirable Matter, not by increasing the Fever so high as to force Sweat by its Violence, but by relaxing the

(3) Ibid, Aph. 113. Aph. 23. Sect. 4. and elsewhere.

Vessels, diluting and attenuating the Humours, and regulating the vital Motion; for by this Way we consult the bad Symptoms and primary Disease both at the same Time. On the contrary, the ignorant and injudicious, if they know how to mitigate the present bad Symptoms, mind that only, and are not at all sollicitous for what may happen hereafter. Thus giving the Patient some Ease they ingratiate themselves with him and those about him, and applaud themselves at the same Time for the great things they have done; when by this Method they frequently bring the Patient into the greatest Difficulties and the utmost Danger of Life. Such an Error is never more frequently committed than in giving what they call cordial and sudorific Medicines in the beginning of Fevers, for this Method promises an easy and pleasant Cure, and is agreeable to the Opinion of the Vulgar, Custom has made it familiar, and the Patient finds himself relieved when the Sweat begins to flow, and if they stop, he is abundantly hotter, more thirsty and restless. But Sweats, which are very easily brought on in the beginning of a Disease, will

will frequently quite disappear as it advances towards its Height, so as not to be recall'd by the warmest Medicines; and tho' they shou'd continue to flow they will certainly bring along with them those bad Symptoms which have been mention'd before. Altho' the Antients the most studious of Nature, never admitted this Method of Practice, and the Moderns more intimately instructed in the sacred Mysteries of Physick always rejected it, yet 'tis never to be expected that the old Women, who have a License of slaying Mankind with Impunity, should ever suffer themselves to be taken off from their Method of Cure; but 'tis to be wish'd, that Physicians who follow the Guidance of Reason, would throw aside their Prejudices, and weigh the Matter with that Carefulness it deserves, and banish this pernicious Method from that Art which promises Health to Mankind.

From what hath been said (that I may at Length dismiss this ungrateful Subject) it appears, that the best Assistance Art can give, is to keep all those Passages free and open in Fevers, thro' which the excre-

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mentitious Matter of the Body is daily discharged in Time of Health. For a Retention of any Part of it in healthy Persons ('tis well known) produces Fevers, and almost all kinds of Disorders: How much more Injury then will it bring to Persons already in Fevers, when the Strength of the Body is greatly impair'd by another Disease, and all the excrementitious Matter become of a more malignant Nature, and collected in greater Quantity within the Blood-Vessels! The Fever in the meanwhile is falsely charg'd with being the Author of all those bad Symptoms which supervene and spring from another Source. But with what Medicines will these be combated when their Cause is latent? Lastly, by this Method we not only prevent those bad Symptoms which arise from a Retention of the excrementitious Matter, but obtain another Benefit also, which is that as soon as any febrile Matter is, prepared for Excretion, there is a natural Passage for it open, let it tend which Way soever it will.



COM M E N T A R Y XI.

Of the Cure of critical Abscesses.

HAVING now finish'd what relates to Evacuations, there remains to be explained the Method of treating critical Abscesses.

When a Fever hath neither been carried off by an Hemorrhage, nor by Stools, nor by Expectoration, nor by Urine, nor by Sweat, but runs on attended with such Symptoms as have been already mentioned, an Abscess may be expected.

An Abscess seems to proceed from the febrile Matter's being concocted in some Degree, but not so perfectly as to be capable of escaping thro' the natural Passages, the Intestines, Kidnies and Skin, and from so remiss a Motion of the Blood as is insufficient to burst the Arteries. For, in violent Fevers, almost the same Symptoms denote a Flux of Blood from the Nose, as in more moderate ones shew an

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Abscess forming near the Ears. And a Fevers, presently abating upon the seasonable Eruption of some considerable Abscess, and quickly again increasing upon its subsiding, without good Reason, make it very plain, that the febrile Matter is thrown out and collected in a critical Abscess.

Wherefore if Nature seasonably attempts to form an Abscess in a proper Place, it ought to be encouraged by Art, lest the morbid Matter shou'd return back again; for the Disease to be thrown from the inner Parts upon the outer is good, but the contrary is bad. If the Abscess therefore is purely inflammatory, those things are to be apply'd to it, which will soonest bring it to Suppuration; for in ardent Fevers where Tumours arise near the Ears, and do not suppurate, the Patients seldom recover (1). But where they suppurate with Signs of Concoction, and contain white Matter, they are salutary (2).

Franc. Valesius relates a singular, but I think a very rational Method of curing a Parotis in malignant Fevers: "What I

(1) Coac. prænot. 137.

(2) Coac. prænot.

“ use to do (says he) in this Case, I shall
“ make no Difficulty of publishing, be-
“ cause I believe many were saved by it
“ who would otherwise have died. As
“ soon as such Swellings begin to appear,
“ I foment the Part with some softening
“ Oyl, as that of Chamomile, and if they
“ don’t rise fast enough, I apply a Cup-
“ ping-glass to the very Place, that the
“ Abscess may not be too small to be of
“ Service; but when it is sufficiently come
“ out, if it increases very much in a short
“ Time, I take off more Blood, lest it
“ shou’d become too large for the Patient’s
“ Strength to support. Soon after, with-
“ out waiting for any Suppuration, I open
“ the Tumour, whilst it is yet hard, with
“ an actual Cautery; if the Tumour ap-
“ pear only on one Side, I open that, but
“ if on both Sides I apply the Cautery to
“ both, and afterwards lay on a suppurat-
“ ing Cataplasme. This Method generally
“ succeeds well; for the Tumour putre-
“ fying soon after the Eschar is made,
“ Pus begins to be discharg’d, and the
“ Head and rest of the Viscera are tho-

“roughly purged by this Drain” (3). This very Practice was likewise much approved by the famous *Marcus Aurelius Severinus*, and other noted Physicians, as may be seen in his Writings (4).

