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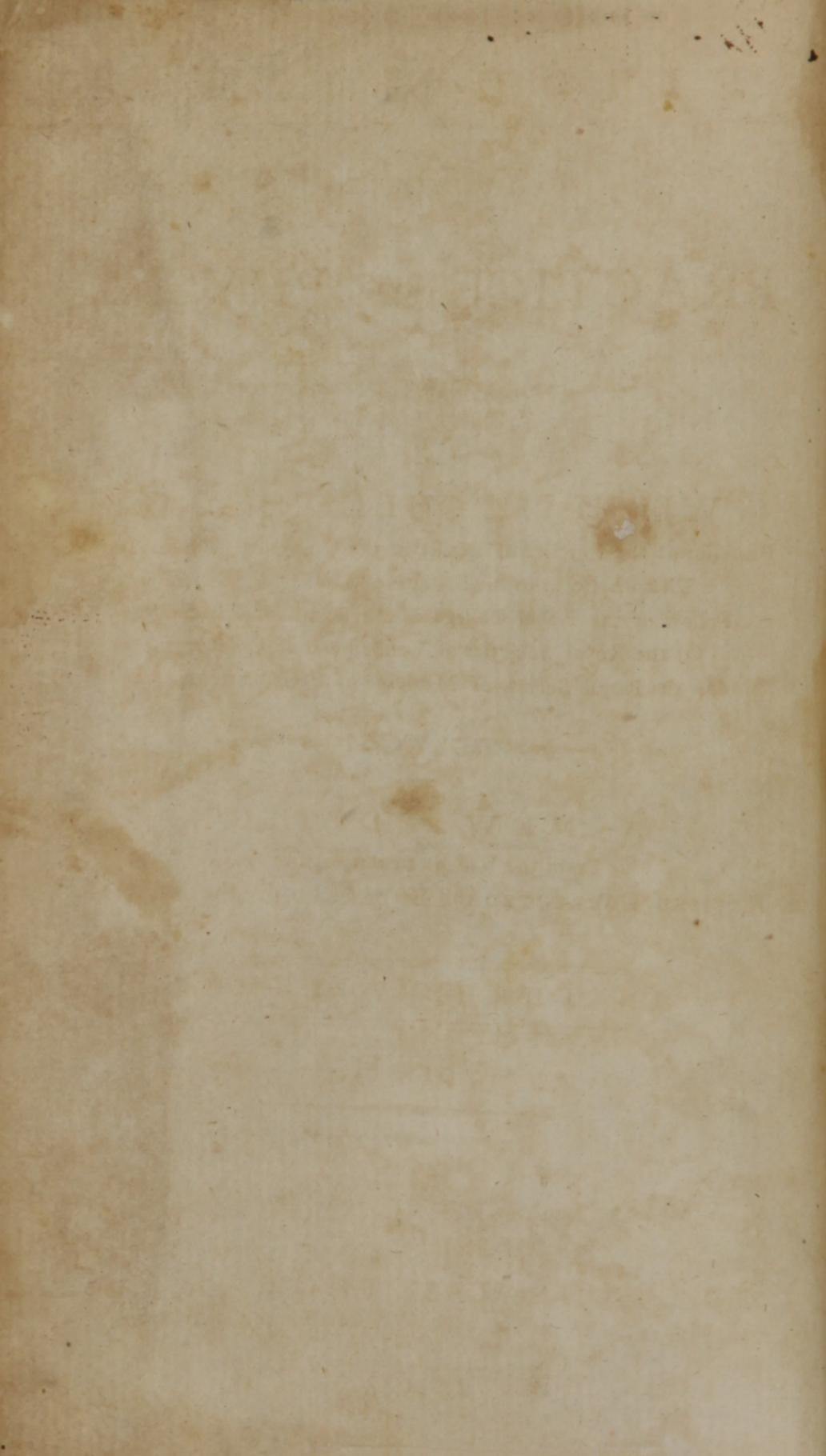


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FIRST LINES

OF THE

PRACTICE OF PHYSIC.

BY

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Of the Royal Societies of London and of Edinburgh,
Of the Royal Society of Medicine of Paris, &c. &c. &c.

A NEW EDITION.

From the Last BRITISH EDITION,
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IN THREE VOLUMES.

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PIC O N T E N T S
of VOL. II

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O F O R K I I I
O F F I C I A L I A
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C H A P. I

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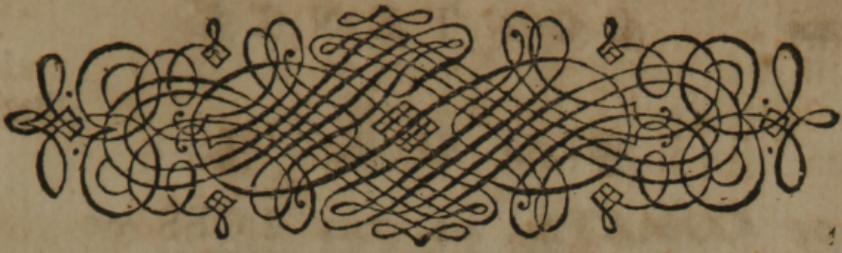
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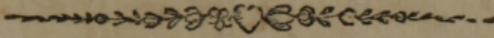
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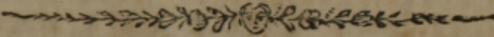
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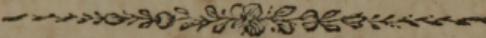
FIRST LINES
OF THE
PRACTICE OF PHYSIC.



B O O K III.



OF EXANTHEMATA, OR
ERUPTIVE FEVERS.



DLXXXV.



THE diseases comprehended under this title, which make the third Order of Pyrexia in our Nosology, are in general such as do not arise but upon occasion of a specific contagion applied, which first produces fever, and afterwards an eruption

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B

eruption

eruption upon the surface of the body ; and which diseases, for the most part, affect persons but once in the course of their lives.

DLXXXVI.

Whether the character of the Order may be thus limited, or if the Order may be allowed to comprehend also the eruptive fevers produced by a matter generated in the body itself, and likewise those cases of eruption which do not depend upon contagion, or upon a matter generated before the fever, but upon a matter generated in the course of the fever, I am not ready to determine. Of the diseases enumerated by the Nosologists as *Exanthemata*, there are certainly three different kinds, which may be distinguished by the circumstances mentioned in this and the preceding paragraph. Of the first kind are the Small Pox, the Chicken Pox, the Measles, the Scarlet Fever, and the Plague. Of the second kind seems to be the Erysipelas ; and of the third kind I judge the Miliaria and Petechia to be. But as I am not sufficiently confident in the facts which should support these distinctions, or which would enable us to apply them in all cases ; I go on in this book to treat of almost all the exanthemata enumerated by preceding Nosologists, with only some difference in the arrangement from what it was in my former editions.

C H A P. I.

O F T H E S M A L L P O X.

DLXXXVII.

THE small pox is a disease arising from a contagion of a specific nature, which first produces a fever, and on the third or fourth day thereof, produces an eruption of small red pimples. These are afterwards formed into pustules, containing a matter, which, in the course of eight days from the time of the eruption, is changed into pus. After this, the matter dries, and falls off in crusts.

DLXXXVIII.

This is a general idea of the disease ; but here are two particular forms or varieties of it, well known under the appellations of the *Distinct* and *Confluent*, which require to be specially described.

DLXXXIX.

In the former, or the distinct small pox, the eruptive fever is moderate, and appears to be evidently of the inflammatory kind, or what we name a Synocha. It generally comes on about mid day, with some symptoms of a cold stage, and commonly with a considerable languor and drowsiness. A hot stage is soon formed, and becomes more considerable on the second and third days. During this course, children are liable to frequent startings from their slumbers; and adults, if they are kept abed, are disposed to much sweating. On the third day, children are sometimes affected with one or two epileptic fits. Towards the end of the third day, the eruption commonly appears, and gradually increases during the fourth; appearing first upon the face, and successively on the inferior parts, so as to be completed over the whole body on the fifth day.

From the third day the fever abates; and against the fifth it entirely ceases. The eruption appears first in small red spots, hardly eminent, but by degrees rising into pimples. These are generally upon the face in small number; but even when more numerous, they are separate and distinct from one another. On the fifth or sixth day, a small vesicle, containing an almost colourless or whey coloured fluid, appears upon the top of each pimple.

For two days, these vesicles increase in breadth only, and there is a small hollow pit in their middle; so that it is only against the eighth day that they are raised into spheroidical pustules.

These vesicles or pustules, from their first formation, continue to be surrounded with an exactly circular inflamed margin, which, when the pustules are numerous, diffuses some inflammation over the neighbouring skin, so as to give somewhat of a damask rose colour to the spaces between the pustules. As the pustules increase in size, if they be numerous on the face, against the eighth day the whole of the face becomes considerably swelled; and in particular, the eyelids are so much swelled as entirely to shut the eyes.

As the disease thus proceeds, the matter in the pustules becomes by degrees more opaque and white, and at length of a yellowish colour. On the eleventh day, the swelling of the face is abated, and the pustules seem quite full. On the top of each a darker spot appears; and at this place the pustule, on the eleventh day, or soon after, is spontaneously broken, and a portion of the matter oozes out; in consequence of which, the pustule is shrivelled, and subsides; while the matter oozing out dries, and forms a crust upon its surface. Sometimes a little only of the matter oozes out; and what remains in the pustule becomes thick, and even hard. After some days, both the crusts and the hardened pustules fall off,

B 3

leaving

leaving the skin which they covered of a brown red colour ; and it is only after many days that the skin in these places resumes its natural colour. In some cases, where the matter of the pustules has been more liquid, the crusts formed by it are later in falling off, and the part they covered suffer some desquamation, which leaves in it a small pit or hollow.

This is the course of things on the face ; and successively, the pustules on the rest of the body take the same. The matter of the pustules, on the arms and hands, is frequently absorbed ; so that, at the height of the disease, these pustules appear as empty vesicles. On the tenth and eleventh days, as the swelling of the face subsides, a swelling arises in the hands and feet ; but which, again, subsides as the pustules come to maturity.

When the pustules on the face are numerous, some degree of pyrexia appears on the tenth and eleventh days, but disappears again after the pustules are fully ripened ; or perhaps remains in a very slight degree till the pustules on the feet have finished their course. It is seldom that in the distinct small pox the fever continues longer.

When the pustules on the face are numerous, some uneasiness in the throat, with a hoarseness of the voice, comes on upon the sixth or seventh day, and a thin liquid is poured out from the mouth. These symptoms increase with the swelling of the face ; and the liquids of the mouth and throat becoming

coming thicker, are more difficultly thrown out. There is, at the same time, some difficulty of swallowing; so that liquids taken in to be swallowed are frequently rejected, or thrown out by the nose. But all these affections of the fauces abate as the swelling of the face subsides.

DXC.

In the other form of small pox, or what is called the Confluent, the course of the disease is, in general, the same with that we have described; but the symptoms of every stage are more violent, and several of the circumstances are different.

In particular, the eruptive fever is more violent; the pulse is more frequent and more contracted, approaching to that state of pulse which is found in the typhus; the coma is more considerable; and there is frequently a delirium. Vomiting, also, is a common symptom, especially at the coming on of the disease. In very young infants, epileptic fits are sometimes frequent on the first days of the disease, and sometimes prove fatal before any eruption appears; or they usher in a very confluent and putrid small pox.

DXCI.

The eruption appears more early on the third day, and it is frequently preceded or accompanied

panied with an erysipelalous efflorescence. Sometimes the eruption appears in clusters, like that of the measles. When the eruption is completed, the pimples are always more numerous upon the face, and at the same time smaller and less eminent. After the eruption, the fever suffers some remission, but never goes off entirely; and, after the fifth or sixth day, it again increases, and continues considerable through the remaining course of the disease.

The vesicles formed on the tops of the pimples appear sooner; and while they increase in breadth, do not retain a circular, but are every way of an irregular figure. Many of them run into one another, insomuch that very often the face is covered rather with one vesicle than with a number of pustules. The vesicles, so far as they are any wise separated, do not arise to a spheroidical form, but remain flat, and sometimes the whole of the face is of an even surface. When the pustules are in any measure separated, their circumference is not bounded by an inflamed margin, and the part of the skin that is free from pustules is commonly pale and flaccid.

The liquor that is in the pustules changes from a clear to an opaque appearance, and becomes whitish or brownish, but never acquires the yellow colour and thick consistence that appear in the distinct small pox.

DXCII.

The swelling of the face which attends the distinct small pox, when they are numerous, and almost then only, always attends the confluent, comes on more early, and arises to a greater degree; but abates on the tenth day, and on the eleventh still more. At this time the pustules or vesicles break, and shrivelling pour out a liquor that is formed into brown or black crusts, which do not fall off for many days after. Those of the face, in falling off, leave the parts they cover subject to a desquamation, which pretty certainly produces pittings.

On the other parts of the body, the pustules of the confluent small pox are more distinct than upon the face, but never acquire the same maturity and consistence of pus as in the properly distinct kind.

The salivation which only sometimes attends the distinct small pox, very constantly attends the confluent; and both the salivation and the affection of the fauces abovementioned are, especially in adults, in a higher degree. In infants, a diarrhœa comes frequently in place of the salivation.

In the confluent small pox, there is often a considerable putrescency of the fluids, as appears from petechiæ, from serous vesicles, under which the skin shows a disposition to gangrene, and from bloody urine or other hem-

orrhagy, all which symptoms frequently accompany this disease.

In the confluent small pox, the fever, which had only suffered a remission from the time of eruption to that of maturation, is often, at or immediately after this period, renewed with considerable violence. This is what has been called the Secondary Fever; and is, in different cases, of various duration and event.

DXCIII.

We have thus endeavoured to describe the various circumstances of the small pox; and from the difference of these circumstances, the event of the disease may be determined. The whole of the prognosis may be nearly comprised in the following propositions.

The more exactly the disease retains the form of the distinct kind, it is the safer; and the more completely the disease takes the form of the confluent kind it is the more dangerous.

It is only when the distinct kind shows a great number of pustules on the face, or otherwise, by fever or putrescency, approaches to the circumstances of the confluent, that it is attended with any danger.

In the confluent small pox there is always danger; and this is always more considerable and certain, according as the fever is more violent and permanent, and especially as the marks and symptoms of putrescency are more evident.

When

When the putrid disposition is very great, the disease sometimes proves fatal before the eighth day; but in most cases it is on the eleventh that death happens, and sometimes it is put off till the fourteenth or seventeenth day.

Though the small pox should not be immediately fatal, the more violent kinds are often followed by a morbid state of the body, of various kind and event. These consequences, as I judge, may be imputed sometimes to an acrid matter produced by the preceding disease, and deposited in different parts; and sometimes to an inflammatory diathesis produced, and determined to particular parts of the body.

DXCIV.

It is, I think agreed among practitioners, that, in the different cases of small pox, the difference chiefly depends upon the appearance of distinct or confluent; and, from the above description of these kinds, it will appear, that they chiefly differ in the period of the eruption, in the number of pustules produced, in the form of the pustules, in the state of the matter contained in them, in the continuance of the fever, and lastly in the danger of the disease.

DXCV.

Upon inquiring into the causes of these differences, we might readily suspect, that they depended upon a difference of the contagion producing the disease. This, however, is not probable; for there are innumerable instances of the contagion, arising from a person labouring under the small pox of the distinct kind, producing the confluent; and on the contrary. Since the practice of inoculation became frequent, we have known the same variolous matter produce in one person the distinct, and in another the confluent small pox. It is therefore highly probable, that the difference of the small pox does not depend upon any difference of the contagion, but upon some difference in the state of the persons to whom it is applied, or in the state of certain circumstances concurring with the application of the contagion.

DXCVI.

To find out wherein the difference in the state of the persons to whom the contagion of the small pox is applied consists, I observe, that the difference between the distinct and confluent small pox consists especially in the number of pustules produced; which, in the distinct, are generally few; in the confluent, always many. If, therefore, we shall be able
to

to discover what, in the state of different persons, can give occasion to more or fewer pustules, we shall probably be able to account for all the other differences of the distinct and confluent small pox.

DXCVII.

It is evident, that the contagion of the small pox is a ferment with respect to the human fluids, and assimilates a great part of them to its own nature; and it is probable, that the quantity thus assimilated, is, in proportion to the bulk of their several bodies, nearly the same in different persons. This quantity passes again out of the body, partly by insensible perspiration, and partly by being deposited in pustules; but if the quantities generated be nearly equal, the quantities passing out of the body by the two ways mentioned are very unequal in different persons; and therefore, if we can explain the causes which determine more to pass by the one way than by the other, we may thereby discover the causes which give occasion to more pustules in one person than in another.

DXCVIII.

The causes which determine more of the variolous matter to pass by perspiration, or to form pustules, are probably certain circumstances of the skin, that determine more or
less

less of the variolous matter to stick in it, or to pass freely through it.

DXCIX.

The circumstance of the skin, which seems to determine the variolous matter to stick in it, is a certain state of inflammation, depending much upon the heat of it : Thus we have many instances of parts of the body, from being more heated, having a greater number of pustules than other parts. In the present practice of inoculation, in which few pustules are produced, much seems to be owing to the care that is taken to keep the skin cool. Parts covered with plasters, especially with those of a stimulant kind, have more pustules than other parts. Further, certain circumstances, such as adult age, and full living, determining to a phlogistic diathesis, seem to produce a greater number of pustules ; while the contrary circumstances have contrary effects.

DC.

It is therefore probable, that an inflammatory state of the whole system, and more particularly of the skin, gives occasion to a greater number of pustules ; and the causes of this may likewise produce most of the other circumstances of the confluent small pox ; such as the period of eruption ; the continuance of the

the fever ; the effusion of a more putrescent matter, and less fit to be converted into pus ; and what arises from thence, the form and other circumstances of the pustules.

DCI.

Having thus attempted to account for the chief difference which occurs in the state of the small pox, we shall now try the truth of our doctrine, by its application to practice.

DCII.

In considering the practice, we view it first, in general, as suited to render the disease more generally benign and safe, and this by the practice of inoculation.

DCIII.

It is not necessary here to describe the operation of inoculating ; and what we name the practice of inoculation, comprehends all the several measures which precede or follow that operation, and are supposed to produce its salutary effects.

These measures are chiefly the following.

1. The choosing for the subject of inoculation persons otherwise free from disease, and not liable, from their age or other circumstances, to any incidental disease.

2. The

2. The choosing a person at the time of life most favourable to a mild disease.

3. The choosing for the practice a season the most conducive to the mildness of the disease.

4. The preparing the person to be inoculated, by abstinence from animal food for some time before inoculation.

5. The preparing the person by courses of mercurial and antimonial medicines.

6. The taking care, at the time of inoculation, to avoid cold, intemperance, fear, or other circumstances which might aggravate the future disease.

7. After these preparations and precautions, the choosing a fit matter to be employed in inoculation, by taking it from a person of a sound constitution, and free from any disease or suspicion of it ; by taking it from a person who has had the small pox of the most benign kind ; and, lastly, by taking the matter from such persons, as soon as it has appeared in the pustules, either in the part inoculated, or on other parts of the body.

8. The introducing, by inoculation, but a small portion of the contagious matter.

9. After inoculation, the continuing the vegetable diet, as well as the employment of mercurial and antimonial medicines ; and, at the same time, frequently employing purgatives.

10. Both before and after inoculation, taking care to avoid external heat, either from the
the

the sun, artificial fires, warm chambers, much clothing, or being much in bed ; and, on the contrary, exposing the person to a free and cool air.

11. Upon the appearance of the eruptive fever, the rendering that moderate by the employment of purgatives ; by the use of cooling and antiseptic acids ; and especially by exposing the person frequently to a cool and even a cold air, at the same time giving freely of cold drink.

12. After the eruption, the continuing the application of cold air, and the use of purgatives, during the course of the disease, till the pustules are fully ripened.

DCIV.

These are the measures proposed and practised in the latest and most improved state of inoculation ; and the advantages obtained by the whole of the practice, or at least by most of the measures abovementioned, are now ascertained by a long experience to amount to this, That, in ninety nine cases of the hundred, inoculation gives a distinct small pox only, and that also very generally of the mildest form ; but it will still be useful, for the proper conduct of inoculation, to consider the importance and utility of the several measures abovementioned, that we may thereby more exactly determine upon what the advantages of inoculation more certainly depend.

DCV.

DCV.

As the common infection may often seize persons labouring under another disease, which may render the small pox more violent, it is obvious that inoculation must have a great advantage, by avoiding such concurrence. But as the avoiding such concurrence may often, in the mean while, leave persons exposed to the common infection, it merits inquiry, whether every diseased state should restrain from the practice of inoculation, or what are the particular diseases that should do so. This is not yet sufficiently ascertained by observation; and we have frequently remarked, that the small pox have often occurred with a diseased state of the body, without being thereby rendered more violent. In particular, we have observed, that a scrophulous habit, or even the presence of scrophula, did not render the small pox more violent; and we have observed also, that several diseases of the skin are equally innocent. I am of opinion, that they are the diseases of the febrile kind, or ailments ready to induce or aggravate a febrile state, that especially give the concurrence which is most dangerous with the small pox. I dare not attempt any general rules; but I am disposed to maintain, that though a person be in a diseased state, if that state be of uncertain nature and effect, and at the same time the small pox be exceedingly rife, so as

to render it extremely difficult to guard against the common infection, it will always be safer to give the small pox by inoculation, than to leave the person to take them by the common infection.

DCVI.

Though inoculation has been practised with safety upon persons of all ages ; yet, from what has actually occurred in the cases of common infection, and from several other considerations, there is reason to conclude, that adults are more liable to a violent disease than persons of younger years. At the same time, it is observed, that children, in the time of their first dentition, are liable, from this irritation, to have the small pox rendered more violent ; and that infants, before the time of dentition, upon receiving the contagion of the small pox, are liable to be affected with epileptic fits, which frequently prove fatal. It is therefore, upon the whole, evident, that though circumstances may admit, and even render inoculation at any age proper ; yet, for the most part, it will be still more advisable to choose persons at an age, after the first dentition is over, and before the time of puberty.

DCVII.

Though inoculation has been practised with safety at every season of the year ; yet,
as

as it is certain that the cold of winter may increase the inflammatory, and the heats of summer increase the putrescent state of the small pox, it is highly probable that inoculation may have some advantage, from avoiding the extremes either of heat or cold.

DCVIII.

Although the original temperament and constitutions of men are not to be readily changed; it is sufficiently certain, that the conditions of the human body may, by various causes, in many respects be occasionally very much changed; and therefore, as the use of animal food may increase both the inflammatory and putrescent state of the human body, so it must render persons, on receiving the contagion of the small pox, less secure against a violent disease; and, therefore, inoculation may derive some advantage from abstinence from animal food for some time before the inoculation is performed; but I am of opinion, that a longer time than that usually prescribed may be often necessary; and I am persuaded, that the Scottish mothers who avoid giving their children animal food till they are past the small pox, render this disease in them of a milder kind.

DCIX.

I cannot deny that mercurial and antimonial medicines may have some effect in determining

mining to a more free perspiration, and therefore may be of some use in preparing a person for the small pox ; but there are many observations which render me doubtful as to their effect. The quantity of both these medicines, particularly of the antimony, commonly employed, is too inconsiderable to produce any effect. It is true, that the mercurials have often been employed more freely ; but even their salutary effects have not been evident, and their mischievous effects have sometimes appeared. I doubt, therefore, upon the whole, if inoculation derives any advantage from these pretended preparatory courses of medicines.

DCX.

As it has been often observed, in the case of almost all contagions, that cold, intemperance, fear, and some other circumstances, concurring with the application of the contagion, have greatly aggravated the future disease, so it must be the same in the case of the small pox ; and it is undoubted, that inoculation must derive a great, and perhaps its principal, advantage, from avoiding the concurrences abovementioned.

DCXI.

It has been commonly supposed, that inoculation has derived some advantage from the
choice

choice of the matter employed in it ; but, from what has been observed in DXCV, it must appear very doubtful if any choice be necessary, or can be of any benefit, in determining the state of the disease.

DCXII.

It has been supposed by some, that inoculation has an advantage, by introducing a small portion only of the contagious matter : But this rests upon an uncertain foundation. It is not known what quantity is introduced by the common infection, and it may be a small quantity only. Although it were larger than that thrown in by inoculation, it is not ascertained that the circumstance of quantity would have any effect. A certain quantity of ferment may be necessary to excite fermentation in a given mass ; but, that quantity given, the fermentation and assimilation are extended to the whole mass ; and we do not find that a greater quantity than is just necessary, either increases the activity of the fermentation, or more certainly secures the assimilation of the whole. In the case of the small pox, a considerable difference in the quantity of contagious matter introduced, has not discovered any effect in modifying the disease.

DCXIII.

DCXIII.

Purging has the effect of diminishing the activity of the sanguiferous system, and of obviating its inflammatory state. It is therefore probable, that the frequent use of cooling purgatives is a practice attending inoculation which may be of considerable advantage; and, probably, it is also useful by diminishing the determination to the skin. It appears to me, that mercurials and antimonials, as they are commonly managed, are useful only as they make a part of the purging course.

DCXIV.

It is probable, that the state of the small pox depends very much upon the state of the eruptive fever, and particularly upon moderating the inflammatory state of the skin; and, therefore, it is probable, that the measures taken for moderating the eruptive fever and inflammatory state of the skin, afford the greatest improvement which has been made in the practice of inoculation. The tendency of purging, and the use of acids, for this purpose, is sufficiently obvious; and upon the same grounds, we should suppose that blood-letting might be useful; but probably this has been omitted, for the same reason that perhaps might have led to the omission of other remedies also; which is, that we have found a
more

more powerful and effectual one in the application of cold air, and the use of cold drink. Whatever doubts or difficulties our theory might present to us on this subject, they may be entirely neglected, as the practice of Indostan had long ago, and the practice of this country has lately, by a large and repeated experience, ascertained the safety and efficacy of this remedy ; and as it may and can be more certainly employed with the practice of inoculation, than it can be in cases of common infection, it must give a singular advantage to the former.

DCXV.

After the eruption, when a few pimples only have appeared on the face, the continuing the application of cold air, and the employment of purgatives, has indeed been the practice of many inoculators ; but, I think, these practices cannot be said to give any peculiar advantages to inoculation ; for when the state of the eruption is determined, when the number of pustules is very small, and the fever has entirely ceased, I hold the safety of the disease to be absolutely ascertained, and the further use of remedies entirely superfluous. In such cases, I judge the use of purgatives to be not only unnecessary, but that they may be often hurtful.

DCXVI.

DCXVI.

I have thus considered the several circumstances and practices accompanying inoculation, and have endeavoured to ascertain the utility and importance of each. Upon the whole, I hope I have sufficiently ascertained the general utility and great advantage of this practice, especially consisting in this, that if certain precautions, preparations, and remedies, are of importance, all of them can be employed with more certainty in the practice of inoculation than in the case of common infection.

It remains now that I should offer some remarks on the conduct of the small pox, as received by infection, or even when, after inoculation, the symptoms shall prove violent. The latter sometimes happens, although every precaution and remedy have been employed. The cause of this is not well known; but it appears to me to be commonly owing to a disposition of the fluids to putrescency. But, however this may be, it will appear, that, not only in the case of common infection, but even in that of inoculation, there may be occasion for studying the conduct of this disease, in all its possible varying circumstances.

DCXVII.

When, from the prevailing of small pox as an epidemic, and more especially when it is

known that a person not formerly affected with the disease has been exposed to the infection, if such person should be seized with the symptoms of fever, there can be little doubt of its being an attack of the small pox; and therefore he is to be treated in every respect as if the disease had been received by inoculation. He is to be freely exposed to a cool air, to be purged, and to have cooling acids given liberally.

DCXVIII.

If these measures moderate the fever, nothing more is necessary: But if the nature of the fever attacking a person be uncertain; or, if, with suspicions of the small pox, the symptoms of the fever be violent; or even if, knowing the disease to be small pox, the measures mentioned DXCVII, shall not moderate the fever sufficiently; it will be proper to let some blood; and this will be more especially proper, if the person be an adult, of a plethoric habit, and accustomed to full living.

DCXIX.

In the same circumstances, we judge it will be always proper to give a vomit, as useful in the commencement of all fevers, and more especially in this, where a determination to
the

the stomach appears from pain and spontaneous vomiting.

DCXX.

It frequently happens, especially in infants, that, during the eruptive fever of the small pox, convulsions occur. Of these, if only one or two fits appear on the evening preceding the eruption, they give a favourable prognostic of a mild disease, and require no remedy; but if they occur more early, and be violent and frequently repeated, they are very dangerous, and require a speedy remedy. For this purpose, bleeding is hardly ever of service; blistering always comes too late; and the only remedy I have found effectual is an opiate given in a large dose.

DCXXI.

These are the remedies necessary during the eruptive fever; and if, upon the eruption, the pimples upon the face be very few and distinct, the disease is no further of any danger, requires no remedies, and the purgatives, which, as has been said before, are by some practitioners continued, prove often hurtful.

But when, upon the eruption, the pimples on the face are very numerous; when they are not distinct; and especially, when upon the fifth day, the fever does not suffer a con-

siderable remission ; the disease will still require a great deal of attention.

DCXXII.

If, after the eruption, the fever shall continue, the avoiding heat, and the continuing to expose the body to a cool air, will still be proper. If the fever be considerable, with a full and hard pulse, in an adult person, a bleeding will be necessary ; and, more certainly, a cooling purgative. It is, however, seldom that a repetition of the bleeding will be proper, as a loss of strength does usually come on very soon ; but the repetition of a purgative, or the frequent use of laxative glysters, is commonly useful.

DCXXIII.

When a loss of strength, with other marks of a putrescent tendency of the fluids appears, it will be necessary to exhibit the Peruvian bark in substance, and in large quantity. In the same case, the free use of acids, and of nitre, is useful ; and it is commonly proper also to give wine very freely.

DCXXIV.

From the fifth day of the disease, onward through the whole course of it, it is proper to give an opiate once or twice a day ; taking
care,

care, at the same time, to obviate costiveness by purgatives or laxative glysters.

DCXXV.

In a violent disease, from the eighth to the eleventh day, it is proper to lay on blisters successively on different parts of the body, and that without regard to the parts being covered with pustules.

DCXXVI.

If, in this disease, the tumour of the fauces be considerable ; the deglutition difficult ; the saliva and mucus viscid, and with difficulty thrown out ; it will be proper to apply blisters to the external fauces, and to employ diligently detergent gargles.

DCXXVII.

During the whole course of the disease, when any considerable fever is present, the frequent exhibition of antimonial medicines, in nauseating doses, has been found useful ; and these, for the most part, sufficiently answer the purpose of purgatives.

DCXXVIII.

The remedies mentioned from DCXXII, to DCXXVI, are those frequently necessary, from the fifth day till the suppuration is finished. But as, after that period, the fever is sometimes continued and increased; or, as sometimes, when, after there has been little or no fever before, a fever now arises, and continues with considerable danger; this is what is called the Secondary Fever, and requires particular treatment.

DCXXIX.

When the secondary fever follows the distinct small pox, and the pulse is full and hard, the case is to be treated as an inflammatory affection, by bleeding and purging. But, if the secondary fever follow the confluent small pox, and be a continuance or exacerbation of the fever which had subsisted before, it is to be considered as of the putrid kind; and in that case, bleeding is improper. Some purging may be necessary; but the remedies to be chiefly depended on, are the Peruvian bark and acids.

When the secondary fever first appears, whether it is after a distinct or a confluent small pox, it will be useful to exhibit an antimonial emetic in nauseating doses, but in such manner as to produce some vomiting.

DCXXX.

DCXXX.

For avoiding the pits which frequently follow the small pox, many different measures have been proposed; but none of them appear to be sufficiently certain.

C H A P. II.

OF THE CHICKEN POX.

DCXXXI.

THIS disease seems to depend upon a specific contagion, and to affect persons but once in their lives. It is hardly ever attended with any danger ; but as it seems frequently to have given occasion to the supposition of a person's having the small pox twice, it is proper to study this disease, and to distinguish it from the genuine small pox.

DCXXXII.

This may be generally done by attending to the following circumstances.

The eruption of the chicken pox comes on with very little fever preceding it, or with fever of no determined duration.

The

The pimples of the chicken pox, more quickly than those of the small pox, are formed into little vesicles or pustules.

The matter in these pustules remains fluid, and never acquires the colour or consistence of the pus which appears in the pustules of the small pox.

The pustules of the chicken pox are always in three or four days from their first appearance, formed into crusts.

See Dr. Heberden in Med. Transact. Vol. I. art. xvii.

C H A P. III.

O F T H E M E A S L E S.

DCXXXIII.

THIS disease also depends upon a specific contagion, and affects persons but once in their lives.

DCXXXIV.

It occurs most frequently in children ; but no age is exempted from it, if the persons have not been subjected to it before.

DCXXXV.

It commonly appears as an epidemic, first in the month of January, and ceases soon after the summer solstice ; but various accidents, introducing the contagion may produce the disease at other times of the year.

DCXXXVI.

DCXXXVI.

The disease always begins with a cold stage, which is soon followed by a hot, with the ordinary symptoms of thirst, heat, anorexia, anxiety, sickness, and vomiting; and these are more or less considerable in different cases. Sometimes from the beginning, the fever is sharp and violent; often, for the first two days, it is obscure and inconsiderable, but always becomes violent before the eruption, which usually happens upon the fourth day.

DCXXXVII.

This eruptive fever, from its commencement, is always attended with hoarseness, with a frequent hoarse dry cough, and frequently with some difficulty of breathing. At the same time, the eye lids are somewhat swelled, the eyes are a little inflamed, and pour out tears; and, together with these symptoms, there is a coryza, and frequent sneezing. For the most part, a constant drowsiness attends the beginning of this disease.

DCXXXVIII.

The eruption, as we have said, commonly appears upon the fourth day; first on the face, and successively on the lower parts of the body. It discovers itself first in small red

points ; but, soon after, a number of these appear in clusters, which do not arise into visible pimples, but by the touch are found to be a little prominent. This is the case on the face ; but on other parts of the body, the prominence, or roughness, is hardly to be perceived. On the face the eruption retains its redness, or has that increased for two days ; but, on the third, the vivid redness is changed to a brownish red ; and, in a day or two more, the eruption entirely disappears, while a mealy desquamation takes place. During the whole time of the eruption, the face is somewhat turgid, but seldom considerably swelled.

DCXXXIX.

Sometimes, after the eruption has appeared, the fever ceases entirely ; but this is seldom the case ; and more commonly the fever continues, or is increased after the eruption, and does not cease till after the desquamation. Even then the fever does not always cease, but continues with various duration and effect.

DCXL.

Though the fever happen to cease upon the eruption's taking place, it is common for the cough to continue till after the desquamation, and sometimes much longer.

In

In all cases, while the fever continues, the cough also continues, generally with an increase of the difficulty of breathing; and both of these symptoms sometimes arise to a degree that denotes a pneumonic affection. This may arise at any period of the disease; but very often it does not come on till after the desquamation of the eruption.

After the same period, also, a diarrhœa frequently comes on, and continues for some time.

DCXLI.

It is common for the measles, even when they have not been of a violent kind, to be succeeded by inflammatory affections, particularly ophthalmia and phthisis.

DCXLII.

If the blood be drawn from a vein during the measles, with the circumstances necessary to favour the separation of the gluten, this always appears separated, and lying on the surface of the crassamentum, as in inflammatory diseases.

DCXLIII.

For the most part the measles, even when violent, are without any putrid tendency; but in some cases such a tendency appears, both
in

in the course of the disease, and especially after the ordinary course of it is finished. See Dr. Watson, in London Med. Observations, Vol. IV. art. xi.

DCXLIV.

From what is delivered (from DCXXXVII, to DCXLII) it will appear, that the measles are distinguished by a catarrhal affection, and by an inflammatory diathesis to a considerable degree; and therefore the danger attending them arises chiefly from the coming on of a pneumonic inflammation.

DCXLV.

From this consideration it will be obvious, that the remedies especially necessary are those which may obviate and diminish the inflammatory diathesis; and therefore, in a particular manner, bloodletting. This remedy may be employed at any time in the course of the disease, or after its ordinary course is finished. It is to be employed more or less according to the urgency of the symptoms of fever, cough, and dyspnoea; and generally may be employed very freely. But, as the symptoms of pneumonic inflammation seldom come on during the eruptive fever; and as this fever is sometimes violent immediately before the eruption, though a sufficiently mild disease be to follow; so bleeding is seldom very necessa-

ry during the eruptive fever, and may often be reserved for the periods of greater danger which are perhaps to ensue.

DCXLVI.

In all cases of measles, where there are no marks of putrescency, and where there is no reason, from the known nature of the epidemic, to apprehend putrescency, bleeding is the remedy to be depended upon ; but assistance may also be obtained from cooling purgatives ; and particularly from blistering on the sides, or between the shoulders.

DCXLVII.

The dry cough may be alleviated by the large use of demulcent pectorals, mucilaginous, oily, or sweet. It may, however, be observed, with respect to these demulcents, that they are not so powerful in involving and correcting the acrimony of the mass of blood as has been imagined ; and that their chief operation is by besmearing the fauces, and thereby defending them from the irritation of acrids, either arising from the lungs or distilling from the head.

DCXLVIII.

For moderating and quieting the cough in this disease, opiates certainly prove the most effectual

effectual means, whenever they can be safely employed. In the measles, in which an inflammatory state prevails in a considerable degree, opiates may be supposed to be inadmissible; and, in those cases in which a high degree of pyrexia and dyspnoea show either the presence, or at least the danger, of pneumonic inflammation, I think that opiates might be very hurtful. In cases, however, in which the dyspnoea is not considerable, and where bleeding, to obviate or abate the inflammatory state, has been duly employed, and where the cough and watchfulness are the urgent symptoms, I think that opiates may be safely exhibited, and with great advantage. I think, further, that, in all the exanthemata, there is an acrimony diffused over the system, which gives a considerable irritation; and, for obviating the effects of this, opiates are useful, and always proper, when no particular contraindication prevails.

DCXLIX.

When the desquamation of the measles is finished, though there should then be no disorder remaining, physicians have thought it necessary to purge the patient several times, with a view to draw off the dregs of this disease, that is, a portion of the morbid matter which is supposed to remain long in the body. I cannot reject this supposition; but, at the same time, cannot believe, that the remains of
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the morbid matter, diffused over the whole mass of blood, can be entirely drawn off by purging ; and it appears to me, that to avoid the consequences of the measles, it is not the drawing off the morbid matter which we need to study, so much as the obviating and removing the inflammatory state of the system which had been induced by the disease. With this last view, indeed, purging may still be a proper remedy ; but bleeding, in proportion to the symptoms of inflammatory disposition, is yet more so.

DCL.

From our late experience of the benefit of cold air in the eruptive fever of the small pox, some physicians have been of opinion, that the practice might be transferred to the measles ; but we have not yet had trials sufficient to ascertain this. There is no doubt that external heat may be very hurtful in the measles, as in most other inflammatory diseases ; and therefore the body ought to be kept in a moderate temperature during the whole course of the measles ; but how far, at any period of the disease, cold air may be applied with safety, we are yet uncertain. Analogy, though so often the resource of physicians, is, in general, fallacious ; and further, though the analogy with the small pox might lead to the application of cold air during the eruptive fever of the measles, the analogy with catarrh
seems

seems to be against the practice. After the eruption had appeared upon the skin, we have had many instances of cold air making it disappear, and thereby producing much disorder in the system; and have also had frequent examples of such disorder being removed by restoring the heat of the body, and thereby again bringing forth the eruption.

C H A P. IV.

O F T H E S C A R L E T F E V E R.

DCL I.

IT may be doubted if the scarlet fever be a disease specifically different from the Cynanche Maligna above described. The latter is almost always attended with a scarlet eruption ; and, in all the instances I have seen of what may be called the Scarlet Fever, the disease, in almost every person affected, has been attended with an ulcerous sore throat.

DCL II.

This view of the matter may create some doubt ; but I am still of opinion, that there is a scarlet fever which is a disease specifically different from the Cynanche Maligna.

Doctor Sydenham has described a scarlet fever, which he had seen prevailing as an epidemic,

idemic, with all the circumstances of the fever and eruption, without its being accompanied with any affection of the throat; at least he does not take notice of any such affection, which such an accurate observer could not fail to have done, if any such symptom, as we have commonly seen making a principal part of the disease, had attended those cases which he had observed. Several other writers have described the scarlet fever in the same manner, and I know physicians who have seen the disease in that form; so that there can be no doubt of there being a scarlet fever not necessarily connected with an ulcerous sore throat, and therefore a disease different from the Cynanche Maligna.

DCLIII.

But, further, although in all the instances of scarlet fever which I have seen, (and in the course of forty years I have seen it six or seven times prevailing as an epidemic in Scotland), the disease, in almost all the persons affected, was attended with an ulcerous sore throat, or was what Sauvages names the Scarlatina Anginosa; and although, in some instances the ulcers of the throat were of a putrid and gangrenous kind, and at the same time the disease in all its symptoms resembled very exactly the cynanche maligna; yet I am still persuaded, that not only the Scarlatina of Sydenham, but that even the Scarlatina Anginosa

fa of Sauvages, is a different disease from the Cynanche Maligna; and I have formed this opinion from the following considerations.

DCLIV.

1st, There is a scarlet fever entirely free from any affection of the throat, which sometimes prevails as an epidemic; and therefore there is a specific contagion producing a scarlet eruption without any determination to the throat.

2dly, The Scarlatina, which, from its matter being generally determined to the throat, may be properly termed Anginosa, has, in many cases of the same epidemic, been without any affection of the throat; and therefore the contagion may be supposed to be more especially determined to produce the eruption only.