But where the Matter of the Abscess is of such a Nature as to cause an Erysipelas, those Remedies are to be applied to it which will condense the thinner Humours, and stop them at the Skin. This Sort of Abscess is a great deal more apt to return back than genuine Inflammations; which some of *Hippocrates's* Interpreters not rightly understanding, have wondred that he shou'd order refrigerating Medicines, and those which are actually cold and astringent, as Beets and Gourds sliced into cold Water, to be apply'd in a particular Species of the Quinsy, to a φλέγμα thrown out upon the Neck or Breast, especially since he tells us, at the same Time, that when it swells outward about the Breast, the Patients for the most Part live, but if it turns inwards upon the Lungs, they ge-

(3) Comment. ad Hippoc. Lib. de morb. vulgar. No. 92. Lib. 7.

(4) De Abscessu critico, cap. 31.

nerally die (5). In this Place φλέγμα signifies an Erysipelas, to which *Celsus*, *Galen* and his Successors order the Leaves of Beet, and astringent Medicines to be applied, for such Remedies retain the morbid Matter in the external Parts, otherwise they wou'd scarcely have been prescribed by those who so well knew how dangerous it is for an Erysipelas to be turn'd inwards. But these same Medicines repel a genuine Inflammation.

Moreover, if the morbid Matter is critically thrown upon the Joints, we must apply what is proper, to detain it there until it be gradually wasted : for, according to *Hippocrates's* Observation, Diseases of the Joints, except those of the Hips, seldom suppurate.

Lastly, if Eruptions appear upon the Skin, and come out but slowly, external Heat is of use to push them on, where the Fever is not violent ; by the same Means they are prevented from going back suddenly before their Time. And, indeed, a pretty great degree of Heat, internal as well

(5) Lib. 2. de morb. (470).

as external, is of use to encourage the Eruption of all Kind of Abscesses.

However, a Crisis effected by an Abscess is generally more troublesome and dangerous than such as are perfected by Evacuations, especially if no critical Evacuation at all comes into their Assistance. Thus *Hippocrates* tells us, that when an Abscess is form'd about the Legs, and the Urine continues quite crude, there's Danger of very lasting Pains and Lameness (6). I had a Patient who was on a sudden freed from a malignant Fever by an Abscess in his Thigh whilst the Urine continued crude; the Thigh-Bone from thence became carious, and the Lameness and Ulcer still remain, though this happen'd seven Months since.

Urine which drops a great deal of thick, white, smooth and equal Sediment, much resembling purulent Matter, best of all dissolves and carries off critical Abscesses. The Discharge of this kind of Urine, sometimes occasions Pain; hence a Strangury is related by our Master, in the second Con-

(6) Coac. Præfag. (180).

stitution of the first Book of Epidemics, to have then been the most effectual of all the critical Signs. But besides, such Abscesses are sometimes cured by a spontaneous Hæmorrhage, sometimes by a Diarrhœa and Gripes, and sometimes by spitting.

The Matter therefore occasioning such Abscesses seems to be carried off by all these Discharges; for which Reason, if, upon the Eruption of a critical Abscess, the Patient makes a considerable Quantity of Urine with the Sediment as above described, the Abscess ought not to be injudiciously promoted by Art, for Nature will throw off the morbid Matter by the Kidnies, with equal Safety and far greater Ease. The same thing holds good with respect to the other Evacuations which happen seasonably, and of their own Accord, after the Appearance of a critical Abscess. Wherefore they are all to be encouraged, if they lessen the Disease.

Moreover, when an Abscess is not equal to the Disease, notwithstanding it has been assisted by Art; or if it disappears suddenly and without Reason, and the Disorder thereupon increases; we must here follow
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the Example of Nature, and endeavour to expel the morbid Matter through proper Outlets. In a malignant and very fatal Fever which raged at *Montpelier* in the Year 1623, all those Patients who had Parotids about the Crisis died within the Space of two Days from their Appearance, because the Abscess (as *Riverius* imagin'd) was not large enough to receive the whole Quantity of morbid Matter. In order therefore to evacuate it another Way, he prescribed Bleeding, altho' the Patients were very weak from an Oppression; but on this Account he drew off the intended Quantity of Blood at several Times; next Day he procured Stools by some gentle Laxatives. So great was the Efficacy of this Method, that no one afterwards in this Constitution, who was treated according to it, died with Parotids (7).

The Spots which appear in Fevers are seldom sufficient to receive all the morbid Matter, and oftentimes they come out without giving any Manner of Relief; hence some have imagined them to contri-

(7) *Prax. medic. cap. de febr. pestilent. towards the End.*

bute nothing at all towards the Crisis of a Fever. But 'tis certain, that Spots have sometimes perfectly carried off this Disorder, and without any other Assistance (8); and also that when they are thrown out either too soon or too late, it presages ill, but when they come out seasonably, good (9). Wherefore I think the Petechiæ ought to be ranked with critical Abscesses; however, for the most Part some other Assistance is wanted. The Petechial Fever is generally reckoned amongst malignant and mortal Diseases, and when left to itself or injudiciously managed, is very fatal, but when treated according to Art, is easy to be cured, and a very safe Disease, at least that was so which was epidemical at *Cologne* from the Year 1672 to 1674, and which visited the same Country some Time after; so likewise was that which lately infested us, and still rages; for out of the great Number of Patients which Dr. *Donckers*, a Physician of *Cologne*, had under his Care, if I rightly remember, five only died, as he himself attests. This

(8) Ramazin. de constitut. ann. 1692, &c. No. 21.

(9) Id. ibid. & Donckers de Idea Feb. petechial.