3dly, Though in all the epidemics that I could allege to be those of the Scarlatina Anginosa, there have been some cases, which, in the nature of the ulcers, and in other circumstances, exactly resembled the cases of the Cynanche Maligna; yet I have as constantly remarked, that these cases have not been above one or two in a hundred, while the rest have all of them been with ulcers of a benign kind, and with circumstances hereafter to be described, somewhat different from those of the Cynanche Maligna.

4thly, On the other hand, as I have two or three times seen the Cynanche Maligna epidemically

demically prevailing ; so, among the persons affected, I have seen instances of cases as mild as those of the Scarlatina Anginosa usually are ; but here the proportion was reversed ; and these mild cases were not one fifth of the whole, while the rest were of the putrid and malignant kind.

Lastly, It applies to the same purpose to observe, that of the Cynanche Maligna, most of the instances terminate fatally ; while, on the other hand, that is the event of very few of the cases of the Scarlatina Anginosa.

DCLV.

From these considerations, though it may appear that there is some affinity between the Cynanche Maligna and Scarlatina Anginosa, it will still remain probable that the two diseases are specifically different. I have been at some pains to establish this opinion ; for, from all my experience, I find, that those two diseases require a different treatment ; and I therefore now proceed to mention more particularly the circumstances of the Scarlatina Anginosa.

DCLVI.

This disease commonly appears about the beginning of winter, and continues throughout that season. It comes on with some cold shivering, and other symptoms of the fever
which

which usually introduces the other exanthemata. But here there is no cough, nor the other catarrhal symptoms which attend the measles; nor is there that anxiety and vomiting which commonly introduce the confluent small pox, and which more certainly introduce the Cynanche Maligna.

Early in the disease some uneasiness is felt in the throat; and frequently the deglutition is difficult, generally more so than in the Cynanche Maligna. Upon looking into the fauces, a redness and swelling appear, in colour and bulk approaching to the state of these symptoms in the Cynanche Tonsillaris; but in the Scarlatina, there is always more or less of sloughs, which seldom appear in the Cynanche Tonsillaris; and the sloughs are commonly whiter than those in the Cynanche Maligna.

While these appearances are discovered in the fauces, upon the third or fourth day a scarlet eruption appears on the skin, in the same form as described in (CCCXIV.) This eruption is commonly more considerable and universal than in the Cynanche; but it seldom produces a remission of the fever. The eruption for the most part remains till the third or fourth day after its first appearance; but then goes off, ending in a mealy desquamation. At this time the fever usually subsides; and, generally, at the same time, some degree of sweat comes on.

The floughs, on the fauces, which appeared early in the disease, continue for some days ; but then falling off, discover the swelling abated, and an ulcer formed on one or both tonsils showing a laudable pus ; and soon after the fever has subsided, these ulcers heal up entirely. For the most part this disease has much less of coryza attending it than the Cynanche Maligna ; and, when there is a coryza attending the Scarlatina, the matter discharged is less acrid, and has not the fetid smell which it has in the other disease.

In the Scarlatina, when the eruption has entirely disappeared, it frequently happens, that, in a few days after, the whole body is affected with an anasarous swelling ; which, however, in a few days more, gradually subsides.

We have thus described the most common circumstances of the Scarlatina Anginosa ; and have only to add, that, during the time of its being epidemic, and especially upon its first setting in, there are always a few cases in which the circumstances of the disease approach very nearly to those of the Cynanche Maligna ; and it is only in these instances that the disease is attended with any danger.

DCLVII.

With respect to the cure of this disease, when the symptoms of it are nearly the same with those of the Cynanche Maligna, it
requires

requires exactly the same treatment as directed in (CCCXVII.)

DCLVIII.

When the scarlet fever appears without any affection of the throat, the treatment of it is very simple, and is delivered by Dr. Sydenham. An antiphlogistic regimen is commonly all that is requisite; avoiding, on one hand, the application of cold air; and, on the other, any increase of external heat.

DCLIX.

In the ordinary state of the Scarlatina Anginosa, the same treatment is, in most cases, sufficient; but as here the fever is commonly more considerable, and there is likewise an affection of the throat, some remedies may be often necessary.

DCLX.

When there is a pretty high degree of fever, with a full pulse, and a considerable swelling of the tonsils, bleeding is very proper, especially in adults; and it has been frequently practised with advantage; but as, even in the Cynanche Tonsillaris, much bleeding is seldom necessary, (CCCV); so, in the Scarlatina, when the state of the fever and the appearances of the fauces render the na-

ture of the disease ambiguous, bleeding may be omitted ; and, if not altogether avoided, it should at least not be large, and ought not to be repeated.

DCLXI.

Vomiting, and especially nauseating doses of emetics, notwithstanding the inflamed state of the fauces, have been found very useful in this disease. An open belly is proper in every form of this disease ; and when the nauseating doses of emetics operate a little downwards, they are more serviceable.

DCLXII.

In every form of the Scarlatina Anginosa, through the whole course of it, detergent gargles should be employed, and more or less as the quantity of sloughs and the viscid mucus in the fauces may seem to require.

DCLXIII.

Even in the milder states of the Scarlatina Anginosa, it has been common with practitioners to exhibit the Peruvian bark through the whole course of the disease ; but we are assured, by much experience, that in such cases it may be safely omitted, though in cases any ways ambiguous it may not be prudent to neglect this remedy.

DCLXIV.

DCLXIV.

The anafarcous swelling, which frequently follows the Scarlatina Anginosa, seldom requires any remedy ; and, at least, the purgatives so much inculcated, and so commonly exhibited, soon take off the anafarca.

C H A P. V.

O F T H E P L A G U E.

S E C T. I.

Of the PHENOMENA of the PLAGUE.

DCLXV.

THE Plague is a disease which always arises from contagion ; which affects many persons about the same time ; proves fatal to great numbers ; generally produces fever ; and, in most persons, is attended with buboes or carbuncles.

DCLXVI.

These are the circumstances which, taken together, give the character of the disease ;
but

but it is accompanied with many symptoms almost peculiar to itself, that in different persons are greatly diversified in number and degree, and should be particularly studied. I would wish to lay a foundation for this ; but think it unfit for a person who has never seen the disease to attempt its particular history. For this, therefore, I must refer to the authors who have written on the subject ; but allowing those only to be consulted, who have themselves seen and treated the disease in all its different forms.

DCLXVII.

From the accounts of such authors, it appears to me, that the circumstances which particularly distinguish this disease, and especially the more violent and dangerous states of it, are,

1st, The great loss of strength in the animal functions, which often appears early in the disease.

2dly, The stupor, giddiness, and consequent staggering, which resembles drunkenness, or the headach, and various delirium ; which are all of them symptoms denoting a great disorder in the functions of the brain.

3dly, The anxiety, palpitation, syncope, and especially the weakness and irregularity of the pulse, which denote a considerable disturbance in the action of the heart.

4thly, The nausea and vomiting, particularly the vomiting of bile, which shows an accumulation of vitiated bile in the gall bladder and biliary ducts, and from thence derived into the intestines and stomach ; all of which symptoms I suppose to denote a considerable spasm, and loss of tone, in the extreme vessels on the surface of the body.

5thly, The buboes or carbuncles, which denote an acrimony prevailing in the fluids. And,

Lastly, The petechiæ, hemorrhagies, and colliquative diarrhœa, which denote a putrescent tendency prevailing to a great degree in the mass of blood.

DCLXVIII.

From the consideration of all these symptoms, it appears, that the plague is especially distinguished by a specific contagion, often suddenly producing the most considerable symptoms of debility in the nervous system or moving powers, as well as of a general putrescency in the fluids ; and it is from the consideration of these circumstances as the proximate cause, that I think both the prevention and cure of the plague must be directed.

DCLXIX.

If this disease should revisit the northern parts of Europe, it is probable, that, at the
time,

time, there will be no physician then alive, who, at the first appearance of the disease, can be guided by his former experience, but must be instructed by his study of the writers on this subject, and by analogy. It is, therefore, I hope, allowable for me, upon the same grounds, to offer here my opinion with respect to both the prevention and cure of this disease.

This paragraph was written before I had any notice of the plague of Moscow anno 1771; but I think it will still apply to the case of Greatbritain and of many other northern states.

S E C T. II.

Of the PREVENTION of the PLAGUE.

DCLXX.

WITH respect to the prevention: As we are firmly persuaded that the disease never arises in the northern parts of Europe, but in consequence of its being imported from some other country; so the first measure necessary, is the magistrate's taking care to prevent the importation; and this may generally be done by a due attention to bills of health, and to the proper performance of quarantines.

DCLXXI.

With respect to the latter, we are persuaded, that the quarantine of persons may safely be much less than forty days ; and, if this were allowed, the execution of the quarantine would be more exact and certain, as the temptation to break it would be in a great measure removed.

DCLXXII.

With respect to the quarantine of goods ; it cannot be perfect, unless the suspected goods be unpacked and duly ventilated, as well as the other means employed for correcting the infection they may carry ; and, if all this were properly done, it is probable that the time commonly prescribed for the quarantine of goods might also be shortened.

DCLXXIII.

A second measure, in the way of prevention, becomes requisite, when an infection has reached and prevailed in any place, to prevent that infection from spreading into other places. This can be done only by preventing the inhabitants, or the goods, of any infected place, from going out of it, till they have undergone a proper quarantine.

DCLXXIV.

DCLXXIV.

The third measure for prevention, to be employed with great care, is to hinder the infection from spreading among the inhabitants of the place in which it has arisen. The measures necessary for this, are to be directed by the doctrine laid down in LXXXII; and from that doctrine we infer, that all persons who can avoid any near communication with infected persons, or goods, may escape the infection.

DCLXXV.

For avoiding such communication, a great deal may be done by the magistrate; 1. By allowing as many of the inhabitants as are free from the infection, and not necessary to the service of the place, to go out of it. 2. By prohibiting all assemblies, or unnecessary intercourse, of the people. 3. By taking care that necessary communications be performed without contact. 4. By making such arrangements and provisions as may render it easy for the families remaining to shut themselves up in their own houses. 5. By allowing persons to quit houses in which an infection appears, upon condition that they go into lazarettoes. 6. By ventilating and purifying, or destroying at the public expense, all infected goods. Lastly, By avoiding hospi-

tals, and providing separate apartments for infected persons.

The execution of these measures will require great authority, and much vigilance and attention, on the part of the magistrate ; but it is not our province to enter into any detail on this subject of the public police.

DCLXXVI.

The fourth and last part of the business of prevention, respects the conduct of persons necessarily remaining in infected places, especially of those obliged to have some communication with persons infected.

DCLXXVII.

Of those obliged to remain in infected places, but not obliged to have any near communication with the sick, they may be preserved from the contagion by avoiding all near communication with other persons, or their goods ; and, it is probable, that a small distance will answer the purpose, if, at the same time, there be no stream of air to carry the effluvia of persons, or goods, to some distance.

DCLXXVIII.

For those who are necessarily obliged to have a near communication with the sick, it is proper to let them know, that some of the most
powerful

powerful contagions do not operate, but when the bodies of men exposed to the contagion are in certain circumstances which render them more liable to be affected by it, or when certain causes concur to excite the power of it; and therefore, by avoiding these circumstances and causes, they may often escape infection.

DCLXXIX.

The bodies of men are especially liable to be affected by contagions, when they are any ways considerably weakened by want of food, and even by a scanty diet, or one of little nourishment; by intemperance in drinking, which, when the stupor of intoxication is over, leaves the body in a weakened state; by excess in venery; by great fatigue; or by any considerable evacuation.

DCLXXX.

The causes which, concurring with contagion, render it more certainly active, are cold, fear, and full living.

The several means, therefore, of avoiding or guarding against the action of cold (XCIV, to XCVI) are to be carefully studied.

DCLXXXI.

Against fear the mind is to be fortified as well as possible, by inspiring a favourable idea

of the power of preservative means ; by destroying the opinion of the incurable nature of the disease ; by occupying mens' minds with business or labour ; and by avoiding all objects of fear, as funerals, passing bells, and any notice of the death of particular friends.

DCLXXXII.

A full diet of animal food increases the irritability of the body, and favours the operation of contagion ; and indigestion, whether from the quantity or quality of food, has the same effect.

DCLXXXIII.

Besides giving attention to obviate the several circumstances (DCX, DCLXXIX, to DCLXXXII) which favour the operation of contagion, it is probable that some means may be employed for strengthening the bodies of men, and thereby enabling them to resist contagion.

For this purpose, it is probable, that the moderate use of wine, or of spirituous liquors, may have a good effect.

It is probable also, that exercise, when it can be employed, if so moderate as to be neither heating nor fatiguing to the body, may be employed with advantage.

Persons who have tried cold bathing, and commonly feel invigorating effects from it, if they

they are anywise secure against having already received infection, may possibly be enabled to resist it by the use of the cold bath.

It is probable, that some medicines also may be useful in enabling men to resist infection; but amongst these I can hardly admit the numerous alexipharmics formerly proposed; or, at least, very few of them, and those only of tonic power. Amongst these last we reckon the Peruvian bark; and it is perhaps the most effectual. If any thing is to be expected from antiseptics, I think camphire, whether internally or externally employed, is one of the most promising.

Every person is to be indulged in the use of any means of preservation of which he has conceived a good opinion, whether it be a charm or a medicine, if the latter be not directly hurtful.

Whether issues be useful in preserving from, or in moderating the effects of, contagion, I cannot determine from the observations I have yet read.

DCLXXXIV.

As neither the atmosphere in general, nor any considerable portion of it, is tainted or impregnated with the matter of contagions; so the lighting of fires over a great part of the infected city, or other general fumigations in the open air, are of no use for preventing the disease, and may perhaps be hurtful.

DCLXXXV.

DCLXXXV.

It would probably contribute much to check the progress of infection, if the poor were enjoined to make a frequent change of clothing, and were suitably provided for that purpose; and if they were, at the same time, induced to make a frequent ventilation of their houses and furniture.

S E C T. III.

Of the CURE of the PLAGUE.

DCLXXXVI.

IN the cure of the plague, the indications are the same as those of fever in general (CXXVI); but here they are not all equally necessary and important.

DCLXXXVII.

The measures for moderating the violence of reaction, which operate by diminishing the action of the heart and arteries (CXXVIII), have seldom any place here, excepting so far as the antiphlogistic regimen is generally proper. Some physicians, indeed, have recom-
mended

mended bleeding ; and there may occur cafes in which bleeding may be useful ; but, for the moft part, it is unneceffary, and in many cafes it might be very hurtful.

Purging has alfo been recommended ; and, in fome degree, it may be useful in drawing off the bile, or other putrefcent matters frequently present in the inteftines ; but a large evacuation this way may certainly be hurtful.

DCLXXXVIII.

The moderating the violence of reaction, fo far as it can be done by taking off the fpafm of the extreme veffels (CLI), is a meafure of the utmoft neceffity in the cure of the plague ; and the whole of the means (CLII, to CC) fuited to this indication are extremely proper.

DCLXXXIX.

The giving an emetic at the very firft approach of the difeafe, would probably be of great fervice ; and it is likely, that at fome other periods of the difeafe, emetics might be useful, both by evacuating bile abundant in the alimentary canal, and by taking off the fpafm of the extreme veffels.

DCXC.

From fome principles with refpect to fever in general, and with refpect to the plague in particular,

particular, I am of opinion, that, after the exhibition of the first vomit, the body should be disposed to sweat; which ought to be raised to a moderate degree only, but continued for at least twenty four hours, or longer if the patient bear it easily.

DCXCI.

This sweating should be excited and conducted agreeably to the rules laid down in (CLXVIII.) It is to be promoted by the plentiful use of diluents, rendered more grateful by vegetable acids, or more powerful by being impregnated with some portion of neutral salts.

DCXCII.

To support the patient under the continuance of the sweat, a little weak broth, acidulated with juice of lemons, may be given frequently; and sometimes a little wine, if the heat of the body be not considerable.

DCXCIII.

If sudorific medicines are judged to be necessary, opiates are the most effectual and safe; but they should not be combined with aromatics; and probably may be more effectual, if joined with a portion of emetics and of neutral salts.

DCXCIV.

DCXCIV.

If, notwithstanding the use of emetics and sudorifics, the disease should still continue, the cure must depend upon the employment of means for obviating debility and putrescency; and, for this purpose, the various remedies proposed above (from CCI, to CCXXVII), may all be administered, but especially the tonics; and of those the chief are cold drink and the Peruvian bark.

DCXCV.

In the cure of the plague, some attention is due to the management of buboes and carbuncles; but we do not touch this, as it belongs to the province of surgery.

C H A P. VI.

OF ERYSIPELAS, OR ST. ANTHONY'S
FIRE.

DCXCVI.

IN CCLXXIV I mentioned the distinction which I proposed to make between the diseases to be named the Erythema and the Erysipelas; and from thence it will appear, that Erysipelas, as an Erythema following fever, may have its place here.

DCXCVII.

I suppose the Erysipelas to depend on a matter generated within the body, and which, analogous to the other cases of exanthemata, is, in consequence of fever, thrown out upon the surface of the body. I own it may be difficult to apply this to every particular case of erysipelas; but I take the case in which it is generally supposed to apply, that of the ery-
sipelas

ſipelas of the face ; which I ſhall therefore conſider here.

DCXCVIII.

The Eryſipelas of the face comes on with a cold ſhivering, and other ſymptoms of pyrexia. The hot ſtage of this is frequently attended with a confuſion of head, and ſome degree of delirium ; and almoſt always with drowſineſs, or perhaps coma. The pulse is always frequent, and commonly full and hard.

DCXCIX.

When theſe ſymptoms have continued for one, two, or at moſt three days, there appears, on ſome part of the face, a redneſs, ſuch as that deſcribed in (CCLXXV) as the appearance of Erythema. This redneſs, at firſt, is of no great extent ; but gradually ſpreads from the part it firſt occupied to the other parts of the face, commonly till it has affected the whole ; and frequently from the face it ſpreads over the hairy ſcalp, or deſcends on ſome part of the neck. As the redneſs ſpreads, it commonly diſappears, or at leaſt decreases, in the parts it had before occupied. All the parts upon which the redneſs appears are, at the ſame time, affected with ſome ſwelling, which continues for ſome time after the redneſs has abated. The whole face becomes
conſiderably

considerably turgid ; and the eyelids are often so much swelled, as entirely to shut up the eyes.

DCC.

When the redness and swelling have proceeded for some time, there commonly arise, sooner or later, blisters of a larger or smaller size, on several parts of the face. These contain a thin yellowish or almost colourless liquor, which sooner or later runs out. The surface of the skin, in the blistered places, sometimes becomes livid and blackish ; but this livor seldom goes deeper than the surface, or discovers any degree of gangrene affecting the skin. On the parts of the face not affected with blisters, the cuticle suffers, towards the end of the disease, a considerable desquamation.

Sometimes the tumour of the eyelids ends in a suppuration.

DCCI.

The inflammation coming upon the face does not produce any remission of the fever which had before prevailed ; and sometimes the fever increases with the increasing and spreading inflammation.

DCCII.

DCCII.

The inflammation usually continues for eight or ten days ; and for the same time, the fever and symptoms attending it also continue.

DCCIII.

In the progress of the inflammation the delirium and coma attending it sometimes go on increasing, and the patient dies apoplectic on the seventh, ninth, or eleventh day of the disease. In such cases, it has been commonly supposed that the disease is translated from the external to the internal parts. But I have not seen any instance in which it did not appear to me, that the affection of the brain was merely a communication of the external affection, as this continued increasing at the same time with the internal.

DCCIV.

When the fatal event does not take place, the inflammation, after having affected a part, commonly the whole of the face, and perhaps the other external parts of the head, ceases. With the inflammation, the fever also ceases ; and, without any evident crisis, the patient returns to his ordinary state of health.

DCCV.

DCCV.

This disease is not commonly contagious ; but as it may arise from an acrid matter externally applied, so it is possible that the disease may sometimes be communicated from one person to another.

Persons who have once laboured under this disease are liable to returns of it.

DCCVI.

The event of this disease may be foreseen from the state of the symptoms which denote more or less affection of the brain. If neither delirium nor coma come on, the disease is seldom attended with any danger ; but when these symptoms appear early in the disease, and are in a considerable degree, the utmost danger is to be apprehended.

DCCVII.

As this disease often arises in the part, at the same time with the coming on of the pyrexia ; as I have known it, with all its symptoms, arise from an acrimony applied to the part ; as it is commonly attended with a full, and frequently a hard pulse ; as the blood drawn in this disease shows the same crust upon its surface that appears in the phlegmasiæ ; and, lastly, as the swelling of the eyelids, in
this

this disease, frequently ends in a suppuration ; so, from these considerations, it seems doubtful if this disease be properly, in Nosology, separated from the Phlegmasiæ. At any rate, I take the disease I have described to be what physicians have named the Erysipelas Phlegmonodes, and that it partakes a great deal of the nature of the Phlegmasiæ.

DCCVIII.

Upon this conclusion, the Erysipelas of the face is to be cured very much in the same manner as phlegmonic inflammations, by bloodletting, cooling purgatives, and by employing every part of the antiphlogistic regimen ; and our experience has confirmed the fitness of this method of cure.

DCCIX.

The evacuations of bloodletting and purging are to be employed more or less according to the urgency of symptoms, particularly those of the pyrexia, and of those which mark an affection of the brain. As the pyrexia continues, and often increases with the inflammation of the face ; so the evacuations mentioned may be employed at any time in the course of the disease.

DCCX.

DCCX.

In this, as in other diseases of the head, it is proper to put the patient, as often as he can easily bear it, into somewhat of an erect posture.

DCCXI.

As in this disease there is always an external affection, and as in many instances there is no other; so various external applications to the part affected have been proposed; but almost all of them are of doubtful effect. The narcotic, refrigerant, and astringent applications, are suspected of disposing to gangrene; spirituous applications seem to increase the inflammation; and all oily or watery applications seem to occasion its spreading. The application that seems most safe, and which is now most commonly employed, is that of a dry mealy powder frequently sprinkled upon the inflamed parts.

DCCXII.

An Erysipelas Phlegmonodes frequently appears on other parts of the body beside the face; and such other erysipelatous inflammations frequently end in suppuration. These cases are seldom dangerous. At coming on, they are sometimes attended with drowsiness,
and

and even with some delirium ; but this rarely happens ; and these symptoms do not continue after the inflammation is formed. I have never seen an instance of the translation of this inflammation from the limbs to an internal part ; and though these inflammations of the limbs be attended with pyrexia, they seldom require the same evacuations as the erysipelas of the face. At first they are to be treated by dry mealy applications only ; and all humid applications, as fomentations, or poultices, are not to be applied, till, by the continuance of the disease, by the increase of swelling, or by a throbbing felt in the part, it appears that the disease is proceeding to suppuration.

DCCXIII.

We have hitherto considered erysipelas as in a great measure of a Phlegmonic nature ; and, agreeably to that opinion, we have proposed our method of cure. But it is probable, that an erysipelas is sometimes attended with, or is a symptom of, a putrid fever ; and, in such cases, the evacuations proposed above may be improper, and the use of the Peruvian bark may be necessary ; but I cannot be explicit upon this subject, as such putrid cases have not come under my observation.

C H A P. VII.

OF THE MILIARY FEVER.

DCCXIV.

THIS disease is said to have been unknown to the ancients, and that it appeared, for the first time, in Saxony, about the middle of the last century. It is said to have spread from thence into all the other parts of Europe; and, since the period mentioned, to have appeared in many countries in which it had never appeared before.

DCCXV.

From the time of its having been first particularly observed, it has been described and treated of by many different writers; and by all of them, till very lately, has been considered as a peculiar idiopathic disease.

It is said to have been constantly attended with peculiar symptoms. It comes on with a cold stage, which is often considerable. The hot stage which succeeds, is attended with great

great anxiety, and frequent sighing. The heat of the body becomes great, and soon produces profuse sweating; preceded, however, by a sense of pricking, as of pin points, in the skin; and the sweat is of a peculiarly rank and disagreeable odour. The eruption appears sooner or later in different persons, but at no determined period of the disease. It seldom or never appears on the face; but discovers itself first upon the neck and breast, and from thence often spreads over the whole body.

DCCXVI.

The eruption named Miliary is said to be of two kinds; the one named the Red, the other the White Miliary. The former, which in English is strictly named a Rash, is commonly allowed to be a symptomatic affection; and as the latter is the only one that has any pretensions to be considered as an idiopathic disease, it is this alone that I shall more particularly describe and treat of in the present chapter.

DCCXVII.

What then is called the White Miliary eruption, appears at first like the red, in very small red pimples, for the most part distinct, but sometimes clustered together. Their slight prominence is distinguished better by the finger than by the eye. Soon after the

appearance of this eruption, and at least on the second day, a small vesicle appears upon the top of each pimple. At first the vesicle is whey coloured; but soon becomes white, and stands out like a little globule on the top of the pimple. In two or three days, these globules break, or are rubbed off; and are succeeded by small crusts, which soon after fall off in small scales. While one set of pimples takes this course, another set succeeds; so that the disease often continues upon the skin for many days together. Sometimes when one crop of this eruption has disappeared, another, after some interval, is produced. And it has been further observed, that in some persons there is such a tendency to this disease, that they have been affected with it several times in the course of their lives.

DCCXVIII.

This disease is said to affect both sexes, and persons of all ages and constitutions; but it has been observed, at all times, to affect especially, and most frequently, lying in women.

DCCXIX.

This disease is often accompanied with violent symptoms, and has frequently proved fatal. The symptoms attending it, are, however, very various. They are, in one or other instance, all the several symptoms attending febrile

febrile diseases ; but I cannot find that any symptom or concurrence of symptoms are steadily the same in different persons, so as to furnish any specific character to the disease. When the disease is violent, the most common symptoms are phrenitic, comatose, and convulsive affections, which are also symptoms of all fevers treated by a very warm regimen.

DCCXX.

While there is such a variety of symptoms appearing in this disease, it is not to be expected that any one particular method of cure can be proposed ; and accordingly we find, in different writers, different methods and remedies prescribed ; frequent disputes about the most proper ; and those received and practised by some, opposed and rejected by others.

DCCXXI.

I have thus given an account of what I have found delivered by authors who have considered the white miliary fever as an idiopathic disease ; but, now, after having often observed the disease, I must say that I doubt much if it ever be such an idiopathic as has been supposed ; and I suspect that there is much fallacy in what has been written on the subject.

DCCXXII.

It seems to me very improbable, that this should have been really a new disease when it was first considered as such. There appear to me very clear traces of it in authors who wrote long before that period; and though there were not, we know that the descriptions of the ancients were inaccurate and imperfect, particularly with respect to cutaneous affections; whilst we know also very well, that those affections which usually appeared as symptomatic only, were commonly neglected, or confounded together under a general appellation.

DCCXXIII.

The antecedent symptoms of anxiety, sighing, and pricking of the skin, which have been spoken of as peculiar to this disease, are, however, common to many others; and, perhaps, to all those in which sweatings are forced out by a warm regimen.

Of the symptoms said to be concomitant of this eruption, there are none which can be said to be constant and peculiar but that of sweating. This, indeed, always precedes and accompanies the eruption; and, while the military eruption attends many different diseases, it never, however, appears in any of these, but after sweating; and, in persons labouring under

der these diseases, it does not appear, if sweating be avoided. It is therefore probable, that the eruption is the effect of sweating; and that it is the produce of a matter, not before prevailing in the mass of blood, but generated, under particular circumstances, in the skin itself. That it depends upon particular circumstances of the skin, appears further from hence, that the eruption seldom or never appears upon the face, although it affects the whole of the body besides; that it comes upon those places especially which are more closely covered; and that it can be brought out upon particular parts by external applications.

DCCXXIV.

It is to be observed, that this eruptive disease differs from the other exanthemata in many circumstances; in its not being contagious, and therefore never epidemic; that the eruption appears at no determined period of the disease; that the eruption has no determined duration; that successive eruptions frequently appear in the course of the same fever; and that such eruptions frequently recur in the course of the same person's life.

All these circumstances render it extremely probable, that, in the miliary fever, the morbid matter is not a subsisting contagion communicated to the blood, and thence, in consequence of fever and assimilation, thrown out

upon the surface of the body; but a matter occasionally produced in the skin itself, by sweating.

DCCXXV.

This conclusion is further rendered probable from hence, that, while the miliary eruption has no peculiar symptoms, or concurrence of symptoms, belonging to it; yet, upon occasion, it accompanies almost all febrile diseases, whether inflammatory or putrid, if these happen to be attended with sweating; and from thence it may be presumed, that the miliary eruption is a symptomatic affection only, produced in the manner we have said.

DCCXXVI.

But, as this symptomatic affection does not always accompany every instance of sweating, it may be proper to inquire, what are the circumstances which especially determine this eruption to appear? To this, however, I can give no full and proper answer. I cannot say that there is any one circumstance which in all cases gives occasion to this eruption; nor can I say what different causes may, in different cases, give occasion to it. There is only one observation I can offer to the purpose of this inquiry; and it is, that, of the persons sweating under febrile diseases, those are especially liable to the miliary eruption, who

who have been previously weakened by large evacuations, particularly of blood. This will explain why it happens to lying in women more frequently than to any other persons; and to confirm this explanation, I have remarked, that the eruption happened to women not in childbed, but who had been much subjected to a frequent and copious menstruation, and to an almost constant fluor albus. I have also had occasion to observe it happen to men in fevers, after wounds from which they had suffered a great loss of blood.

Further, that this eruption is produced by a certain state of debility, will appear probable, from its often occurring in fevers of the putrid kind, which are always attended with great debility. It is true, that it also sometimes attends inflammatory diseases, when it cannot be accounted for in the same manner; but I believe it will be found to attend especially those inflammatory diseases in which the sweats have been long protracted or frequently repeated, and which have thereby produced a debility, and perhaps a debilitating putrid diathesis.

DCCXXVII.

It appears so clearly to me that this eruption is always a symptomatic and factitious affection, that I am persuaded it may be in most cases prevented merely by avoiding sweats. Spontaneous sweatings, in the beginning of

diseases, are very rarely critical ; all sweatings, not evidently critical, should be prevented ; and the promoting them, by increasing external heat, is commonly very pernicious. Even critical sweats should hardly be encouraged by such means. If, therefore, spontaneous sweats arise, they are to be checked by the coolness of the chamber ; by the lightness and looseness of the bed clothes ; by the persons laying out their hands and arms, and by their taking cold drink ; and, by these precautions, I think I have frequently prevented miliary eruptions, which were otherwise likely to have appeared, particularly in lying in women.

DCCXXVIII.

But it may happen, when these precautions have been neglected, or from other circumstances, that a miliary eruption does actually appear ; and the question will then be put, how the case is to be treated ? It is a question of consequence, because I believe that the matter here generated is often of a virulent kind ; it is frequently the offspring of putrescency ; and, when treated by increasing the external heat of the body, it seems to acquire a virulence which produces those symptoms mentioned in DCCXIX, and proves certainly fatal.

It has been an unhappy opinion with most physicians, that eruptive diseases were ready to be hurt by cold ; and that it was therefore necessary to cover up the body very closely, so

as thereby to increase the external heat. We now know that this is a mistaken opinion; that increasing the external heat of the body is very generally mischievous; and that several eruptions not only admit, but require the application of cold air. We are now persuaded, that the practice which formerly prevailed, in the case of miliary eruptions, of covering up the body close, and both by external means, and internal remedies, encouraging the sweatings which accompany this eruption, was highly pernicious, and commonly fatal. I am therefore of opinion, even when a miliary eruption has appeared, that in all cases where the sweating is not manifestly critical, we should employ all the several means of stopping it that are mentioned above; and I have sometimes had occasion to observe, that even the admission of cool air was safe and useful.

DCCXXIX.

This is, in general, the treatment of miliary eruptions; but, at the same time, the remedies suited to the primary disease are to be employed; and therefore, when the eruption happens to accompany inflammatory affections, and when the fulness and hardness of the pulse or other symptoms show an inflammatory state present, the case is to be treated by bloodletting, purging, and other antiphlogistic remedies.

Upon the other hand, when the miliary eruption attends diseases in which debility and putrescency prevail, it will be proper to avoid all evacuations, and employ tonic and antiseptic remedies, particularly the Peruvian bark, cold drink, and cold air.

I shall conclude this subject with mentioning, that the venerable octogenarian practitioner, de Fischer, when treating of this subject, in laying down the indications of cure, has given this as one of them: 'Excretionis periphericæ non primariam habere rationem.'

C H A P. VIII.

O F T H E R E M A I N I N G E X A N T H E -
M A T A .

U R T I C A R I A , P E M P H I G U S , A N D A P H T H A .

D C C X X X .

TH E Nettle Rash is a name applied to two different diseases. The one is the chronic eruption described by Dr. Heberden in the Medical Transactions, Vol. I. art. xvii. which, as not being a febrile disorder, does not belong to this place. The other is the Urticaria of our Synopsis, which, as taken into every system of Nosology as one of the Exanthemata Febrilia, is properly to be treated of here.

D C C X X X I .

I have never observed this disease as contagious and epidemic; and the few sporadic cases
of

of it which have occurred to me, have seldom taken the regular course described by authors. At the same time, as the accounts of different authors are not very uniform, and hardly consistent, I cannot enter further into the consideration of this subject; and I hope it is not very necessary, as on all hands it is agreed to be a mild disease, and such as seldom requires the use of remedies. It is generally sufficient to observe an antiphlogistic regimen, and to keep the patient in a temperature that is neither hot nor cold.

DCCXXXII.

The Pemphigus, or Vesicular fever, is a rare and uncommon disease, and very few instances of it are recorded in the writings of physicians. As I have never had occasion to see it, it would be improper for me to treat of it; and I do not choose to repeat after others, while the disease has yet been little observed, and its character does not seem to be exactly ascertained. Vid. Acta Helvetica, vol. ii. p. 260. Synops. Nosolog. vol. ii. p. 149.

DCCXXXIII

The Aphtha, or Thrush, is a disease better known; and, as it commonly appears in infants, it is so well understood, as not to need our treating of it here. As an idiopathic disease, affecting adults, I have not seen it in this country;

country ; but it seems to be more frequent in Holland ; and, therefore, for the study of it, I refer to Dr. Boerhaave, and his commentator Van Swieten, whose works are in every body's hands.

DCCXXXIV.

The Petechia has been, by all our Nosologists, enumerated amongst the exanthemata ; but as, according to the opinion of most physicians, it is very justly held to be always a symptomatic affection only, I cannot give it a place here.



B O O K IV.



OF H E M O R R H A G I E S.



C H A P. I.

OF H E M O R R H A G Y I N G E N E R A L.

DCCXXXV.

I N establishing a class or order of diseases, under the title of *Hemorrhagies*, Nosologists have employed the single circumstance of an effusion of red blood, as the character of such a class or order. By this means, they have associated diseases which in their nature are very different ; but, in every methodical distribution, such arbitrary and unnatural associations should be avoided as much as possible. Further, by that management

ment Nosologists have suppressed or lost sight of an established and well founded distinction of hemorrhagies into Active and Passive.

DCCXXXVI.

It is my design to restore this distinction ; and I shall therefore here, under the title of Hemorrhagies, comprehend those only which have been commonly called Active, that is, those attended with some degree of pyrexia ; which seem always to depend upon an increased impetus of the blood in the vessels pouring it out, and which chiefly arise from an internal cause. In this I follow Dr. Hoffman, who joins the active hemorrhagies with the febrile diseases ; and have accordingly established these hemorrhagies as an order in the class of pyrexia. From this order I exclude all those effusions of red blood that are owing entirely to external violence ; and all those which, though arising from internal causes, are, however, not attended with pyrexia, and which seem to be owing to a putrid fluidity of the blood, to the weakness or to the erosion of the vessels, rather than to any increased impetus of the blood in them.

DCCXXXVII.

Before proceeding to treat of those proper hemorrhagies which form an order in our Nosology, I shall treat of active hemorrhagy
in

in general ; and indeed the several genera and species, to be treated of particularly afterwards, have so many circumstances in common with one another, that the general consideration to be now offered will prove both proper and useful.

S E C T. I.

Of the PHENOMENA of HEMORRHAGY.

DCCXXXVIII.

THE phenomena of hemorrhagy are generally the following.

Hemorrhagies happen especially in plethoric habits, and to persons of a sanguine temperament. They appear most commonly in the spring, or in the beginning of summer.

For some time, longer or shorter in different cases, before the blood flows, there are some symptoms of fulness and tension about the parts from whence the blood is to issue. In such parts as fall under our view, there are some redness, swelling, and sense of heat or of itching ; and in the internal parts, from which blood is to flow, there is a sense of weight and heat ; and, in both cases, various pains are often felt in the neighbouring parts.

DCCXXXIX.

DCCXXXIX.

When these symptoms have subsisted for some time, some degree of a cold stage of pyrexia comes on, and a hot stage is formed; during which, the blood flows of a florid colour, in a greater or lesser quantity, and continues to flow for a longer or shorter time; but commonly, after some time, the effusion spontaneously ceases, and together with it the pyrexia also.

DCCXL.

During the hot stage which precedes an hemorrhagy, the pulse is frequent, quick, full, and often hard; but, as the blood flows, the pulse becomes softer and less frequent.

DCCXLI

In hemorrhagies, blood drawn from a vein does, upon its concreting, commonly show the gluten separated, or a crust formed, as in the cases of Phlegmasiæ. •

DCCXLII.

Hemorrhagies, from internal causes, having once happened, are apt, after a certain interval, to return; in some cases very often, and frequently at stated periods.

DCCXLIII.

DCCXLIII.

These are, in general, the phenomena of hemorrhagy ; and if in some cases all of them be not exquisitely marked, or if perhaps some of them do not at all appear, it imports only, that, in different cases, the system is more or less generally affected ; and that, in some cases, there are purely topical hemorrhagies, as there are purely topical inflammations.

S E C T. II.

Of the PROXIMATE CAUSE of HEMORRHAGY.

DCCXLIV.

THE pathology of hemorrhagy seems to be sufficiently obvious. Some inequality in the distribution of the blood, occasions a congestion in particular parts of the sanguiferous system ; that is, a greater quantity of blood is poured into certain vessels than their natural capacity is suited to receive. These vessels become thereby preternaturally distended ; and this distention, proving a stimulus to them, excites their action to a greater degree than usual, which, pushing the blood with un-
usual

usual force into the extremities of these vessels, opens them by anastomosis, or rupture ; and, if these extremities be loosely situated on external surfaces, or on the internal surfaces of certain cavities that open outwardly, a quantity of blood flows out of the body.

DCCXLV.

This reasoning will, in some measure, explain the production of hemorrhagy. But it appears to me, that, in most cases, there are some other circumstances that concur to produce it ; for it is probable, that in consequence of congestion, a sense of resistance arises, and excites the action of the *Vis Medicatrix Naturæ* ; the exertions of which are usually made by the formation of a cold stage of pyrexia, inducing a more vigorous action of the vessels ; and the concurrence of this exertion more effectually opens the extremities, and occasions the flowing out of the blood.

DCCXLVI.

What has been delivered in the two preceding paragraphs, seems to explain the whole phenomena of hemorrhagy, except the circumstance of its frequent recurrence, which I apprehend may be explained in the following manner. The congestion and consequent irritation being taken off by the flowing of the blood ; this, therefore, soon after, spontaneously

ously ceases ; but, at the same time, the internal causes which had before produced the unequal distribution of the blood, commonly remain, and must now operate the more readily, as the overstretched and relaxed vessels of the part will more easily admit of a congestion of blood in them, and, consequently, produce the same series of phenomena as before.

DCCXLVII.

This may sufficiently explain the ordinary return of hemorrhagy ; but there is still another circumstance, which, as commonly concurring, is to be taken notice of ; and that is, the general plethoric state of the system, which renders every cause of unequal distribution of more considerable effect. Though hemorrhagy may often depend upon the state of the vessels of a particular part being favourable to a congestion's being formed in them ; yet, in order to that state's producing its effect, it is necessary that the whole system should be at least in its natural plethoric condition ; and, if this should be in any degree increased beyond what is natural, it will still more certainly determine the effects of topical conformation to take place. The return of hemorrhagy, therefore, will be more certainly occasioned, if the system becomes preternaturally plethoric ; but hemorrhagy has always a tendency to increase the plethoric state

state of the system, and, consequently, to occasion its own return.

DCCXLVIII.

To show that hemorrhagy does contribute to produce or increase the plethoric state of the system, it is only necessary to observe, that the quantity of serous fluids being given, the state of the excretions depends upon a certain balance between the force of the larger arteries propelling the blood, and the resistance of the excretories ; but the force of the arteries depends upon their fulness and distention, chiefly given to them by the quantity of red globules and gluten, which are, for the greatest part, confined to the red arteries ; and therefore, the *spoliation* made by an hemorrhagy, being chiefly of red globules and gluten, the effusion of blood must leave the red arteries more empty and weak. In consequence of the weaker action of the red arteries, the excretions are in proportion diminished ; and, therefore, the ingesta continuing the same, more fluids will be accumulated in the larger vessels. It is by this means that the loss of blood by hemorrhagies, whether artificial or spontaneous, if within certain bounds, is commonly so soon recovered ; but, as the diminution of the excretions, from a less quantity of fluid being impelled into the excretories, gives occasion to these vessels to fall into a contracted state ; so, if this shall continue

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ue long, these vessels will become more rigid, and will not yield to the same impelling force as before. Although the arteries, therefore, by new blood collected in them, shall have recovered their former fulness, tension, and force; yet this force will not be in balance with the resistance of the more rigid excretories, so as to restore the former state of excretion; and, consequently, a further accumulation will take place in the arteries, and an increase of their plethoric state be thereby induced. In this manner, we perceive more clearly, that hemorrhagy, as producing a more plethoric state of the system, has a tendency to occasion its own recurrence with greater violence; and, as the renewal and further accumulation of blood require a determinate time, so, in the several repetitions of hemorrhagy, that time will be nearly the same; and therefore the returns of hemorrhagy will be commonly at stated periods, as has been observed frequently to happen.