Account I can the more easily credit, because I am certain, and can prove by a proper Evidence if there was Occasion, that out of one hundred Patients who were ill of this Fever in the present Constitution, and treated in much the same Manner, scarce above three died. What this Method is I shall relate in as few Words as possible.

The first Stage of the Disease is the most proper Time for thoroughly cleansing the Stomach and Intestines, that the crude and viscid Humours, which probably imbibe the venemous Taint swallow'd with the Saliva, and afford it a proper Pabulum, may be expelled as soon as possible, together with the Ferment contain'd in them; for these Humours corrupted by it, seem to be the Source of the Fever. The first Stage of the Disease reaches so far as the Appearance of the Spots, or at least to that Day on which the Constitution is wont to throw them out. In this Space of Time also, if either the Quantity or Motion of the Blood, or an Inflammation of any internal Part of the Body, requires Bleeding, it is proper
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to open a Vein, and the sooner this is done before the Eruption, the better. But if a violent Pain of the Head, or a Phrensy, or extreme Drowfiness, with Redness of the Eyes, and Face, or any other Signs of an Inflammation of the Brain, require bleeding, at any other Time of the Disease, Cupping-glasses ought to be apply'd to the Neck, with Scarification, and Blood drawn according to the Urgency of the Symptoms, and the Strength of the Patient. The small Veins under the Tongue have likewise been successfully open'd in these Fevers; but the Patient's Weakness will not in these Circumstances admit any of the large Veins to be open'd. In this Fever many suddenly seized with a Phrensy and Lethargy, have unexpectedly died, several of whom, I doubt not, might have been saved by the seasonable Use of this Remedy. But to proceed; the Motion of the Blood, from the very beginning of the Fever, generally wants to be quicken'd, if we may judge by the Pulse; this, however is more necessary just upon the Eruption of the Petechiæ, because at that Time, Nature being about to form an Abscess in
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the Skin, is to be assisted in it ; and for this Reason we ought to abstain from purging Medicines, and keep the Patient coſtive, a little before the ſecond Stage of the Diſeaſe. Among thoſe Remedies which are proper to excite the Motion of the Blood, and promote the Excretion by the Skin, the Antidotes of the Antients, which are compoſed of Opium and warm penetrating Medicines, are not the leaſt efficacious; but theſe muſt not yet be given in ſuch a Quantity as to raiſe a Sweat; for Sweats are prejudicial as yet, when they flow of their own Accord, and abundantly more ſo, if forced out by Art. Moreover, throughout this Stage, if the vital Motion is languid, as generally happens, the Patient is to be treated in the ſame Manner. As to Diet, Barley-water with Wine is very proper to ſupport the Patient's Strength, through the whole Courſe of the Diſeaſe, provided the Diſorders of the Head do not render Wine prejudicial. In the mean Time, we muſt have Regard to the particular Condition of the Humours. If there is an inflammatory Thickneſs of the Blood, 'tis proper to attenuate it with
nitrous

nitrous Medicines, if there's a putrid Dissolution, we shou'd correct it with Acids and Astringents, if there's a crude viscid Lentor, we should dissolve it with alkaline Salts, exactly saturated with Acids, and likewise with Blisters, which are besides of great Service as a Stimulus. We should in this Stage likewise have a Regard to the Patient's going to Stool; at the Beginning and End of it he ought to be kept somewhat costive, but if he shou'd continue so too long, the Oppression at the Præcordia, Anxiety and Disorders of the Head and Nerves will be greatly increased. And when these bad Symptoms are already come on from thence, two or three lax Stools will greatly abate them, and raise the Pulse. When the Patient therefore is costive, it is convenient to move him with Rhubarb and Tamarinds: However, if he has been properly purged in the beginning, he will seldom have Occasion for brisk Purging now. I prefer a laxative Medicine given by the Mouth, before a Clyster, because it cleanses the small Guts as well as the large ones. And a gentle loosening the Belly is no manner of Hindrance

drance to Perspiration (1). The second Stage ends at the coming on of the Crisis, which happens sometimes sooner, sometimes later, according to the Nature of the Constitution. In those Constitutions where the Eruption of the Spots usually happens about the fourth Day, there will be a Crisis, at least an imperfect one about the seventh; if the Eruption happens about the seventh, the Crisis may be expected about the fourteenth; however, if the fourteenth doth not quite terminate the Disease, we may look for it about the twenty first. But in every Constitution when the critical Day of the Fever is approaching, if the Signs of Concoction are discerned in the Urine, if the Pulse is fuller and stronger, and we observe those Symptoms which presage a Sweat, the State or third Stage of the Disease is at Hand, and now, and not before is the proper Time for provoking Sweat; wherefore warm Medicines are to be given in greater Quantity, and diluting Liquors drank warm very frequently. A kindly Sweat being thus procured over

(1) Sancttor. Aph. 48. S. 1.

all the Body, if the Urine appears more concocted, and the Patient is thereby relieved, it ought to be continued till it puts an End to the Fever. But if this should not answer, and the Pulse should again become quick and contracted, and the Sweat be kept up with Difficulty, and the Anxiety, Oppression of Breast, Faintness and Disorders of the Head, should be increased, there are certainly Remains of the morbid Matter behind, which require farther Concoction. Wherefore we must return to the Method of Cure prescribed in the second Stage, till Nature again endeavours to bring on a Sweat, and if the second Crisis, or even the third, should not be perfect, we must repeat the same again. But if this Method is pursued according to Art, the Disease will seldom continue beyond the second Crisis. When the Fever is quite carried off, we must not omit Purging.