DCCXLIX.

I have thus explained the nature of hemorrhagy in general, as depending upon some inequality in the distribution of the blood, occasioning a congestion of it in particular parts of the sanguiferous system. It is indeed probable, that, in most persons, the several parts of the sanguiferous system are in balance with one another; and that the density,

sity, and consequently the resistance, in the several vessels, is in proportion to the quantity of blood which each should receive; from whence it frequently happens, that no inequality in the distribution of the blood takes place in the course of a long life. If, however, we consider that the sanguiferous system is constantly in a plethoric state, that is, that the vessels are constantly distended beyond that size which they would be if free from any distending force, we shall be satisfied that this state may be readily changed. For as, on the one hand, the vessels are elastic, so as to be under a constant tendency to contract upon the withdrawing of any part of the distending force; and, on the other hand, are not so rigid but that, by an increase of the impetus of the blood in them, they may be more than ordinarily distended; so we can easily understand how, in most persons, causes of an increased contraction or distention may arise in one part or other of the system, or that an unequal distribution may take place; and how, in an exquisitely distended or plethoric system, a small inequality in the distribution of the blood may form those congestions which give occasion to hemorrhagy.

DCCL.

In this manner I endeavour to explain how hemorrhagy may be occasioned at any period of life, or in any part of the body; but hem-

orrhagies happen in certain parts more frequently than in others, and at certain periods of life more readily than at others; and therefore, in delivering the general doctrine of hemorrhagy, it may be required that I should explain those circumstances which produce the specialities mentioned; and I shall now attempt it.

DCCLI.

The human body, from being of a small bulk at its first formation, grows afterwards to a considerable size. This increase of bulk consists, in a great measure, in the increase of the quantity of fluids, and a proportional enlargement of the containing vessels. But, at the same time, the quantity of solid matter is also gradually increased; and, in whatever manner we may suppose this to be done, it is probable that the progress, in the whole of the growth of animal bodies, depends upon the extension of the arterial system; and such is the constitution of the sanguiferous system, that the motion of the blood in the arteries has a constant tendency to extend them in every dimension.

DCCLII.

As the state of the animal solid is, at the first formation of the body, very lax and yielding; so the extension of the system proceeds,

ceeds, at first, very fast ; but, as the extension gives occasion to the apposition of more matter to the solid parts, these are, in proportion to their extension, constantly acquiring a greater density, and therefore giving more resistance to their further extension and growth. Accordingly, we observe, that as the growth of the body advances, its increase, in any given time, becomes proportionally less and less, till at length it ceases altogether.

DCCLIII.

This is the general idea of the growth of the human body, till it attain the utmost bulk which it is capable of acquiring ; but it is to be remarked, that this growth does not proceed equally in every part of the body ; it being requisite for the economy of the system, that certain parts should be first evolved, and should also acquire their full bulk sooner than others. This appears particularly with respect to the head ; the parts of which appear to be first evolved, and soonest to acquire their full size.

DCCLIV.

To favour this unequal growth, it is presumed, that the dimensions or the laxity of the vessels of the head, or that the direction of the force of the blood, are adapted to the purpose ; and from what has been said in

DCCLII, it will also certainly follow, that as the vessels of the head grow fastest, and soonest acquire their full size, so they will soonest also acquire that density which will prevent their further extension. While, however, the force of the heart, and the quantity of the fluids, with respect to the whole system, remain the same, the distending and extending powers will be directed to such parts as have not yet acquired the same density and dimensions as those first evolved; and thus the distending and extending powers will proceed to operate till every part of the system, in respect of density and resistance, shall have been brought to be in balance with every other, and till the whole be in balance with the force of the heart, so that there can be no further growth in any particular part, unless some preternatural circumstance shall happen to arise.

DCCLV.

In this process of the growth of the body, as it seems in general to depend upon a certain balance between the force of the heart or distending power, and the resistance of the solids; so it will appear, that, while the solids remain very lax and yielding, some occasional increase of the distending power may arise without producing any very perceptible disorder in the system. But, it will also appear, that, in proportion as the distending power and resistance of the solids come to be more nearly

nearly in exact balance with one another, so any increase of the distending power will more readily produce a rupture of vessels, which do not easily yield to extension.

DCCLVI.

From all this, it must follow, that the effects of any unusually plethoric state of the system, will be different according as this shall occur at different periods of the growth of the body. Accordingly, it is evident, that if the plethoric state arises while the head is yet growing, and while the determination of the blood is still more to the head than to the other parts, the increased quantity of the blood will be especially determined to the head; and as there also, at the same time, the balance between the distending and extending powers is most nearly adjusted, so the determination of the blood will most readily produce in that part a rupture of the vessels, or an hemorrhagy. Hence it is, that hemorrhagies of the nose so frequently happen in young persons; and in these more readily, as they approach nearer to their acmé, or full growth; or, it may be said, perhaps more properly, as they approach nearer to the age of puberty, when perhaps, in both sexes, but especially in the female, a new determination arises in the system.

DCCLVII.

The determination of a greater quantity of blood to the vessels of the head, might be supposed to occasion a rupture of vessels in other parts of the head as well as in the nose; but such a rupture does not commonly happen; because, in the nose, there is, for the purpose of sense, a considerable network of blood vessels expanded on the internal surface of the nostrils, and covered only with thin and weak teguments. From this circumstance it is, that upon any increased impetus of the blood in the vessels of the head, those of the nose are most easily broken; and the effusion from the nose taking place, it not only relieves the other extremities of the external carotid, to which the arteries of the nose chiefly belong, but relieves also, in a great measure, the system of the internal carotid. For, from the internal carotid, certain branches are sent to the nose, are spread out on its internal surface, and probably inosculated with the extremities of the external carotid; so that, whichsoever of the extremities are broken, the *vis derivationis* of Haller will take place; the effusion will relieve the whole sanguiferous system of the head; and the same effusion will also commonly prevent an hemorrhagy happening at the same time in any other part of the body.

DCCLVIII.

DCCLVIII.

From these principles, it will appear why hemorrhagies of the nose, so frequent before the period of puberty, or of the acmé, seldom happen after these periods; and I must observe further, that although they should occur, they would not afford any objection to my doctrine, as such hemorrhagies might be imputed to a peculiar laxity of the vessels of the nose, and perhaps to a habit acquired with respect to these vessels, while the balance of the system might be otherwise duly adjusted.

DCCLIX.

When the process of the growth of the body goes on regularly, and the balance of the system is properly adjusted to the gradual growth of the whole, as well as to the successive growth of the several parts, even a plethoric state does not produce any hemorrhagy, or at least any after that of the nose; but if, while the plethoric state continues, any inequality shall also subsist in any of the parts of the system, congestions, hemorrhagic or inflammatory, may be still readily formed.

DCCLX.

In general, it may be observed, that, when the several parts of the system of the aorta

have attained their full growth, and are duly balanced with one another, if then any considerable degree of plethora remain or arise, the nicety of the balance will be between the systems of the aorta and pulmonary artery, or between the vessels of the lungs and those of all the rest of the body. And although the lesser capacity of the vessels of the lungs is commonly compensated by the greater velocity of the blood in them; yet if this velocity be not always adjusted to the necessary compensation, it is probable that a plethoric state of the whole body will always be especially felt in the lungs; and therefore, that an hemorrhagy, as the effect of a general plethora, may be frequently occasioned in the lungs, even though there be no fault in their conformation.

DCCLXI.

In some cases, perhaps, an hemorrhagy from the lungs, or an hemoptysis, does arise from the general plethoric state of the body; but an hemoptysis more frequently does, and may be expected to happen, from a faulty proportion between the capacity of the lungs and that of the rest of the body.

DCCLXII.

When such a disproportion takes place, it will be evident that an hemoptysis will especially

ially happen about the time that the body is approaching to its acmé ; that is, when the system of the aorta has arrived at its utmost extension and resistance, and when, therefore, the plethoric state of the whole must especially affect the lungs.

DCCLXIII.

Accordingly it has been constantly observed, that the hemoptysis especially occurs about the time of the body's arriving at its acmé ; but I must remark also, that the hemorrhagy may occur sooner or later, according as the balance between the vessels of the lungs, and those of the system of the aorta, happens to be more or less exactly adjusted to one another ; and it may therefore often occur much later than the period mentioned, when that balance, though not quite even, is however not so ill adjusted, but that some other concurring causes are necessary to give it effect.

DCCLXIV.

It was anciently remarked by Hippocrates, and has been confirmed by modern observation, that the hemoptysis generally occurs in persons between the age of fifteen and that of five and thirty ; that it may happen at any time between these two periods ; but that it seldom happens before the former, or after the

latter ; and it may be proper here to inquire into the reason of these two limitations.

DCCLXV.

With respect to the first, the reason of it has been already explained in DCCLXII and DCCLXIII.

With respect to the second limitation, I expect that the reason of it will be understood from the following considerations.

It has been already observed, that the extension and growth of the body require the plethoric state of the arterial system ; and nature has provided for this, partly by the constitution of the blood being such, that a great portion of it is unfit to pass into the exhalants and excretories ; partly by giving a certain density and resistance to the several exhalants and excretories through which the fluids might pass out of the red arteries ; and partly, but especially, by a resistance in the veins to the free passage of the blood into them from the arteries.

DCCLXVI.

With respect to this last and chief circumstance, it appears from the experiments of Sir Clifton Wintringham, in his *Experimental Inquiry*, that the proportional density of the coats of the veins to that of the coats of the arteries, is greater in young than in old animals :

animals: From which it may be presumed, that the resistance to the passage of the blood from the arteries into the veins, is greater in young animals than in old; and, while this resistance continues, the plethoric state of the arteries must be constantly continued and supported. As however the density of the coats of the vessels, consisting chiefly of a cellular texture, is increased by pressure; so, in proportion as the coats of the arteries are more exposed to pressure by distention than those of the veins, the former, in the progress of the growth of the body, must increase much more in density than the latter; and therefore the coats of the arteries, in respect of density and resistance, must come in time, not only to be in balance with those of the veins, but to prevail over them: A fact which is sufficiently proved by the experiments of the above mentioned ingenious author.

By these means, the proportional quantities of blood in the arteries and veins must change in the course of life. In younger animals, the quantity of blood in the arteries must be proportionally greater than in old ones; but, by the increasing density of the arteries, the quantity of blood in them must be continually diminishing, and that in the veins be proportionally increasing, so as at length to be in a proportionally greater quantity than that in the arteries. When this change happens in the proportional quantities of the blood in the arteries and veins, it

must be evident that the plethoric state of the arteries will be in a great measure taken off; and therefore that the arterial hemorrhagy is no longer likely to happen; but that, if a general plethoric state afterwards take place in the system, it must especially appear in the veins.

DCCLXVII.

The change I have mentioned to happen in the state of the arterial and venous systems, is properly supposed to take place in the human body about the age of thirty five; when it is manifest that the vigour of the body, which depends so much upon the fulness and tension of the arterial system, no longer increases; and therefore it is, that the same age is the period, after which the arterial hemorrhagy, hemoptysis, hardly ever appears. It is true there are instances of the hemoptysis happening at a later period; but it is for the reasons given (DCCLVIII), which show that an hemorrhagy may happen at any period of life, from accidental causes forming congestions, independent of the state of the balance of the system at that particular period.

DCCLXVI.

I have said (DCCLXVI), that if after the age of thirty five, a general and preternatural

natural plethoric state occur, it must especially appear in the venous system; and I must now observe, that this venous plethora may also give occasion to hemorrhagy.

DCCLXIX.

If a plethoric state of the venous system take place, it is to be presumed, that it will especially and in the first place affect the system of the vena portarum, in which the motion of the venous blood is more slow than elsewhere; in which the motion of the blood is little assisted by external compression; and in which, from the want of valves in the veins that form the vena portarum, the motion of the blood is little assisted by the compression that is applied; while, from the same want of valves in those veins, the blood is more ready to regurgitate in them. Whether any regurgitation of the blood can produce an action in the veins, and which inverted or directed towards their extremities, can force these, and occasion hemorrhagy, may perhaps be disputed: But it appears to me, that an hemorrhagy, produced by a plethoric state of the veins, may be explained in another and more probable manner. If the blood be accumulated in the veins, from any interruption of its proper course, that accumulation must resist the free passage of the blood from the arteries into the veins. This, again, must produce some congestion in the
extremities

extremities of the red arteries, and therefore some increased action in them, which must be determined with more than usual force, both upon the extremities of the arteries, and upon the exhalants proceeding from them; and this force may occasion an effusion of blood, either by anastomosis or rupture.

DCCLXX.

In this manner I apprehend the hemorrhoidal flux is to be explained, so far as it depends upon the state of the whole system. It appears most commonly to proceed from the extremities of the hemorrhoidal vessels; which being the most dependent and distant branches of those veins that form the vena portarum, are therefore the most readily affected by every accumulation of blood in that system of veins, and consequently by any general plethora in the venous system.

DCCLXXI.

It is here to be observed, that I have spoken of this hemorrhagy as proceeding from the hemorrhoidal vessels only, as indeed it most commonly does; but it will be readily understood, that the same accumulation and resistance to the venous blood may, from various causes, affect many of the extremities of the vena portarum, which lie very superficially upon the internal surface of the alimentary canal,

canal, and give occasion to what has been called the *Morbus Niger* or *Melæna*.

DCCLXXII.

Another part, in which an unufually plethoric state of the veins may have particular effects, and occasion hemorrhagy, is the head. In this, the venous system is of a peculiar conformation, and such as seems intended by nature to give there a slower motion to the venous blood. If, therefore, the plethoric state of the venous system in general, which seems to increase as life advances, should at length increase to a great degree, it may very readily affect the venous vessels of the head, and produce there such a resistance to the arterial blood, as to determine this to be poured out from the nose, or into the cavity of the cranium. The special effect of the latter effusion will be to produce the disease termed Apoplexy; and which, therefore, is properly named by Doctor HOFFMAN, *Hæmorrhagia Cerebri*: And the explanation of its cause, which I have now given, explains well why it happens especially to men of large heads and short necks, and to men in the decline of life, when the powers promoting the motion of the blood are much weakened.

DCCLXXIII.

I have thus attempted to give the history of the plethoric and hemorrhagic states of
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the human body, as they occur at the different periods of life ; and hope I have thereby explained, not only the nature of hemorrhagy in general, but also of the particular hemorrhagies which most commonly appear, and as they occur successively at the different periods of life.

S E C T. III.

Of the REMOTE CAUSES *of* HEMORRHAGY.

DCCLXXIV.

IN the explanation hitherto given, I have especially considered the predisposition to hemorrhagy ; but it is proper also, and even necessary, to take notice of the occasional causes, which not only concur with the predisponent, in exciting hemorrhagy, but may also sometimes be the sole causes of it.

DCCLXXV.

These occasional causes are,

1. External heat, which, by rarefying the blood, produces or increases the plethoric state of the body ; and the same heat, as giving a stimulus to the whole system, must urge any particular determinations before established,

ed, still further, or may urge to excess any inequality, otherwise innocent; so that, in either way, external heat may immediately excite hemorrhagies, to which there was a predisposition; or may form congestions where there were none before, and thereby occasion hemorrhagy.

2. A considerable and sudden diminution of the weight of the atmosphere, which seems to occasion the same effects as heat, by producing also an expansion of the blood.

3. Whatever increases the force of the circulation, and thereby the velocity of the blood, may operate in the same manner as heat, in urging not only previous determinations with violence, but also in urging to excess inequalities, otherwise innocent. All violent exercise, therefore, and especially all violent efforts, which, not only by a larger and longer inspiration, but also, by the simultaneous action of many muscles interrupting the free motion of the blood, impel it with unusual force into the extreme vessels more generally, and, according to the different postures of the body, and mode of the effort, into certain vessels more particularly.

Among the causes increasing the force of the circulation, anger and other violent active passions are to be reckoned.

4. The violent exercise of particular parts of the body. If these are already affected with congestions, or liable to them, such exercise may be considered as a stimulus applied to

to the vessels of that particular part. Thus, any violent exercise of respiration may excite hemoptysis, or occasion its return.

5. The postures of the body increasing determinations, or ligatures occasioning accumulations of the blood in particular parts of the body.

6. A determination into certain vessels rendered habitual by the frequent repetition of hemorrhagy from them.

7. Cold, externally applied, as changing the distribution of the blood, and determining it in greater quantity into the internal parts.

S E C T. IV.

Of the CURE of HEMORRHAGY,

DCCLXXVI.

HAVING thus considered the proximate and remote causes of hemorrhagy in general, our next business is, to treat of the cure of the disease in the same manner.

In entering upon this subject, the first question which presents itself, is, Whether the cure of hemorrhagies ought to be attempted by art, or if they should be left to the conduct of nature?

DCCLXXVII.

DCCLXXVII.

The latter opinion was the favourite doctrine of the celebrated Dr. STAHL, and his followers. They maintained, that the human body is much disposed to a plethoric state; and, consequently, to many disorders which nature endeavours to obviate and relieve by exciting hemorrhagy: That this, therefore, is often necessary to the balance and health of the system: That it is accordingly to be generally encouraged, sometimes solicited, and is not to be suppressed, unless when it goes to great excess, or happens in parts in which it may be dangerous

DCCLXXVIII.

Much of this doctrine may be admitted. The human body, upon many occasions, becomes preternaturally plethoric; and the dangerous consequences which might from thence be apprehended, seem to be obviated by an hemorrhagy taking place: And, further, the necessity of hemorrhagy often appears from hence, that the suppression of it seems to occasion many disorders.

All this seems to be just; but in the conclusion drawn from it there is a fallacy.

DCCLXXIX.

DCCLXXIX.

It appears to me certain, that hemorrhagy, either upon its first attack, or upon its after recurrence, is never necessary to the health of the body, excepting upon the supposition, that the plethoric state which seems to require the evacuation, cannot be otherwise prevented or removed; and as I imagine it possible by other means to prevent or remove a plethoric state, so I do not think that hemorrhagy is, in all cases, necessary. In general, I am of opinion that hemorrhagy is to be avoided,

1. Because it does not always happen in parts where it is safe.

2. Because often, while it does relieve a plethoric state, it may, at the same time, induce a very dangerous disease.

3. Because it may often go to excess, and either endanger life, or induce a dangerous infirmity.

And, lastly, Because it has a tendency to increase the plethoric state it was meant to relieve; to occasion its own recurrence, (DCCXXI); and thereby to induce a habit, which, if left to the precarious and unequal operation of nature, may, from the frequent errors of this, be attended with much danger.

DCCLXXX.

It is further to be considered, that hemorrhagies do not always arise from the necessities
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of the system, but often proceed from incidental causes. It appears to me that all hemorrhagies of the latter kind may be immediately suppressed, and the repetition of them, as it induces a plethora, and a habit not otherwise necessary, may be prevented with great advantage.

DCCLXXXI.

Upon the whole of this subject, I conclude, that every preternatural hemorrhagy, or, in other words, every one except that of the menses in females, is to be avoided, and especially the returns of it prevented; and I therefore now proceed to mention, how hemorrhagy, and its recurrences, may, and should be prevented.

DCCLXXXII.

From the principles delivered above, it will immediately appear, that the prevention, either of the first attacks, or of the returns of hemorrhagy, will chiefly, and in the first place, depend upon the preventing or removing any considerable degree of a plethoric state which may happen to prevail in the body. It is true, that, where the hemorrhagy depends upon the particular conformation of certain parts, rather than upon the general plethoric state of the whole; the measures for removing or preventing the latter, may not
always

always be sufficient for preventing hemorrhagy : But at the same time it must be evident, that determinations in consequence of the conformation of particular parts, will always be urged more or less, in proportion to the greater or lesser degree of the plethoric state of the whole system ; and, therefore, that, even in the cases depending upon particular conformation, the preventing or removing an unusually plethoric state, will always be a chief means of preventing hemorrhagy. It is further to be attended to, that there may be several inequalities in the balance of the system, which may have little or no effect unless when the system becomes preternaturally plethoric ; and therefore, that in cases, the preventing or removing of the plethoric state of the system will be a chief means of preventing the first attacks, or the returns of hemorrhagy. It now, therefore, remains to explain, how the plethoric state of the system is to be prevented or removed.

DCCLXXXIII.

The fluids of the human body are in continual waste by the excretions, but are commonly replaced by the aliments taken in ; and if the quantity of aliments in any measure exceed that of the excretions, an increase of the quantity of the fluids of the body, or, in other words, a plethoric state, must necessarily arise. This, to a certain degree, is requisite for
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the growth of the body : But even then, if the proportion of the aliments to the excretions be greater than is suited to the growth of the body ; and more certainly still, if, after the growth is completed, when an equality between the *ingesta* and the *excreta* should be established, the disproportion still continue, a preternaturally plethoric state must arise. In both cases, it is evident, that the plethora must be prevented or corrected by adjusting the *ingesta* and *excreta* to each other ; which generally may be done, either by diminishing the *ingesta*, or by increasing the *excreta*. The former may be effected by the management of diet, the latter by the management of exercise.

DCCLXXXIV.

The *ingesta* may be diminished, either by giving aliment in less quantity than usual, or by giving aliments of a less nutritious quality ; that is, aliments of a substance, which, under the same bulk and weight, contain less of a matter capable of being converted into animal fluids, and more of a matter ready to pass off by the excretions, and consequently less of a matter to be retained and accumulated in the vessels.

The choice of aliments suited to these purposes, must be left to be directed by the doctrines of the *Materia Medica*.

DCCLXXXV.

DCCLXXXV.

The increafing of the excreta, and thereby diminifhing the plethoric ftate of the fystem is to be obtained by increafing the exercife of the body; and generally for adjusting the balance between the ingefta and excreta, and thereby obviating the plethoric ftate, it is neceffary that exercife, in a due meafure, be very constantly employed.

DCCLXXXVI.

The obferving abftinence, and the employment of exercife, for obviating or removing the plethoric ftate of the body, were formerly confidered pretty fully, when treating of the gout, (DXLVIII) to DLII); fo that the lefs is neceffary to be faid here: And it is now only requifite to obferve, that the fame doubts, as in cafes of the gout, do not occur here with regard to the fafety of thofe meafures, which, in a plethoric ftate of the body difpofing to hemorrhagy, are always admiffible and proper. Here, however, it is to be obferved, that fome choice in the mode of exercife is neceffary, and that it fhould be different according to the particular determinations which may happen to prevail in the fystem. In general, in the cafe of plethora difpofing to hemorrhagy, bodily exercife will always be hazardous, and geftation more commonly fafe.

DCCLXXXVII.

DCCLXXXVII.

Artificial evacuations may be employed to diminish the plethoric state of the body; and when, at any time, it has become considerable, and immediately threatens a disease, these evacuations should be made to the quantity that the symptoms seem to require. But it is constantly to be attended to, that bloodlettings are improperly employed to prevent a plethora, as they have a tendency to increase it (DCCXXI); and as they require to be often repeated, and are thereby apt to induce a habit which may be attended with much danger.

DCCLXXXVIII.

While a plethora, and thereby the predisposition to hemorrhagy, is avoided, or removed, the other measures necessary for preventing the occurrence of this, are those for avoiding the remote causes. These have been enumerated in (DCCLXXV); and the means of avoiding them, so far as within our power, are sufficiently obvious.

DCCLXXXIX.

Having thus mentioned the means of preventing either the first attacks, or the recurrence of hemorrhagy; I must next say how

it is to be managed when it has actually come on.

DCCXC.

When an hemorrhagy has come on which appears to have arisen from a preternaturally plethoric state, or from some change in the balance of the sanguiferous system, no measures are to be immediately taken for suppressing it; as we may expect, that, when the quantity of blood necessary for the relief of the system is poured out, the effusion will spontaneously cease.

DCCXCI.

In many cases, however, it may be suspected, that the quantity of blood poured out, is not exactly in proportion to the necessities of the system, either for relieving a general plethora or a particular congestion, but that it is often to a greater quantity than these require. This we suppose to happen in consequence of an inflammatory diathesis prevailing, and of a febrile spasm being formed; and therefore it is in many cases proper, as well as for the most part safe, to moderate the evacuation; and when it threatens to go to excess, to suppress it altogether.

DCCXCII.

DCCXCII.

An hemorrhagy may be moderated by avoiding any irritation that might concur to increase it; so that every part of the antiphlogistic regimen is to be observed; in particular external heat, both as it rarefies the fluids, and stimulates the solids, is to be carefully avoided: And it is probable, that in all cases an hemorrhagy may be safely moderated by cool air applied, and cold drink exhibited.

DCCXCIII.

A second means for the same purpose, is the use of refrigerant medicines, and particularly of acids and nitre.

DCCXCIV.

A third means which has been frequently employed, is that of bloodletting. The propriety of this practice may be doubtful, as the quantity of blood poured out by the hemorrhagy may be supposed to answer the purpose of an evacuation in any other way; and I am ready to allow, that the practice has been often superfluous, and sometimes hurtful, by making a greater evacuation than was necessary or safe. At the same time, I apprehend it is not for the mere purpose of evacuating, that bloodletting is to be practised in the cure of hemorrhagy; but that it

is further necessary for taking off the inflammatory diathesis which prevails, and the febrile spasm that has been formed. Accordingly, in the case of hemorrhagy, when the pulse is not only frequent but quick and full, and does not become softer or slower upon the flowing of the blood, and that the effusion is profuse, and threatens to continue so, it appears to me, that bloodletting may be necessary, and I have often found it useful. It seems probable also, that the particular circumstances of venesection may render it more powerful for taking off the tension and inflammatory irritation of the system, than any gradual flow from an artery.

DCCXCV.

That a spasm of the extreme vessels has a share in supporting hemorrhagy, appears to me probable from hence, that blistering has been often found useful in moderating and suppressing the disease.

DCCXCVI.

Do emetics and vomiting contribute to the cure of hemorrhagy? See Dr. BRYAN ROBINSON on the Virtues and Power of Medicines.

DCCXCVII.

When an hemorrhagy is very profuse, and seems to endanger life, or even threatens to induce

induce a dangerous infirmity, it is agreed on all hands, that it is to be immediately suppressed by every means in our power; and particularly, that, besides the means above mentioned for moderating the disease, astringents, internal or external where the latter can be applied, are to be employed for suppressing it.

DCCXCVIII.

The internal astringents are either vegetable or fossil.

The vegetable astringents are seldom very powerful in the cure of any hemorrhagies, except those of the alimentary canal.

The fossil astringents are more powerful; but some choice amongst the different kinds may be proper.

The chalybeates, so frequently employed, do not appear to me to be very powerful.

The preparations of lead are certainly more so; but are otherwise of so pernicious a quality, that they should not be employed except in cases of the utmost danger. The *Tinctura Saturnina*, or *Antiphthifica*, as it has been called, appears to be of little efficacy; but whether from the small portion of lead which it contains, or from the state in which the lead is in it, I am uncertain.

The fossil astringent that appears to me the most powerful, and at the same time the most safe, is alum.

DCCXCIX.

External astringents, when they can be applied, are more effectual than the internal. The choice of these is left to the surgeons.

DCCC.

The most powerful of all astringents appears to me to be cold, which may be employed, either by applying cold water to the surface of the body, or by throwing it into the internal parts.

DCCCI.

For suppressing hemorrhagies, many superstitious remedies and charms have been recommended, and pretended to have been employed with success. The seeming success of these, however, has been generally owing to the bystanders' mistaking a spontaneous ceasing of the hemorrhagy for the effect of the remedy. At the same time, I believe, that those remedies may have been sometimes useful, by impressing the mind with horror, awe, or dread.

DCCCII.

Upon occasion of profuse hemorrhagies, opiates have been employed with advantage; and,

and, when the fulness and inflammatory diathesis of the system have been previously taken off by the hemorrhagy itself, or by bloodletting, I think opiates may be employed with safety.

DCCCIII.

For restraining hemorrhagy, ligatures have been applied upon the limbs, in the view of retarding the return of the venous blood from the extremities; but they appear to me to be of uncertain and ambiguous use.

DCCCIV.

In the case of profuse hemorrhagies, no pains are to be taken to prevent a *Deliquium Animi*, or fainting, as the happening of this is often the most certain means of stopping the hemorrhagy.

DCCCIV.

Having thus delivered the general doctrine of hemorrhagy, I proceed to consider the particular cases of it. It may perhaps be remarked, that I have marked fewer of these than are commonly enumerated by the nosologists; but my reasons for differing from these authors, must be left to a nosological discussion, to be entered into elsewhere more properly than here.

C H A P. II.

OF THE EPISTAXIS, OR HEMOR-
RHAGY OF THE NOSE.

DCCCVI.

THE state of the vessels upon the internal surface of the nose being such as already mentioned (DCCLVII), renders an hemorrhagy from that more frequent than from any other part of the body.

DCCCVII.

The blood commonly flows from one nostril only ; and probably because an hemorrhagy from one vessel relieves the congestion in all the neighbouring vessels.

The blood flowing from both nostrils at the same time, shows commonly a more considerable disease.

DCCCVIII.

DCCCVIII.

This hemorrhagy happens to persons of every constitution and temperament, but most frequently to those of a plethoric habit and sanguine temperament. It happens to both sexes, but most frequently to the male.

DCCCIX.

This hemorrhagy may occur at any time of life; but most commonly happens to young persons, owing to the state of the balance of the system peculiar to that age, as mentioned in (DCCCLVI.)

DCCCX.

Although generally it happens to persons before they have arrived at their full growth, and more rarely afterwards; yet sometimes it happens to persons after their acmé, and during the state of manhood: And it must then be imputed to an unusually plethoric state of the system; to an habitual determination of the blood to the vessels of the nose; or to the particular weakness of these.

DCCCXI.

In all these cases the disease may be considered as an hemorrhagy purely arterial, and

depending upon an arterial plethora ; but it sometimes occurs in the decline of life, when probably it depends upon and may be considered as a mark of a venous plethora of the vessels of the head. See DCCCLXXII.

DCCCXII.

This hemorrhagy happens also at any period of life, in certain febrile diseases, which are altogether or partly of an inflammatory nature, and which show a particular determination of the blood to the vessels of the head. These diseases often admit of a solution by this hemorrhagy, when it may be properly termed *critical*.

DCCCXIII.

The disease sometimes comes on without any previous symptoms ; particularly when some external violence has a share in producing it. But when it proceeds entirely from an internal cause, it is commonly preceded by headachs, redness of the eyes, a florid colour of the face, an unusual pulsation in the temples, a sense of fulness about the nose, and an itching of the nostrils. A bound belly, pale urine, coldness of the feet, and cold shivering over the whole body, are also sometimes among the symptoms that precede the disease.

DCCCXIV.

DCCCXIV.

From the weakness of the vessels of the nose, the blood often flows from them without any considerable effort of the whole system, and therefore without any observable febrile disorder; which, however, in many cases, is, in all its circumstances, very discernible.

DCCCXV.

An hemorrhagy of the nose happening to young persons, is, and may generally be, considered as a slight disease of little consequence, and hardly requiring any remedy. But, even in young persons, when it recurs very frequently, and is very copious, it will require particular attention, as it is to be considered as a mark of arterial plethora; and as frequently returning, it may increase the plethoric state; which in a more advanced stage of life, may give the blood a determination to parts from which the hemorrhagy would be more dangerous. All this will more particularly require attention, according as the marks of plethora, and of particular congestion, preceding the hemorrhagy, are more considerable; and as the flowing of the blood is attended with a more considerable degree of febrile disorder.

DCCCXVI.

When the epistaxis happens to persons after their acmé, returning frequently, and flowing copiously, it is always to be considered as a dangerous disease, and as more certainly threatening the consequences mentioned in the last paragraph.

DCCCXVII.

When this hemorrhagy happens in the decline of life, it may be considered as in itself very salutary : But at the same time, it is to be considered as a mark of a very dangerous state of the system ; that is, as a mark of a very strong tendency to a venous plethora in the vessels of the head : And I have accordingly observed it often followed by apoplexy, palsy, or such like diseases.

DCCCXVIII.

When an hemorrhagy from the nose happens in febrile diseases, as mentioned in DCCCXII, and is in pretty large quantity, it may be considered as critical and salutary ; but it is very apt to be profuse, and even in this way dangerous.

It upon some occasions occurs during the eruptive fever of several exanthemata, and is in such cases sometimes salutary ; but, if these exanthemata

exanthemata be accompanied with any putrid tendency, this hemorrhagy, like artificial bloodlettings, may have very bad effects.

DCCCXIX.

Having thus explained the several circumstances of epistaxis, I proceed to consider the management and cure of it. I use the expression of *management*, because it has been usually thought to require no cure, but that nature should be allowed to throw out blood in this way very frequently; and as often as it appears to arise from internal causes, that is, from a state of the system supposed to require such evacuation.

DCCCXX.

I am however of opinion, for the reasons given in DCCLX XIX, that this disease is very seldom to be left to the conduct of nature; and that in all cases it should be moderated by keeping the patient in cool air; by giving cold drink; by keeping the body and head erect; by avoiding any blowing of the nose, speaking, or other irritation: And, when the blood has flowed for some time, without showing any tendency to cease, a profuse bleeding is to be prevented by measures employed to stop it, such as pressing the nostril from which the blood flows, washing the

the face with cold water, or applying this to other parts of the body.

DCCCXXI.

Even in the case of young persons, where the disease is least hazardous, and even in the first attacks, I judge such measures to be proper: But they will be still more proper if the disease frequently recurs without any external violence; if the returns shall happen to persons of a habit disposed to be plethoric; and more particularly, if the marks of a plethoric state appear in the precedent symptoms (DCCCXIII.)

DCCCXXII.

Even in young persons, if the bleeding be very profuse and long continued, and more especially if the pulse become weak and the face pale, I apprehend it will be proper to suppress the hemorrhagy by every means in our power. See DCCXCVII, and following paragraphs.

DCCCXXIII.

Further, in the same case of young persons, when the returns of this hemorrhagy become frequent, and especially with the marks of a plethoric habit, I think it necessary to employ such a regimen as may prevent a plethoric state,

state, (DCCLXXXIII—DCCLXXXVII). At the same time, care should be taken to avoid all circumstances which may determine the blood more fully to the vessels of the head, or prevent its free return from them; and, by keeping an open belly to make some derivation from them.

DCCCXXIV.

In adult persons, liable to frequent returns of the epistaxis, the whole of the measures proposed (DCCCXXIII) are more certainly and freely to be employed. When with the circumstances mentioned in DCCCXXIII, the tendency to a profuse hemorrhagy appears, a bleeding at the arm may be proper, even in young persons; but in the case of adults, it will be still more allowable, and even necessary.

DCCCXXV.

In persons of any age liable to frequent returns of this hemorrhagy, when the measures proposed in DCCCXVII, *et seq.* shall have been neglected, or from peculiar circumstances in the balance of the system, shall have proved ineffectual, and the symptoms threatening hemorrhagy (DCCCXXXVIII) shall appear, it will then be proper, by blood-letting, cooling purgatives, and every part of the antiphlogistic regimen, to prevent the hemorrhagy,

hemorrhagy, or at least to prevent its being profuse when it does happen.

DCCCXXVI.

In the circumstances just now mentioned (DCCCXXV), the measures proposed are proper, and even necessary; but it should at the same time be observed, that these are practised with much less advantage than those pointed out in DCCCXXIV: Because, though those suggested here may prevent the coming on of the hemorrhagy for the present, they certainly, however, dispose to the return of that plethoric state which required their being used; and there can be no proper security against returns of the disease, but by pursuing the means proposed in DCCCXXIII.

DCCCXXVII.

When the hemorrhagy of the nose happens to persons approaching to their full growth, and when its returns have been preceded by the symptoms DCCCXXIII, it may be supposed, that, if the returns can be prevented by the measures proposed in DCCCXXV, these may be safely employed; as the plethoric state induced will be rendered safe, by the change which is soon to take place in the balance of the system. This, however, cannot be admitted; as the evacuations practised upon this plan will have all the

the consequences which, I have already observed, may follow the recurrence of the hemorrhagy itself.

DCCCXXVIII.

When the hemorrhagy of the nose shall be found to make its returns at nearly stated periods, the measures for preventing it (DCCCXXV) may be practised with great certainty; and, upon every repetition of bloodletting, by diminishing the quantity taken away, its tendency to induce a plethora may be in some measure avoided. When indeed, the repetition of evacuations is truly unavoidable, the diminishing them upon every repetition is properly practised: But it is a practice of nice and precarious management, and should by no means be trusted to, so far as to supersede the measures proposed in DCCCXXV, wherever these can be admitted.

DCCCXXIX.

When the hemorrhagy of the nose happens in consequence of a venous plethora in the vessels of the head, as in DCCLXXII, the flowing of the blood pretty largely may be allowed, especially when it happens after the suppression or ceasing of the menstrual or hemorrhoidal flux. But though the flowing of the blood is, on its first occurring, to
be

be allowed, there is nothing more proper than guarding against its returns. This is to be done not only by the measures proposed in DCCLXXXIII, *et seq.* but, as the effects of a plethoric state of the vessels of the head are very uncertain; so, upon any appearance of it, and especially upon any threatening of hemorrhagy, the plethora is to be removed, and the hemorrhagy to be obviated immediately by proper evacuations, as bloodletting, purging, and issues; or by restoring suppressed evacuations, where this can be done.

C H A P. III.

● OF THE HEMOPTYSIS, OR HEMOR-
RHAGY FROM THE LUNGS.

S E C T. I.

Of the PHENOMENA *and* CAUSES *of*
HEMOPTYSIS.

DCCCXXX.

W H E N, after some affection of the breast, blood is thrown out from the mouth, and is brought out with more or less of coughing, there can be no doubt that it comes from the lungs; and this generally ascertains the disease of which I am now to treat. But there are cases in which the source of the blood spit out is uncertain; and therefore some other considerations, to be mentioned

ed hereafter, are often necessary to ascertain the existence of an hemoptysis.

DCCCXXXI.

The blood vessels of the lungs are more numerous than those of any other part of the body of the same bulk. These vessels of the largest size, as they arise from the heart, are more immediately than in any other part subdivided into vessels of the smallest size; and these small vessels spread out near to the internal surfaces of the bronchial cavities, are situated in a loose cellular texture, and covered by a tender membrane only: So that, considering how readily and frequently these vessels are gorged with blood, we may understand why an hemorrhagy from them is, next to that of the nose, the most frequent of any; and particularly, why any violent shock given to the whole body so readily occasions an hemoptysis.

DCCCXXXII.

An hemoptysis may be occasioned by external violence, at any period of life; and I have explained above (DCCLX), why, in adult persons, while the arterial plethora still prevails in the system, that is, from the age of sixteen to that of five and thirty, an hemoptysis

tyfis may at any time be produced, merely by a plethoric state of the lungs.

DCCCXXXIII.

But it has been also observed above, (DCCLXI), that an hemoptysis more frequently arises from a faulty proportion between the capacity of the vessels of the lungs and that of those of the rest of the body. Accordingly it is often a hereditary disease, which implies a peculiar and faulty conformation. And the disease also happens especially to persons who discover the smaller capacity of their lungs, by the narrowness of their chest, and by the prominency of their shoulders; which last is a mark of their having been long liable to a difficult respiration.

DCCCXXXIV.

With these circumstances also the disease happens especially to persons of a sanguine temperament; in whom particularly, the arterial plethora prevails. It happens likewise to persons of a slender delicate make, of which a long neck is a mark; to persons of much sensibility and irritability, and therefore of quick parts, whose bodies are generally of a delicate structure; to persons who have been formerly liable to frequent hemorrhages of the nose; to persons who have suffered a suppression of any hemorrhagy they had formerly

formerly been liable to, the most frequent instance of which is in females who have suffered a suppression of their menstrual flux; and, lastly, to persons who have suffered the amputation of any considerable limb.

DCCCXXXV.

In most of these cases (DCCCXXXIV), the disease happens especially to persons about the time of their coming to their full growth, or soon after it, and this for the reasons fully set forth above.

DCCCXXXVI.

From all that has been said from DCCCXXXI to DCCCXXXV, the predisponent cause of hemoptysis will be sufficiently understood, and the disease may happen from the mere circumstance of the predisponent cause arising to a considerable degree. In the predisposed, however, it is often brought on by the concurrence of various occasional and exciting causes. One of these, and perhaps a frequent one, is external heat; which, even when in no great degree, will bring on the disease in spring, and the beginning of summer, while the heat rarifies the blood more than it relaxes the solids which had been before contracted by the cold of winter. Another exciting cause is a sudden diminution of the weight of the atmosphere,

phere, especially when concurring with any effort in bodily exercise. This effort, too, alone, may often, in the predisposed, be the exciting cause; and more particularly, any violent exercise of respiration. In short, in the predisposed, any degree of external violence also may bring on the disease.

DCCCXXXVII.

Occasioned by one or other of these causes (DCCCXXXVI), the disease comes on with a sense of weight and anxiety in the chest, some uneasiness in breathing, some pain of the breast or other parts of the thorax, and some sense of heat under the sternum; and very often, before the disease appears, a saltish taste is perceived in the mouth.

DCCCXXXVIII.

Immediately before the appearance of blood, a degree of irritation is felt at the top of the larynx. To relieve this, a hawking is made, which brings up a little blood, of a florid colour, and somewhat frothy. The irritation returns; and, in the same manner, more blood of a like kind is brought up, with some noise in the windpipe, as of air passing through a fluid.