Thus much for the Petechial Fever in particular, but with Respect to Abscesses in general, whenever Nature doth in vain attempt to carry off a Fever by an Abscess, and no Sign of a critical Evacuation appears,

appears, 'ts highly necessary that some Discharge or other should be procured by Art. If the Abscess is of the sanguine Kind, if the Disease is recent, and if the Fever is violent, we ought doubtless to bleed, provided the Patient's Strength permits it. But when he is found to be weak, we should consider whether this Weakness proceeds from his Strength being worn out, or oppressed: if we suspect the latter to be the Cause, it will be proper to take away a few Ounces only for the Sake of Trial; whereupon, if the Pulse rises, we shall be more certain of it, and then in a short Time after we may draw off a sufficient Quantity without any Hazard. But if the Disease has been of a long standing, if the Fever has been gentle, if the Patient is advanced in Years, if his Strength is much wasted, if there are any Signs of a turgid Humour about the first Passages, or if the Fever is usually carried off by a Looseness, Purging ought certainly to take place. But if the epidemical Constitution is wont to throw off the morbid Matter chiefly by the Skin, and Nature tends that Way, we should provoke Sweat. Both Purging and
Sweating

Sweating frequently take place after Bleeding.

Moreover, not only those Abscesses are bad which are too inconsiderable to carry off the Disease, but on the contrary, such likewise which are thrown out in a greater Quantity than is necessary. In the pestilential Constitution both these bad Accidents were observed by *Hippocrates*, for many of his Patients had Abscesses which were either too small to be of any Service, or too large for their Strength to support. But this was remarkable in them (he is here speaking of an Erysipelas, which in that Constitution raged violently) that all those whose Abscesses came to Suppuration, if a Diarrhœa came on seasonably, or a Flow of well concocted Urine, were by these Means saved (2). Whenever therefore a Physician foresees that an Abscess is like to be too large for the Patient's Strength to bear, he ought to check it by such Evacuations as he judges most proper, so that it may not be too little for the Disease, nor too much for the Patient.

(2) Lib. 3. Epidem. stat. pest.



C O M M E N T A R Y XII.

Of Blisters.

AS Blister-Plaisters made with Cantharides are now very frequently used in Fevers, it may not be impertinent to say something here of this kind of Remedy.

Cantharides have been used in Physick ever since the Time of *Hippocrates*; *Archigenes*, however, was the first that I know of, supposing he lived before *Aretæus*, who employed them in blistering the Skin. Both had Recourse to this Remedy in Diseases of the Head and Nerves, where there was no Fever (1). But ever since the Time of the *Arabians*, Medicines which ulcerate the Skin, have been used likewise in acute Diseases, in order to divert De-fluxions, and to draw corrupted Humours

(1) Aetii Tetr. 2. serm. 2. cap. 28. & 50. Aret. curat. morb. diuturn. lib. 1. cap. 4.

from the internal Parts of the Body towards the Surface. For any acrid Matter, which applied to the Skin, produceth a Redness, Pain and Blisters, was thought to draw the Humours from the innermost Parts of the Body, unto the Part so affected. And long before the Time of the *Arabians*, this Remedy was made use of in the Plague, by *Ruffus* of *Ephesus*. If the inner Parts are very hot, whilst the extreme are chilled, and the Skin feels cold, and the Præcordia are distended, and colliquated Humours come off by Vomit and Stool, if there are continual Watchings, Delirium, and a rough Tongue, he adviseth the applying such Remedies as excite Heat, that the Warmth may be equally diffused all over the Body, and to endeavour by all Means to draw it from the internal Parts to the external (2). *Paulus* likewise in an immoderate Chilliness in Fevers, after having in vain tried more gentle Remedies, made use of stimulating Medicines to inflame the Skin, and Sina-

(2) Oribas. Synops. Lib. 6. Cap. 25. Paul. Æginet. Lib. 2. Cap. 36.

pisms (3). In a Syncope also coming on upon a Fever, with a Coldness of the extreme Parts, as far as the Groins, and the Arms, he orders a Cataplasm, compos'd of Mustard-seed, or Pyrethrum, or Adarce (4). And indeed our most antient Author *Hippocrates* advises, that if with a Diarrhoea the extreme Parts are cold, they should be heated by Plaisters (5).

But since the Year 1575, in which the Plague made vast Havock at *Venice* and *Padua*, the Practice of Blistering hath considerably increased, since which Physicians have not been afraid, chiefly on the Authority of *Hieronimus Mercurialis*, to use Cantharides in Blisters, whose malignant Quality was before suspected. The same Disease raging afterwards at *Pesaro*, and many other Cities of *Italy*, in the Year 1590, great Disputes arose among the Physicians about this Medicine; but all the Arguments brought against the use of them, were confuted (says a very learned man) by *Saxonia*, in three Books which he published of the Use of Blisters, wherein he

(3) Lib. 2. Cap. 46.

(4) Lib 3. Cap. 34.

(5) Lib. de rat. vict. in acut. morb. 398.

so copiously handled this Point, that those who have writ since, plainly follow'd him, and scarce added any thing to the Subject. Nevertheless it so happens, that this *Saxonia* confin'd the Virtues of Cantharides to Revulsion and Derivation, except the Evacuation of a small Quantity of Serum, and the provoking of Urine; and all the Arguments which he has brought to prove the Benefit of Blisters are built upon the Antients Doctrine of Defluxions. *Helmont* attacked that Hypothesis with such strong Arguments, that he gave the first Shock to it (6), and afterwards *Harvey's* noble Discovery totally overturned it, wherefore *Saxonia's* Arguments for Blisters, as well as those of the Antients, must necessarily be destroyed with their Foundation. However, the Use of Blisters with Cantharides is very frequent among us at this Day, insomuch that there's hardly any very dangerous Fever, where the Application of them is not by the Generality of Physicians religiously observed. For these Reasons, a Physician ought to

(6) In his Treatises entitled *Catarrhi deliramenta*. Cante-
rium, latex humor errans.

know what is to be expected from this Remedy, which indeed can be learned no other Way than by faithful Experiments.