DCCCXXXIX.

DCCCXXXIX.

This is commonly the manner in which the hemoptysis begins; but sometimes at the very first the blood comes up by coughing, or at least somewhat of coughing accompanies the hawking just now mentioned.

DCCCXL.

The blood issuing is sometimes at first in very small quantity, and soon disappears altogether: But, in other cases, especially when it repeatedly occurs, it is in greater quantity, and frequently continues to appear at times for several days together. It is sometimes profuse; but rarely in such quantity as either by its excess, or by its sudden suffocation, to prove immediately mortal. It commonly either ceases spontaneously, or is stopped by the remedies employed.

DCCCXLI.

When blood is thrown out from the mouth, it is not always easy to determine from what internal part it proceeds; whether from the internal surface of the mouth itself, from the fauces, or adjoining cavities of the nose, from the stomach, or from the lungs. It is however, very necessary to distinguish the
different

different cafes; and, in moſt inſtances, it may be done by attending to the following conſiderations.

DCCCXLII.

When the blood ſpit out proceeds from ſome part of the internal ſurface of the mouth itſelf, it comes out without any hawking or coughing: And generally, upon inſpection, the particular ſource of it becomes evident.

DCCCXLIII.

When blood proceeds from the fauces, or adjoining cavities of the noſe, it may be brought out by hawking, and ſometimes by coughing, in the manner we have deſcribed in DCCCXXXVII and DCCCXXXIX; ſo that, in this way, a doubt may ariſe concerning its real ſource. A patient often lays hold of theſe circumſtances to pleaſe himſelf with the opinion of its coming from the fauces, and he may be allowed to do ſo: But a phyſician cannot readily be deceived, if he conſider, that a bleeding from the fauces is more rare than one from the lungs; that the former ſeldom happens but to perſons who have been before liable either to an hemorrhagy of the noſe, or to ſome evident cauſe of eroſion; and, in moſt cafes, by looking into the fauces,

ces, the distillation of the blood, if it comes from thence, will be perceived.

DCCCXLIV.

When blood proceeds from the lungs, the manner in which it is brought up will commonly show from whence it comes: But independent of that, there are many circumstances which may occur to point it out, such as the period of life, the habit of body, and other marks of a predisposition (DCCCXXXIII—DCCCXXXV); and, together with these, the occasional causes (DCCCXXXVI) having been immediately before applied.

DCCCXLV.

When vomiting accompanies the throwing out of blood from the mouth, as vomiting and coughing often mutually excite each other; so they may be frequently joined, and render it doubtful, whether the blood thrown out proceeds from the lungs or from the stomach. We may, however, generally decide, by considering, that blood does not so frequently proceed from the stomach as from the lungs: That blood proceeding from the stomach commonly appears in greater quantity, than when it proceeds from the lungs; that the blood proceeding from the lungs is usually of a florid colour, and mixed with a little frothy mucus only; whereas
the

the blood from the stomach is commonly of a darker colour, more grumous, and mixed with the other contents of the stomach: That the coughing or vomiting, according as the one or the other first arises in the cases in which they are afterwards joined, may sometimes point out the source of the blood; and, lastly, that much may be learned from the circumstances and symptoms which have preceded the hemorrhagy.

Those which precede the hemoptysis enumerated in DCCCXXXVII, are most of them evident marks of an affection of the lungs. And, on the other hand, the hœmatemesis, or issuing of blood from the stomach, has also its peculiar symptoms and circumstances preceding it; as, for instance, some morbid affection of this organ, or at least some pain, anxiety, and sense of weight, referred distinctly to the region of the stomach. To all this may be added, that the vomiting of blood happens more frequently to females than to males; and to the former, in consequence of a suppression of their menstrual flux: and, by attending to all these considerations (DCCCXLII—DCCCXLV), the presence of the hemoptysis may commonly be sufficiently ascertained.

S E C T. II.

Of the CURE of HEMOPTYSIS.

DCCCXLVI.

THIS disease is sometimes attended with little danger; as, when it happens to females in consequence of a suppression of the menses; when, without any marks of a predisposition, it arises from external violence; or when, from whatever cause arising, it leaves behind it no cough, dyspnœa, or other affection of the lungs. Even in such cases, however, a danger may arise from too large an wound being made in the vessels of the lungs; from a quantity of red blood being left to stagnate in the cavity of the bronchiæ; and particularly from any determination of the blood being made into the vessels of the lungs, which, by renewing the hemorrhagy, may have dangerous consequences. In every instance therefore of hemoptysis, the effusion is to be moderated by the several means mentioned DCCXCII to DCCXCV.

DCCCXLVII.

DCCCXLVII.

These measures are especially necessary when the hemoptysis arises in consequence of predisposition; and in all cases where there is the appearance of a large effusion, or where the hemorrhagy frequently returns, the effusion is not only to be moderated, but to be entirely stopped, and the returns of it prevented by every means in our power. See DCCXCVII, and following.

DCCCXLVIII.

To stop an hemoptysis, or prevent the returns of it, two medicines have been frequently employed; neither of which I can approve of. These are, chalybeates, and the Peruvian bark. As both of them contribute to increase the phlogistic diathesis of the system, they can hardly be safe in any case of active hemorrhagy, and I have frequently found them hurtful.

DCCCXLIX.

As the hemoptysis, which happens in consequence of predisposition, is always attended with a phlogistic diathesis; and, as the bad consequences of the disease are especially to be apprehended from the continuance of that diathesis; so this is to be industriously taken off by bloodletting, in greater or smaller

er quantity, and more or less frequently repeated, according as the symptoms shall direct. At the same time, cooling purgatives are to be employed, and every part of the antiphlogistic regimen is to be strictly enjoined. The refrigerants may also be administered; taking care, however, that the acids, and more especially the nitre, do not excite coughing.

DCCCL.

From what was observed in DCCXCV, it will appear, that blistering upon the breast or back may be a remedy of hemoptysis, when it is present; and that issues in the same places may be useful in preventing the recurrence of it when it has ceased.

DCCCLI.

The avoiding of motion is generally a proper part of the antiphlogistic regimen; and in the hemoptysis, nothing is more necessary than avoiding bodily exercise: But some kinds of gestation, as sailing, and travelling in an easy carriage on smooth roads, have often proved a remedy.

DCCCLII.

Such is the treatment I can propose for the hemoptysis, considered merely as an hemorrhagy;

rhagy : But when, in spite of all our precautions, it continues to recur, it is often followed by an ulceration of the lungs, and a phthisis pulmonalis. This, therefore, I must now proceed to consider; but, as it arises also from other causes besides the hemoptysis, it must be treated of with a more general view.

C H A P. IV.

OF THE PHTHISIS PULMONALIS, OR
CONSUMPTION OF THE LUNGS.

S E C T. I.

Of the PHENOMENA *and* CAUSES *of the*
PHTHISIS PULMONALIS.

DCCCLIII.

THE Phthisis Pulmonalis I would define to be, An expectoration of pus or purulent matter from the lungs, attended with a hectic fever.

As this is the principal species of phthisis, I shall frequently in this chapter employ the general term of phthisis, though strictly meaning the phthisis pulmonalis.

DCCCLIV.

DCCCLIV.

I have met with some instances of an expectoration of purulent matter, continuing for many years, accompanied with very few symptoms of hectic, and at least without any hectic exquisitely formed: But, in none of these instances, were the persons so entirely free from symptoms of hectic, as to form any exception to the general definition.

DCCCLV.

In every instance of an expectoration of pus, I presume there is an ulceration of the lungs. The late Mr. de Haen is the only author that I know of who has advanced another opinion, and has supposed, that pus may be formed in the blood vessels, and be from thence poured into the bronchiæ. Admitting his fact, I have attempted an explanation of the appearance of pus without ulceration in CCCXLIX: But, after all, I cannot help suspecting the accuracy of his observations; must entirely reject his explanation of them; must however allow, that we still want facts to support the explanation I have offered; and doubt much if it will apply to any case of phthisis. For these reasons I still conclude, agreeably to the faith of all other dissections, and the opinions of all physicians, that the symptoms mentioned in

our definition depend always upon an ulceration formed in the lungs.

DCCCLVI.

It has sometimes happened, that a catarrh was attended with an expectoration of a matter so much resembling pus, that physicians have been often uncertain whether it was mucus or pus, and therefore whether the disease was a catarrh or a phthisis. It is often of consequence to determine these questions; and it appears to me that it may be generally done, with sufficient certainty, from the following considerations, of which each particular is not always singly decisive, but when they are taken together can hardly deceive us.

1. From the colour of the matter; as mucus is naturally transparent, and pus always opaque. When mucus becomes opaque, as it sometimes does, it becomes white, yellow, or greenish; but the last mentioned colour is hardly ever so remarkable in mucus as in pus.

2. From the consistence; as mucus is more viscid and coherent, and pus less so, and may be said to be more friable. When mucus is thrown into water, it is not readily diffused, but remains united in uniform and circular masses: But pus, in the same circumstances, though not readily diffused, does not
remain

remain so uniformly united, and by a little agitation is broken into ragged fragments.

3. From the odour; which is seldom perceived in mucus, but frequently in pus. It has been proposed to try the odour of the matter expectorated, by throwing it upon live coals: But in such a trial both mucus and pus give out a disagreeable smell, and it is not easy to distinguish between them.

4. From the specific gravity compared with water; and, indeed, it is usual for the mucus of the lungs to swim on the surface of water, and for pus to sink in it. But in this we may sometimes be deceived; as pus which has entangled a great deal of air may swim, and mucus that is free from air may sink.

5. From the mixture which is discernible in the matter brought up: For if a yellow or greenish matter appears surrounded with a quantity of transparent or less opaque and less coloured matter, the more strongly coloured matter may be generally considered as pus; as it is not easy to understand how one portion of the mucus of the lungs can be very considerably changed, while the rest of it is very little so, or remains in its ordinary state.

6. From the admixture of certain substances with the matter thrown out from the lungs. To this purpose we are informed by the experiments of the late Mr. Charles Darwin:

a. That the vitriolic acid dissolves both mucus and pus, but most readily the former: That, if water be added to such a solution of

mucus, this is separated, and either swims on the surface, or, divided into flocculi, is suspended in the liquor; whereas, when water is added to a like solution of pus, this falls to the bottom, or by agitation is diffused so as to exhibit an uniformly turbid liquor. b. That a solution of the caustic fixed alkali, after some time, dissolves mucus, and generally pus; and, if water be added to such solutions, the pus is precipitated, but the mucus is not. From such experiments it is supposed, that pus and mucus may be certainly distinguished from each other.

From the expectoration's being attended with a hectic fever. A catarrh, or expectoration of mucus, is often attended with fever; but never, so far as I have observed, with such a fever as I am presently to describe as a hectic. This, in my opinion, is the most certain mark of a purulent state in some part of the body; and if others have thought differently, I am persuaded that it has been owing to this, that, presuming upon the mortal nature of a confirmed or purulent phthisis, they have considered every case in which a recovery happened, as a catarrh only: But, that they may have been mistaken in this, shall be shown hereafter.

DCCCLVII.

Having thus considered the first part of the character of the phthisis pulmonalis as a
mark

mark of an ulceration of the lungs ; and having just now said, that the other part of the character, that is, the hectic fever, is a mark or indication of the same thing ; it is proper now to consider this here, as I had with that view omitted it before (LXXIV).

DCCCLVIII.

A hectic fever has the form of a remittent, which has exacerbations twice every day. The first of these occurs about noon, sometimes a little sooner or later ; and a slight remission of it happens about five afternoon. This last is soon succeeded by another exacerbation, gradually increasing till after midnight : But after two o'clock of the morning, a remission takes place, which becomes more and more considerable as the morning advances. The exacerbations are frequently attended with some degree of cold shivering ; or at least, the patient is exceedingly sensible to any coolness of the air, seeks external heat, and often complains of a sense of cold, when, to the thermometer, his skin is preternaturally warm. Of these exacerbations, that of the evening is always the most considerable.

DCCCLIX.

It has commonly been given as a part of the character of a hectic fever, that an exacerbation

acerbation of it commonly appears after the taking food; and it is true that dinner, which is taken at noon or after it, does seem to occasion some exacerbation. But this must not make us judge the midday exacerbation to be the effect of eating only; for I have often observed it to come on an hour before noon, and often some hours before dinner; which, in this country at present, is not taken till some time after noon. It is indeed to be observed, that in almost every person, the taking food occasions some degree of fever: But I am persuaded this would not appear so considerable in a hectic, were it not that an exacerbation of fever is present from another cause; and accordingly, the taking food in the morning has hardly any sensible effect.

DCCCLX.

I have thus described the general form of hectic fever; but many circumstances attending it are further to be taken notice of.

The fever I have described does not commonly subsist long, till the evening exacerbations become attended with sweatings; which continue to recur, and to prove more and more profuse through the whole course of the disease.

Almost from the first appearance of the hectic, the urine is high coloured, and deposits a copious branny red sediment, which
hardly

hardly ever falls close to the bottom of the vessel.

In the hectic, the appetite for food is generally less impaired than in any other kind of fever.

The thirst is seldom considerable; the mouth is commonly moist; and as the disease advances, the tongue becomes free from all fur, appears very clean; and, in the advanced stages of the disease, the tongue and fauces appear to be somewhat inflamed, and become more or less covered, with aphthæ.

As the disease advances, the red vessels of the adnata of the eye disappear, and the whole of the adnata becomes of a pearly white.

The face is commonly pale; but, during the exacerbations, a florid red, and an almost circumscribed spot, appear on each cheek.

For some time, in the course of a hectic, the belly is bound; but, in the advanced stages of it, a diarrhœa almost always comes on, and continues to recur frequently during the rest of the disease, alternating in some measure with the sweatings mentioned above.

The disease is always attended with a debility, which gradually increases during the course of it.

During the same course an emaciation takes place, and goes to a greater degree than in almost any other case.

The falling off of the hairs, and the adunque form of the nails, are also symptoms of the want of nourishment.

Towards

Towards the end of the disease, the feet are often affected with œdematous swellings.

The exacerbations of the fever are seldom attended with any headach, and scarcely ever with delirium.

The senses and judgment commonly remain entire to the very end of the disease ; and the mind, for the most part, is confident and full of hope.

Some days before death, a delirium comes on, and commonly continues to the end.

DCCCLXI.

The hectic fever now described (DCCCLVIII, DCCCLIX) as accompanying a purulent state of the lungs, is perhaps the case in which it most frequently appears ; but I have never seen it in any case, when there was not evidently, or when I had not ground to suppose, there was a permanent purulency or ulceration in some external or internal part. It was for this reason that in LXXIV, I concluded it to be a symptomatic fever only. Indeed, it appears to me to be always the effect of an acrimony absorbed from abscesses or ulcers, although it is not equally the effect of every sort of acrimony ; for the scorbutic and cancerous kinds often subsist long in the body without producing a hectic. What is the precise state of the acrimony producing this, I cannot determine, but
it

it seems to be chiefly that of a vitiated purulency.

DCCCLXII.

However this may be, it appears, that the hectic's depending in general upon an acrimony, explains its peculiar circumstances. The febrile state seems to be chiefly an exacerbation of that frequency of the pulse, which occurs twice every day to persons in health, and may be produced by acrimony alone. These exacerbations, indeed, do not happen without the proper circumstances of pyrexia ; but the spasm of the extreme vessels in a hectic does not seem to be so considerable as in other fevers ; and hence the state of sweat and urine which appears so early and so constantly in hectic. Upon the same supposition of an acrimony corrupting the fluids, and debilitating the moving powers, I think that most of the other symptoms may also be explained.

DCCCLXIII.

Having thus considered the characteristical symptoms and chief part of the proximate cause of the phthisis pulmonalis, I proceed to observe, that an ulcer of the lungs, and its concomitant circumstance of hectic fever, may arise from different previous affections of the lungs ; all of which however may, in my opinion, be referred to five heads ; that is,

1. To

1. To an hemoptysis ; 2. To a suppuration of the lungs in consequence of pneumonia ; 3. To catarrh ; 4. To asthma ; or, 5. To a tubercle. These several affections, as causes of ulcers, shall now be considered in the order mentioned.

DCCCLXIV.

It has been commonly supposed, that an hemoptysis was naturally, and almost necessarily, followed by an ulcer of the lungs. But I will presume to say, that, in general, this is a mistake ; for there have been many instances of hemoptysis occasioned by external violence, without being followed by any ulcer of the lungs ; and there have also been many instances of hemoptysis from an internal cause, without any consequent ulceration. And this too has been the case, not only when the hemoptysis happened to young persons, and recurred for several times, but when it has often recurred during the course of a long life. It is indeed easy to conceive, that a rupture of the vessels of the lungs, like that of the vessels of the nose, may be often healed, as the surgeons speak, by the first intention. It is probable therefore, that it is an hemoptysis in particular circumstances only, which is necessarily followed by an ulcer ; but what these circumstances are, it is difficult to determine. It is possible, that merely the degree of rupture, or frequently repeated rupture

ture preventing the wound from healing by the first intention, may occasion an ulcer ; or it is possible that red blood effused, and not brought up entirely by coughing, may, by stagnating in the bronchiæ, become acrid, and erode the parts. These however are but suppositions, not supported by any clear evidence. And, if we consider that those cases of hemoptysis which follow the predisposition (DCCCXXXII—DCCCXXXV) are those especially which end in phthisis, we shall be led to suspect that there are some other circumstances which concur here to determine the consequence of hemoptysis, as I shall hereafter endeavour to show.

DCCCLXV.

Any supposition, however, which we can make with respect to the innocence of an hemoptysis, must not supersede the measures proposed above for its cure ; both because we cannot certainly foresee what may be the consequences of such an accident, and because the measures above suggested are safe ; for, upon every supposition, it is a diathesis phlogistica that may urge on every bad consequence to be apprehended.

DCCCLXVI.

The second cause of an ulceration of the lungs, to be considered, is a suppuration formed in consequence of pneumonia.

DCCCLXVII.

DCCCLXVII.

From the symptoms mentioned in DCCCLVIII, DCCCLIX, it may with reason be concluded, that an abscess, or, as it is called, a *vomica*, is formed in some part of the pleura, and most frequently in that portion of it investing the lungs. Here purulent matter frequently remains for some time, as if inclosed in a cyst; but commonly it is not long before it comes to be either absorbed, and transferred to some other part of the body; or that it breaks through into the cavity of the lungs, or into that of the thorax. In the latter case, it produces the disease called *empyema*; but it is only when the matter is poured into the cavity of the bronchiæ, that it properly constitutes the phthisis pulmonalis. In the case of empyema, the chief circumstances of a phthisis are indeed also present; but I shall here consider that case only in which the abscess of the lungs gives occasion to a purulent expectoration.

DCCCLXVIII.

An abscess of the lungs, in consequence of pneumonia, is not always followed by a phthisis: For sometimes a hectic fever is not formed; the matter poured into the bronchiæ is a proper and benign pus, which is frequently coughed up very readily, and spit out;
and,

and, though this purulent expectoration should continue for some time, yet if a hectic does not come on, the ulcer soon heals, and every morbid symptom disappears. This has happened so frequently, that we may conclude, that neither the access of the air, nor the constant motion of the lungs, will prevent an ulcer of these parts from healing, if the matter of it be well conditioned. An abscess of the lungs, therefore, does not necessarily produce the phthisis pulmonalis ; and if it be followed by such a disease, it must be in consequence of particular circumstances which corrupt the purulent matter produced, render it unsuitable to the healing of the ulcer, and at the same time make it afford an acrimony, which, being absorbed, produces a hectic and its consequences.

DCCCLXIX.

The corruption of the matter of such abscesses may be owing to several causes ; as, 1. That the matter effused during the inflammation, had not been a pure serum fit to be converted into a laudable pus, but had been united with other matters which prevented that, and gave a considerable acrimony to the whole : Or, 2. That the matter effused, and converted into pus, either merely by a long stagnation in a vomica, or by its connexion with an empyema, had been so corrupted as to become unfit for the purpose of
pus,

pus, in the healing of the ulcer. These seem to be possible causes of the corruption of matter in abscesses, so as to make it the occasion of a phthisis in persons otherwise sound ; but it is probable that a pneumonic abscess does especially produce phthisis when it happens to persons previously disposed to that disease, and therefore only as it concurs with some other causes of it.

DCCCLXX.

The third cause supposed to produce phthisis, is a catarrh ; which in many cases seems, in length of time, to have the expectoration of mucus proper to it, gradually changed into an expectoration of pus ; and at the same time, by the addition of a hectic fever, the disease, which was at first a pure catarrh, is converted into a phthisis. This supposition, however, is not easily to be admitted. The catarrh is properly an affection of the mucous glands of the trachea and bronchiæ, analogous to the coryza, and less violent kinds of cynanche tonsillaris, which very seldom terminate in suppuration. And although a catarrh should be disposed to such termination, yet the ulcer produced might readily heal up, as it does in the case of a cynanche tonsillaris ; and therefore should not produce a phthisis.