It is obvious to every one, what Effects Blister-Plaisters have immediately upon the Skin; for we see they generally raise watry Bladders within a few Hours after their Application, and very often without much Heat or Pain. Wherefore, by evacuating a Part of the Serum of the Blood, which likewise continues to run for some time after the Blister-Plaister is removed, they make a small Discharge, and by exciting Pain, act as a Stimulus; but they seldom do much, either on Account of the Evacuation, or of the Stimulus produced by the Pain. For the Efficacy of Cantharides is chiefly exerted on the inner Parts of the Body, and upon the Humours.

Baglivi put eight Ounces of Blood drawn from a sick Person, into two Vessels, and with the Blood in one of them, he mixed a Scruple of powdered Cantharides; at first it seemed to be coagulated, but soon after was tinged with a leaden or blackish Colour, and had a thin Pellicle

on the Surface; afterwards it was covered with a vast Number of small Bladders, which burst and discharged a blackish Serum; at length all the Blood was dissolved, and turned into a black and livid Serum. The Blood in the other Vessel underwent none of these Changes (7).

When the Powder of Cantharides is mix'd with the Serum of the Blood, it becomes more liquid and thin, and can hardly be coagulated (8).

Two Ounces of Tincture of Cantharides were injected into the jugular Vein of a Dog in the Summer Season; immediately upon it he vomited a watry and viscous Matter, and kept on drivelling a viscid Saliva; after dressing the Wound and untying him, he fell down, lay as half dead, and could scarce raise his Head from the Ground; he had besides a violent Thirst, which made him loll out his Tongue, and gave him much Uneasiness; after having drank about six Quarts of Water, he got upon his Legs, moved his Head freely,

(7) Baglivi de usu & ab usu vesicant. Cap. 1. exper. 3.

(8) Ibid, Exper. 4.

with his Neck upright, and was more chearful; but when he had made a very large Quantity of yellow Urine, he again fell to the Ground, and was not now able to lift up his Head, remain'd stupid, and nodding his Head till he died; in the mean time he howl'd, wou'd eat nothing, and was violently thirsty, but no more Water was allow'd him; on the fourth Day he was convulsed, and after very great Howlings, expir'd at Night (9).

The same Experiment was made upon a Whelp, who was affected in the same Manner as the Dog, but no Water being given him, he died in the Space of six Hours, with terrible Howlings (1).

All the Viscera appear'd found in both of them, but the Blood which flow'd out from Incisions made in the Blood-vessels or Viscera, was exceeding black, not in the least coagulated, but entirely dissolved, and its Surface covered over as it were with small Drops of Oil. In the Bladder of the Dog there was not the least Appearance of that Mucus with which it is naturally

(9) L. c. exp. 1. (1) L. c. exp. 2.

lined. The Bile in the Gall Bladder was tinged with somewhat of Blackness.

Diascorides observes, that very dreadful Symptoms are occasioned by taking of Cantharides. For all the Parts from the Mouth to the Bladder, feel as tho' they were corroded; Persons thus affected have a Taste of something like Pitch or Cedar, the right Præcordia are inflamed, they have a Difficulty in making Water, and sometimes bring off Blood with it; they discharge by Stool stringy Filaments, as in a Dysentery, they have a Sickness at Stomach, are faint, and fall down thro' Giddiness of the Head, and at last they become delirious (2). Besides these Symptoms, Physicians have sometimes observed enormous Priapisms to succeed the swallowing of Cantharides.

Upon the Application of Cantharides to the Skin in Fevers, the Thirst as well as Dryness of the Tongue is increased, the Pulse becomes more quick and frequent; but sometimes it is fuller, and sometimes more contracted, the Fever is heightned,

(2) Lib. 6. cap. 1.

and now and then the Bladder is tormented with lancing Pains, especially when fresh Blisters are applied to the ulcerated Parts before they are well covered with a new Skin; sometimes Blood, and Pellicles like abraded Membranes are brought off with the Urine; and in those who have had such Symptoms, the Bladder has been found ulcerated after Death; the Discharge of Urine is generally increased, sometimes it is entirely suppressed, but more frequently made with Pain, and Drop by Drop. The Symptoms occasioned by Blisters go off, sometimes sooner and sometimes later, but for the most Part they quite leave the Patient within three Days.

From hence it appears, that the acrid Matter of the Cantharides is able to penetrate thro' the Pores of the Skin, and infect the Humours; otherwise I can't apprehend how their Application to the Skin can cause such great Disorders about the urinary Passages. We may also take Notice, that these Parts suffer the very same by Cantharides whether, swallowed, applied to the Skin, or injected into the Veins. It has been observed before, that Nature has

has prepared a proper Passage for the thinner acrid Serum of the Blood, and the Salts it abounds with, which want to be continually discharged, through the Kidnies. Since therefore Cantharides act upon the blood like a true dissolvent, converting it into an Ichor, and impregnating it likewise with an acrid Salt, this Poison, by what means soever it is mixed with the Blood, doth chiefly affect the Bladder, where it first of all consumes the Mucus which lines the urinary Passages, and then acts upon their exquisitely sensible Fibres : hence the violent Pain of these Parts. And if the extreme capillary Vessels of the Kidnies are corroded, a bloody Urine follows ; if the Membranes of the Ureters and Bladder, then besides the violent Pains, little Skins are brought off with the Urine ; if the muscular Fibres which surround the Papillæ of the Kidnies are spasmodically contracted by the acrid Stimulus of the Cantharides, the Urine is quite suppress'd, whilst the Bladder is empty.

But before the Poison of the Cantharides can be conveyed from the Skin to the Kidnies,

Kidnies, it must pass through the Veins, along with the Blood, into the right Ventricle of the Heart, where it is mixed with the whole Mass, and afterwards is intimately blended with it in the Lungs; so that it must necessarily circulate along with it through all the Blood-Vessels.

Now what can hinder it from consuming the Mucus which defends the Heart and Arteries, and vellicating their naked Fibres? These are not indeed sensible of Pain, but then are provoked to contract themselves by every Kind of Stimulus. The Hearts of some Animals, after their Pulsation has ceas'd for some time, nay after they are cut out of the Body, will again begin to contract themselves, if they are pricked with a Needle, or irritated by any acrid Matter. And in all Animals put to a sudden Death (as far as the Experiment has been made), the Heart, after it had quite lost its Motion, coul'd be again restored to it by a Stimulus. But the Arteries likewise, besides their contractile Force common with all animal Fibres, have a proper muscular Motion of their own, like the Heart, as *De Gorter* has

has demonstrated (3). These therefore in living Animals will be affected by a Stimulus, in the same Manner as the Heart. Hence we may understand the Reason why the Motion of the Arteries is quicken'd by the Application of Blisters, and also why sometimes, when their Fibres are more sensible of Irritation, or less defended with Mucus, or attacked by a larger Quantity of the Poison, they are seized with a Sort of Spasm, so that the Pulse is thereby rendred small and obscure. This Effect of Blisters was long ago, and perhaps first of all remark'd by *Baglivi*; he says, that among other Symptoms which happen upon the Application of Blisters, the Pulse becomes obscure, and it was very remarkably so, in some Patients who were delirious, where the Pulse before the Application was high; he adds, and this Symptom continues so long as the acrid Salts of the Cantharides remain in the Blood; but when they are thrown off, it vanishes, together with the other Disorders which were occasioned by the

(3) In exercit. medic. de motu vitali.

Blisters (4). Attending to this Remark of *Baglivi's*, I have often observed the like Disorder of the Arteries produced by Blisters applied when the Pulse was very quick and frequent, and don't at all doubt but the same thing has been observed by a great many others. Amongst the Observations publish'd by the Society at *Edinburgh*, is the following, " I have been
 " much disappointed, and at my Wit's
 " end what to do, (says the Author of
 " the Dissertation on nervous Fevers)
 " when Blistering, which I most trusted
 " to, has heightned all the Symptoms;
 " and this was most observable from the
 " Pulse, which in the Intervals betwixt
 " the different Blisterings, was pretty full
 " and soft, upon every new Application
 " becoming smaller and more contracted,
 " other bad Symptoms increasing in Pro-
 " portion (5)."

Moreover our Blisters dissolve the Blood, and impregnate it with an acrid Salt. But if the sanious Ichor which ought to be carried off by the Kidnies, be retained

4) Bagliv. L. c. Cap. 2. No. 3 and 4.

(5) Vol. 4. (370.)

within,

within, the Head is generally disorder'd ; or if in a Fever the urinous Salts and Oils are not discharged, which may be known by the Urine's being thin and pale, there is immediate Danger of a Phrensy. In those Fevers likewise, where the Blood, when drawn, appears to be of a bright florid red, and dissolved, the Brain uses to be remarkably affected. Those who have swallowed Cantharides, fall down of a Vertigo, and become delirious. Dogs likewise who have had a Tincture of Cantharides infused into their Blood, are immediately seized with a violent Disorder in their Head ; but the Dog who had a large Quantity of Water allow'd him recover'd, at least for a short time, though afterwards all kind of Liquids being deny'd him, he died on the fourth Day. The other who had no Water given him, died within six Hours, in all Appearance from a Disorder of the Brain.

Since then in acute Fevers, a Delirium follows upon a Retention of those Salts which ought to be carried off through the Kidnies ; since the Poison of Cantharides chiefly attacks the Head, next to the

T

urinary

urinary Passages ; and since Fevers attended with a Diffolution of the Blood, are very apt to seize upon the Brain, it is not certain that Blisters are absolutely necessary in all Disorders of the Head and Nerves. On the contrary, in Fevers where the Blood is dissolved and acrid, if Disorders of the Head threaten or have seized the Patient, 'tis reasonable to think that Blisters will sooner bring them on, and more violently increase them. It is allowed even by those who so strenuously contend for the use of Blisters in all kinds of Fevers, that a Delirium and Subsultus of the Tendons have ensued, and increased on the Application of Blisters. Yet some have such a bigotted Opinion of their Virtue in these Disorders, that they persuade themselves, whatever bad Symptoms of this kind happen'd, entirely flowed from the Disease, and wou'd have been more violent if this Remedy had been omitted ; but since these Symptoms sometimes come on soon after the Application of Blisters, and gradually disappear again upon their Removal, and this for three or four times, or oftner, as has been observed in the same Patient,

Patient, I can never be induced to believe that Cantharides are an effectual Remedy in all Disorders of the Head and Nerves.

Neither do Blisters seem to be always of Service in Fevers; for some of the putrid Kind dissolve the Blood, and turn it into a dark corrupted Sanies. These rage among us in very hot Summers, are very apt to be attended with a Delirium and Convulsions, and are remarkable for a frequent and quick Pulse. *Galen* hath told us, that a quick Pulse, which doth not strike against the Fingers with Strength and Hardness, proceeds from a Putrefaction of the Humours. For the Arteries by their Contraction discharge the fuliginous excrementitious Matter contained in them. Therefore when this Kind of Matter abounds, the Artery is contracted to its least Dimensions, neither the Heart nor Arteries are greatly distended; hence the Motion of the Artery when it subsides, is by a skilful touch found to be quick, and when it is distended, not strong. But if the Contraction of the Heart is likewise performed in a short Space of Time, the Artery will be distended with Celerity, and then the Pulse will be quick in both

its Motions. This and a great deal more concerning a quick Pulse, may be found in *Galen* (6). For my own Part, I imagine that the Quickness of the Pulse in putrid Fevers, is chiefly owing to the Acrimony of the putrifying Humours, stimulating the Heart and Arteries; and the Reason the Pulse in these Fevers, is not so hard as in inflammatory Diseases is because in them the Blood is thick, but in putrid Fevers dissolved. Of the same Nature likewise are the genuine erysipelatous Fevers, some of the petechial kind, and especially some of the epidemic Camp Fevers. Now it is quite contrary to Reason to apply a strong Dissolvent to the Blood, when it is already too much dissolved, and to exalt by Means of a most acrid Salt, what hath already too great Acrimony, and to irritate the Arteries with a violent Stimulus, when their Motion is already immoderately quick and frequent. Yet all these things are to be expected from the Use of Blisters in these Kinds of Fevers. At a Time when colliquative Fevers, or those attended with a Dissolution

(6) De Præfag. ex Puls. Lib. 3. Cap. 7. and Lib. 4. Cap. 12. and de differ. Feb. lib. 2.

of the Blood, were raging at *Rome*, many of the *Galenists* too strictly adhering to their Hypotheses, imagined that their violent and uncommon Symptoms depended upon some venemous Taint; in order therefore to drive out the Poison, they applied four, six, and sometimes more Blisters: Notwithstanding which, most commonly Convulsions, a more violent Delirium, an Increase of the Fever, Abscesses in the Viscera, and at length Death ensued, as *Baglivi* observes; and this he thinks owing to the Blood's being dissolved by the caustic Salt of the Cantharides, as well as by the acrid Matter of the Fever. According to the same Author, when Blisters were apply'd to those Patients in the Hospitals who were delirious, with an acute Fever, and a dry Tongue, all of them soon died, and most of them convuls'd. Terrified at such repeated Events (says he) I afterwards successfully made use of cooling Emulsions, and opening the frontal Vein (7).

(7) De usu & ab usu Vesicant. Cap. 2. No. 3. The same is likewise confirm'd from Obs. 131. Dec. 11. A. 9. Miscel. nat. curiosa & Obs. Theone. Lib. 1. ob. 20.

But there is a Sort of Fevers where the Blood has a quite contrary Quality; being viscid, glutinous and greatly dispos'd to run into Concretions. *Hippocrates* seems to have understood this Difference of the Humours in Fevers, for he describes one Species of the Quinsey in Winter, proceeding from a fizy viscid Humour obstructing the Blood-vessels, and stopping up the Passages of the Blood and Spirits; and another which happens in Summer or Autumn, produced by a hot, nitrous and acrid Defluxion, which by fretting the Wind-pipe, brings on a Quinsey (8).

Wherefore, in Fevers which are inflammatory or rheumatick, or those which happen in the Winter time, and others where the Blood drawn off has a fizy Crust on its Surface like Glue, or Leather, or where it is too thick, Blisters are of notable Service to dissolve this Lentour; but the Arteries in inflammatory Fevers, have too violent a Motion; for which reason this Remedy shou'd not be used till after proper Bleedings; and though the Pulse, even then too quick, be accelerated

(8) De v. et. in morb. acut. (397)

by it, yet 'twill be only for a little while; afterwards when the thick Humours are dissolved, the Pulse will become softer, and the Fever more gentle.

In slow Fevers likewise, and in all those where the Pulse is too languid for the Nature of the Disease, Blisters are of great Use to quicken it. Therefore in lethargic Disorders, in which the Pulse is generally slow and sluggish, it is the most effectual Remedy; especially if at the same time, the Fever is remiss, and the Disorder proceeds from crude and viscid Humours. Besides, *Sydenham* has with very good Reason, recommended Blisters in those Winter-fever where the Blood is thick and viscid, and the Pulse not so strong as the Disease requires; for they effectually answer both those Intentions at the same Time.

If it should be necessary to bring farther Authority, to confirm what has been already said, concerning the Use of Blisters, I will produce the Opinion of two of the greatest Masters in the Art, the first is that of *Mercurialis*, who introduc'd the Use of Blistering with Cantharides into *Italy*. "I think (says he) we ought well

“ to consider (as I have likewise urged in
 “ my Treatise of pestilential Fevers) that
 “ those Medicines, (speaking of Blisters)
 “ are not to be used indiscriminately in
 “ all Kind of Fevers; for I find the An-
 “ tients made use of Sinapisms, in those Fe-
 “ vers only, which were attended with
 “ a Lethargy, a Coma, or some other
 “ sleepy Disorder. In other violent Fe-
 “ vers, they avoided the Use of a Sinapism.
 “ Therefore since our Blisters are more
 “ violent than Sinapisms, I can’t see why
 “ we should use them so indiscriminately
 “ as we do. I approve of the using them
 “ in those Disorders which violently affect
 “ the Head, especially when they are of
 “ a cold Nature, and then they ought
 “ chiefly to be apply’d to the Feet (9).”
 One of the most celebrated Physicians
 of this Age, who hath by a long Practice
 experienc’d the Virtues of Cantharides
 himself, and has frequently seen what hath
 been done with them by others, says that
 Patients in the small Pox (in which Dis-
 ease there are some who never omit Blis-
 ters, if the Disorder is violent) require

(9) De compos. medicament. Lib. 3. Cap. 23.

Blistering when the Fever is attended with a small and languid Pulse, and there's little or no swelling of the Hands, and with a general Decay of Strength the Patient is rather chilled than overheated. In such a Case Blisters are to be apply'd to the Arms and Legs (1). Thus he; and not only in the Small Pox, but in every other Fever, a slow languid Pulse greatly requires Blisters; on the contrary, a quick and frequent one very seldom admits of them.

Moreover, we ought to consider that Blisters by Means of their acrid Matter, affect the Arteries, which are situated near the Part, where they are apply'd, more than those which are at a greater Distance, and for this Reason will produce in them a more violent Motion; whereby the Humours will be forced through the adjoining Arteries in greater Quantity, and with a stronger Impetus: Wherefore Blisters are of singular Service in removing such Obstructions as require stronger Vibrations of the Solids, and a greater impelling Force of the Fluids. This is manifest from the Ease they give in the Hip-Gout. B. fides,

(1) Epist. ad J. Freind.

the greater the Quantity of Humours those Arteries receive, which are nearest to the blister'd Parts, the less will those have which are at a greater Distance, and arise from the same Trunk. Thus a Blister to the Neck, is judg'd best to draw off Defluxions from the Eyes, Fauces and Wind-pipe; the same is apply'd to the Head or behind the Ears, to make a Revulsion from the Brain; but when the Humours are to be drawn from the middle Parts of the Body, we should apply Blisters to the Extremities, and if the upper Parts are to be reliev'd, blister the lower. This Sort of Remedy then is useful, to draw out the vitiated Juices which are ~~fluctuated~~ ^{fluctuating} about the internal Parts of the Body, upon the outer Habit, provided that other Inconveniences occasioned by them, do not overballance these Advantages. Lastly, from this Property of Blisters, such as are skill'd in the Art of Physick, may easily understand to what Part of the Body they ought to be apply'd in any Disorder whatsoever.

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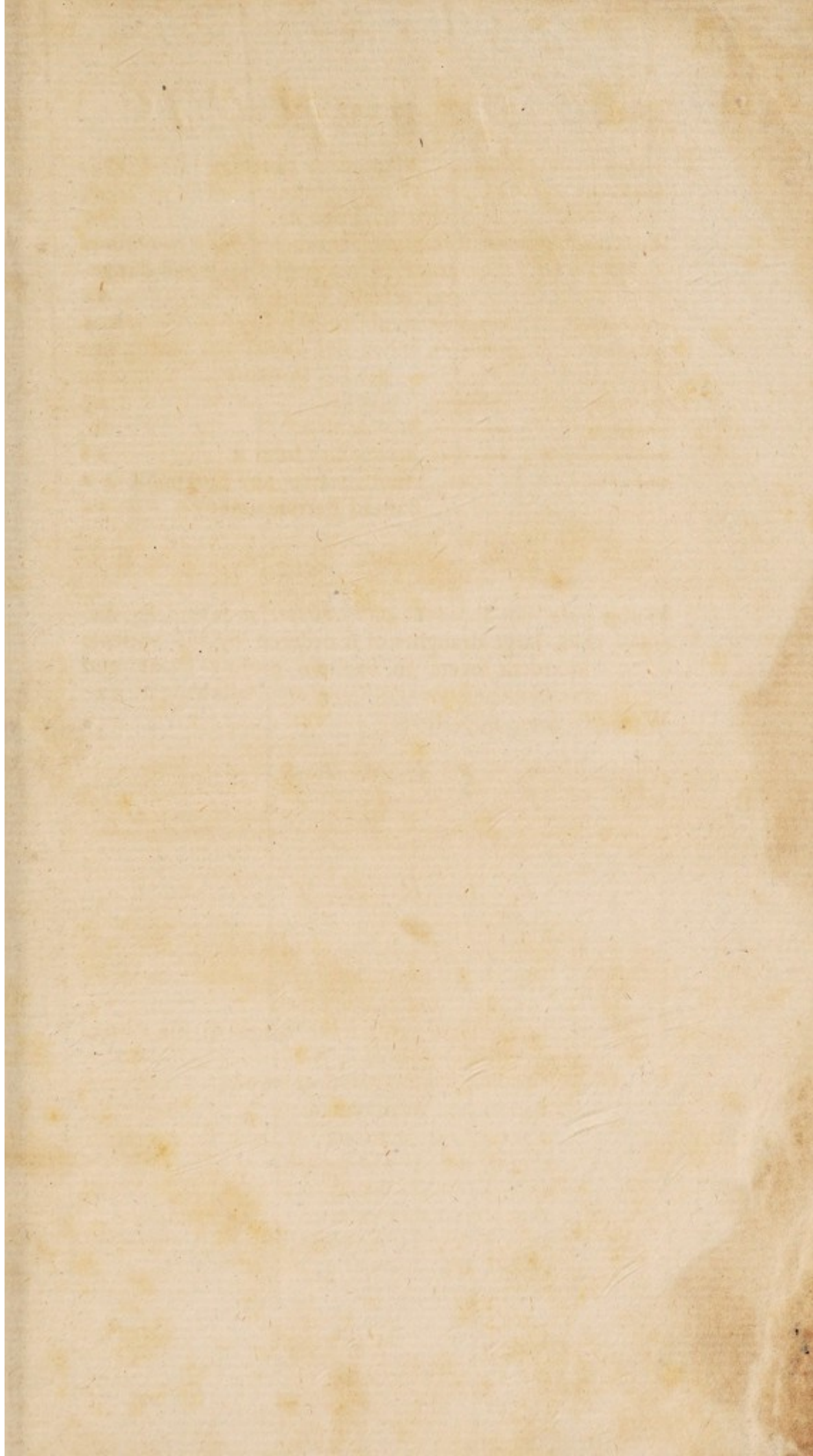
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Palt. Rev. Ser.
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