DCCCLXXI.

Further, the catarrh, as purely the effect of cold, is generally a mild disease, as well as of short duration ; and of the numerous instances of it, there are at most but very few cases which can be said to have ended in phthisis. In all those cases in which this seems to have happened, it is to me probable that the persons affected were peculiarly predisposed to phthisis. And the beginning of phthisis so often resembles a catarrh, that the former may have been mistaken for the latter. Besides, to increase the fallacy, it often happens that the application of cold, which is the most frequent cause of catarrh, is also frequently the exciting cause of the cough which proves the beginning of phthisis.

DCCCLXXII.

It is to me, therefore, probable, that a catarrh is very seldom the foundation of phthisis ; but I would not positively assert that it never is so ; for it is possible that the cases of a more violent catarrh may have joined with them a pneumonic affection, which may end in a suppuration ; or it may happen that a long continued catarrh, by the violent agitation of the lungs in coughing, will produce some of those tubercles which
are

are presently to be mentioned as the most frequent cause of phthisis.

DCCCLXXIII.

It must be particularly observed here, that nothing said in DCCCLXXII, should allow us to neglect any appearance of catarrh, as is too frequently done ; for it may be either the beginning of a phthisis, which is mistaken for a genuine catarrh ; or that even as a catarrh continuing long, it may produce a phthisis, as in DCCCLXXII.

DCCCLXXIV.

Many physicians have supposed an acrimony of the fluids eroding some of the vessels of the lungs, to be a frequent cause of ulceration and phthisis. But this appears to me to be a mere supposition ; for in any of the instances of the production of phthisis which I have seen, there was no evidence of any acrimony of the blood capable of eroding the vessels. It is true, indeed, that in many cases an acrimony subsisting in some part of the fluids, is the cause of the disease ; but it is at the same time probable, that this acrimony operates by producing tubercles, rather than by any direct erosion.

DCCCLXXV.

DCCCLXXV.

It has been mentioned in DCCCLXIII, that an asthma may be considered as one of the causes of phthisis; and by asthma I mean, that species of it which has been commonly named the Spasmodic. This disease frequently subsists very long without producing any other, and may have its own peculiar fatal termination, as shall be explained hereafter. But I have seen it frequently end in phthisis; and in such cases I suppose it to operate in the manner above alleged of catarrh; that is, by producing tubercles, and their consequences, which shall be presently mentioned.

DCCCLXXVI.

I come now to consider the fifth head of the cause of phthisis, and which I apprehend to be the most frequent of any. This I have said, in general, to be tubercles; by which term are meant, certain small tumours, which have the appearance of indurated glands. Dissections have frequently shown such tubercles formed in the lungs; and although at first indolent, yet at length they become inflamed, and are thereby changed into little abscesses, or vomicæ; which breaking, and pouring their matter into the bronchiæ, give a purulent expectoration, and thus lay the foundation of phthisis.

DCCCLXXVII.

Though the matter expectorated upon these occasions has the appearance of pus, it is seldom that of a laudable kind ; and, as the ulcers do not readily heal, but are attended with a hectic fever, for the most part ending fatally, I presume that the matter of the ulcers is imbued with a peculiarly noxious acrimony, which prevents their healing, and produces a phthisis in all its circumstances, as mentioned above.

DCCCLXXVIII.

It is very probable that the acrimony which thus discovers itself in the ulcers, existed before and produced the tubercles themselves ; and it is to this acrimony that we must trace up the cause of the phthisis following these tubercles. This acrimony is probably, in different cases, of different kinds ; and it will not be easy to determine its varieties : But to a certain length I shall attempt it.

DCCCLXXIX.

In one case, and that, too, a very frequent one, of phthisis, it appears, that the noxious acrimony is of the same kind with that which prevails in the scrophula. This may be concluded from observing, that a phthisis, at its usual

usual periods, frequently attacks persons born of scrophulous parents ; that is, of parents who had been affected with scrophula in their younger years : That very often, when the phthisis appears, there occur at the same time some lymphatic tumours in the external parts ; and very often I have found the tabes mesenterica, which is a scrophulous affection, joined with the phthisis pulmonalis. To all this I would add, that, even when no scrophulous affection has either manifestly preceded or accompanied a phthisis, this last, however, most commonly affects persons of a habit resembling the scrophulous ; that is, persons of a sanguine, or of a sanguineo melancholic temperament, who have very fine skins, rosy complexions, large veins, soft flesh, and thick upper lip : And further, that in such persons the phthisis comes on in the same manner that it does in persons having tubercles, as shall be immediately explained.

DCCCLXXX.

Another species of acrimony producing tubercles of the lungs, and thereby phthisis may be said to be the exanthematic. It is well known, that the small pox sometimes, and more frequently the measles, lay the foundation of phthisis. It is probable also, that other exanthemata have the same effect ; and from the phenomena of the disease, and the dissections of persons who have died of it, it is

probable, that all the exanthemata may occasion a phthisis, by affording a matter which in the first place produces tubercles.

DCCCLXXXI.

Another acrimony, which seems sometimes to produce phthisis, is the siphylitic: But whether such an acrimony produces phthisis in any other persons than the previously disposed, does not appear to me certain.

DCCCLXXXII.

What other species of acrimony, such as from scurvy, from pus absorbed from other parts of the body, from suppressed eruptions, or from other sources, may also produce tubercles and phthisis, I cannot now decide, but must leave to be determined by those who have had experience of such cases.

DCCCLXXXIII.

There is one peculiar case of phthisis, which from my own experience I can take notice of. This is the case of phthisis from a calcareous matter formed in the lungs, and coughed up, frequently with a little blood, sometimes with mucus only, and sometimes with pus. How this matter is generated, or in what precise part of the lungs it is seated, I acknowledge myself ignorant. In three cases
of

of this kind which have occurred to me, there was at the same time no appearance of stony or earthy concretions in any other part of the body. In one of these cases, an exquisitely formed phthisis came on, and proved mortal : While in the other two, the symptoms of phthisis were never fully formed ; and after some time, merely by a milk diet and avoiding irritation, the patients entirely recovered.

DCCCLXXXIV.

Another foundation for phthisis, analogous, as I judge, to that of tubercles, is that which occurs to certain artificers whose employments keep them almost constantly exposed to dust ; such as stonecutters, millers, flaxdressers, and some others. I have not observed in this country many instances of phthisis which could be referred to this cause ; but, from RAMAZZINI, MORGAGNI, and some other writers, we must conclude such cases to be more frequent in the southern parts of Europe.

DCCCLXXXV.

Besides these now mentioned, there are probably some other causes producing tubercles, which have not yet been ascertained by observation ; and it is likely, that in the state of tubercles there is a variety not yet accounted for : But all this must be left to future observation and inquiry.

DCCCLXXXVI.

It has been frequently supposed by physicians, that the phthisis is a contagious disease; and I dare not assert that it never is such: But in many hundred instances of the disease which I have seen, there has been hardly one which to me could appear to have arisen from contagion. It is possible, that in warmer climates the effects of contagion may be more discernible.

After having said that a phthisis arises from tubercles more frequently than from any other cause; and after having attempted to assign the variety of these, I now proceed to mention the peculiar circumstances and symptoms which usually accompany the coming on of the disease from tubercles.

DCCCLXXXVII.

A tuberculous and purulent state of the lungs has been observed in very young children, and in some others at several different periods before the age of puberty and full growth; but instances of this kind are rare; and the attack of phthisis, which we have reason to impute to tubercles, usually happens at the same period which I have assigned for the coming on of the hemoptysis.

DCCCLXXXVIII.

DCCCLXXXVIII.

The phthisis from tubercles does also generally affect the same habits as the hemoptysis ; that is, persons of a slender make, of long necks, narrow chests, and prominent shoulders : But very frequently the persons liable to tubercles, have less of the florid countenance, and of the other marks of an exquisitely sanguine temperament, than the persons liable to hemoptysis.

DCCCLXXXIX.

This disease, arising from tubercles, usually commences with a slight and short cough, which becomes habitual, is often little remarked by those affected, and sometimes so little as to be absolutely denied by them. At the same time their breathing becomes easily hurried by any bodily motion, their body grows leaner, and they become languid and indolent. This state sometimes continues for a year, or even for two years, without the persons making any complaint of it, excepting only that they are affected by cold more readily than usual, which frequently increases their cough, and produces some catarrh. This, again, however, is sometimes relieved ; is supposed to have arisen from cold alone ; and therefore gives no alarm either to the patient or to his

friends, nor leads them to take any precautions.

DCCCXC.

Upon one or other of these occasions of catching cold, as we commonly speak, the cough becomes more considerable; is particularly troublesome upon the patient's lying down at night; and in this state continues longer than is usual in the case of a simple catarrh. This is more especially to call for attention, if the increase and continuance of cough come on during the summer season.

DCCCXCI.

The cough which comes on as in DCCCLXXXIX, is very often for a long time without any expectoration; but when, from repeatedly catching cold, it becomes more constant, it is then at the same time attended with some expectoration, which is most considerable in the mornings. The matter of this expectoration becomes by degrees more copious, more viscid, and more opaque; at length of a yellow or greenish colour, and of a purulent appearance. The whole of the matter, however, is not always at once entirely changed in this manner; but, while one part of it retains the usual form of mucus, another suffers the changes now described.

DCCCXCII.

DCCCXCII.

When the cough increafes, and continues very frequent through the night, and when the matter expectorated undergoes the changes I have mentioned, the breathing at the fame time becomes more difficult, and the emaciation and weaknefs go on alfo increafing. In the female fex, as the difeafe advances, and fometimes early in its progreff, the menfes ceafe to flow ; and this circumftance is to be confidered as commonly the effect, although the fex themfelves are ready to believe it the fole caufe of the difeafe.

DCCCXCIII.

When the cough comes on as in DCCCLXXXIX, the pulse is often natural, and for fome time after continues to be fo ; but the fymptoms have feldom fubfifted long before the pulse becomes frequent, and fometimes to a confiderable degree, without much of the other fymptoms of fever. At length, however, evening exacerbations become remarkable ; and by degrees the fever affumes the exquisite form of hectic, as defcribed in DCCCLVIII—DCCCLX.

DCCCXCIV.

It is feldom that the cough, expectoration, and fever, go on increafing, in the manner

now described, without some pain being felt in some part of the thorax. It is usually and most frequently felt at first under the sternum, and that especially, or almost only, upon occasion of coughing : But very often, and that too early, in the course of the disease, a pain is felt on one side, sometimes very constantly, and so as to prevent the person from lying easily upon that side ; but at other times the pain is felt only upon a full inspiration, or upon coughing. Even when no pain is felt, it generally happens that phthifical persons cannot lie easily on some one of their sides without having their difficulty of breathing increased, and their cough excited.

DCCCXCV.

The phthisis begins, and sometimes proceeds to its fatal issue, in the manner described from DCCCLXXXIX, to DCCCXCV, without any appearance of hemoptysis. Such cases are, indeed, rare ; but it is very common for the disease to advance far, and even to an evident purulency and hectic state, without any appearance of blood in the spitting : So that it may be affirmed, the disease is frequently not founded in hemoptysis. At the same time, we must allow, not only that it sometimes begins with an hemoptysis, as is said in DCCCLXIV ; but furthure, that it seldom happens that in the progress of the disease more or less of an hemoptysis does not appear.

appear. Some degree of bloodspitting does, indeed, appear sometimes in the state mentioned DCCCLXXXIX, DCCCXCIII, but more commonly in the more advanced stages of the disease only, and particularly upon the first appearance of purulency. However this may be, it is seldom, in the phthisis from tubercles, that the hemoptysis is considerable, or requires any remedies different from those which are otherwise necessary for the state of the tubercles.

DCCCXCVI.

I have now described a succession of symptoms which, in different cases, occupy more or less time. In this climate they very often take up some years, the symptoms appearing especially in the winter and spring; commonly becoming easier, and sometimes almost disappearing, during the summer: But returning again in winter, they at length, after two or three years, prove fatal, towards the end of spring or beginning of summer.

DCCCXCVII.

In this disease, the prognosis is for the most part unfavourable. Of those affected with it, the greater number die; but there are also many of them who recover entirely, after having been in very unpromising circumstances. What are, however, the circum-

stances more certainly determining to a happy or to a fatal event, I have not yet been able to ascertain.

DCCCXCVIII.

The following aphorisms are the result of my observations.

A phthisis pulmonalis from hemoptysis, is more frequently recovered than one from tubercles.

An hemoptysis not only is not always followed by a phthisis, as we have said above (DCCCLXIV) ; but even when followed by an ulceration, the ulceration is sometimes attended with little of hectic, and frequently admits of being soon healed. Even when the hemoptysis and ulceration have happened to be repeated, there are instances of persons recovering entirely after several such repetitions.

A phthisis from a suppuration in consequence of pneumonic inflammation, is that which most rarely occurs in this climate ; and a phthisis does not always follow such suppuration, when the abscess formed soon breaks and discharges a laudable pus : But, if the abscess continue long shut up, and till after a considerable degree of hectic has been formed, a phthisis is then produced, equally dangerous as that from other causes.

A phthisis from tubercles has, I think, been recovered : But it is of all others the most dangerous ;

dangerous ; and, when arising from a hereditary taint, is almost certainly fatal.

The danger of a phthisis, from whatever cause it may have arisen, is most certainly to be judged of by the degree to which the hectic and its consequences have arrived. From a certain degree of emaciation, debility, profuse sweating, and diarrhœa, no person recovers.

A mania coming on, has been found to remove all the symptoms, and sometimes has entirely cured the disease ; but, in other cases, upon the going off of the mania, the phthisis has recurred, and proved fatal.

The pregnancy of women has often retarded the progress of a phthisis ; but commonly it is only till after delivery, when the symptoms of phthisis return with violence, and soon prove fatal.

S E C T. II.

Of the CURE of PHTHISIS.

DCCCXCIX.

FROM what has been just now said, it will readily appear, that the cure of the phthisis pulmonalis must be exceedingly difficult ; and that even the utmost care and attention in the employment

employment of remedies have seldom succeeded. It may be doubtful whether this failure is to be imputed to the imperfection of our art, or to the absolutely incurable nature of the disease. I am extremely averse in any case to admit of the latter supposition, and can always readily allow of the former; but, in the mean time, must mention here what has been attempted towards either curing or moderating the violence of this disease.

DCCCC.

It must be obvious, that, according to the different circumstances of this disease, the method of cure must be different. Our first attention should be employed in watching the approach of the disease, and preventing its proceeding to an incurable state.

In all persons of a phthical habit, and especially in those born of phthical parents, the slightest symptoms of the approach of phthisis, at the phthical period of life, ought to be attended to.

DCCCCI.

When an hemoptysis occurs, though it be not always followed with ulceration and phthisis, these, however, are always to be apprehended; and every precaution is to be taken against them. This is especially to be done by employing every means of moderating

ing

ing the hemorrhagy, and of preventing its return, directed in DCCCXCII, *et seq.* and these precautions ought to be continued for several years after the occurrence of the hemoptysis.

DCCCCII.

The phthisis which follows a suppuration from pneumonic inflammation, can only be prevented with certainty, by obtaining a resolution of such inflammation. What may be attempted towards the cure of an abscess and ulcer which have taken place, I shall speak of hereafter.

DCCCCIII.

I have said, it is doubtful if a genuine catarrh ever produces a phthisis ; but have allowed that it possibly may ; and both upon this account, and upon account of the ambiguity which may arise, whether the appearing catarrh be a primary disease, or the effect of a tubercle, I consider it as of consequence to cure a catarrh as soon as possible after its first appearance. More especially when it shall linger, and continue for some time, or shall, after some intermission, frequently return, the cure of it should be diligently attempted. The measures requisite for this purpose shall be mentioned afterwards, when we come to treat of catarrh as a primary disease ; but, in
the

the mean time, the means necessary for preventing its producing a phthisis shall be mentioned immediately, as they are the same with those I shall point out as necessary for preventing a phthisis from tubercles.

DCCCCIV.

The preventing of a phthisis from asthma must be, by curing, if possible, the asthma ; or at least by moderating it as much as may be done ; and as it is probable that asthma occasions phthisis, by producing tubercles, the measures necessary for preventing phthisis from asthma, will be the same with those necessary in the case of tubercles, which I am now about to mention.

DCCCCV.

I consider tubercles as by much the most frequent cause of phthisis ; and even in many cases where this seems to depend upon hæmoptysis, catarrh, or asthma, it does however truly arise from tubercles. It is upon this subject, therefore, that I shall have occasion to treat of the measures most commonly requisite for curing phthisis.

DCCCCVI.

When, in a person born of phthifical parents, of a phthifical habit, at the phthifical
period

period of life, the symptoms DCCCLXXXIX, in the spring, or beginning of summer, shall appear in the slightest degree, we may presume that a tubercle, or tubercles, either have been formed, or are forming in the lungs ; and therefore, that every means we can devise for preventing their formation, or for procuring their resolution, should be employed immediately, even although the patient himself should overlook or neglect the symptoms, as imputing them to accidental cold.

DCCCCVII.

This is certainly the general indication ; but how it may be executed I cannot readily say. I do not know that, at any time, physicians have proposed any remedy capable of preventing the formation of tubercles, or of resolving them when formed. The analogy of scrophula, gives no assistance in this matter. In scrophula the remedies that are seemingly of most power are, sea water, or certain mineral waters ; but these have generally proved hurtful in the case of tubercles of the lungs. I have known several instances of mercury very fully employed for certain diseases, in persons who were supposed at the time to have tubercles formed, or forming, in their lungs ; but though the mercury proved a cure for those other diseases, it was of no service in preventing phthisis, and in some cases seemed to hurry it on.

DCCCCVIII.

DCCCCVIII.

Such appears to me to be the present state of our art, with respect to the cure of tubercles; but I do not despair of a remedy for the purpose being found hereafter. In the mean time, all that at present seems to be within the reach of our art, is to take the measures proper for avoiding the inflammation of tubercles. It is probable that tubercles may subsist long without producing any disorder; and I am disposed to think, that nature sometimes resolves and discusses tubercles which have been formed; but that nature does this only when the tubercles remain in an uninfamed state; and therefore, that the measures necessary to be taken are chiefly those for avoiding the inflammation of the tubercles.

DCCCCIX.

The inflammation of a tubercle of the lungs is to be avoided upon the general plan of avoiding inflammation, by bloodletting, and by an antiphlogistic regimen; the chief part of which, in this case, is the use of a low diet. This supposes a total abstinence from animal food, and the using of vegetable food almost alone; but it has been found, that it is not necessary for the patient to be confined to vegetables of the weakest nourishment, it being

ing sufficient that the farinacea be employed, and together with these, milk.

DCCCCX.

Milk has been generally considered as the chief remedy in phthisis, and in the case of every tendency to it ; but whether from its peculiar qualities, or from its being of a lower quality, with respect to nourishment, than any food entirely animal, is not certainly determined. The choice and administration of milk will be properly directed, by considering the nature of the milk of the several animals from which it may be taken, and the particular state of the patient with respect to the period and circumstances of the disease, and to the habits of his stomach with respect to milk.

DCCCCXI.

A second means of preventing the inflammation of the tubercles of the lungs, is, by avoiding any particular irritation of the affected part, which may arise from any violent exercise of respiration ; from any considerable degree of bodily exercise ; from any position of the body which straitens the capacity of the thorax ; and, lastly, from cold applied to the surface of the body, which determines the blood in greater quantity to the internal parts, and particularly to the lungs.

DCCCCXII.

DCCCCXII.

From the last mentioned consideration, the application of cold in general, and therefore the winter season, in cold climates, as diminishing the cutaneous perspiration, is to be avoided; but more particularly, that application of cold is to be shunned that may suppress perspiration, to the degree of occasioning a catarrh, which consists in an inflammatory determination to the lungs, and may therefore most certainly produce an inflammation of the tubercles there.

By considering, that the avoiding heat is a part of the antiphlogistic regimen above recommended, and by comparing this with what has been just now said respecting the avoiding cold, the proper choice of climates and seasons for phthical patients will be readily understood.

DCCCCXIII.

A third means of avoiding the inflammation of the tubercles of the lungs consists, in diminishing the determination of the blood to the lungs, by supporting and increasing the determination to the surface of the body; which is to be chiefly and most safely done by warm clothing, and the frequent use of the exercises of gestation.

DCCCCXIV.

DCCCCXIV.

Every mode of gestation has been found of use in pthifical cases ; but riding on horseback, as being accompanied with a great deal of bodily exercise, is less safe in persons liable to an hemoptysis. Travelling in a carriage, unless upon very smooth roads, may also be of doubtful effect ; and all the modes of gestation that are employed on land, may fall short of the effects expected from them, because they cannot be rendered sufficiently constant : And therefore it is that sailing, of all other modes of gestation, is the most effectual in pneumonic cases, as being both the smoothest and most constant.

It has been imagined, that some benefit is derived from the state of the atmosphere upon the sea : But I cannot find that any impregnation of this which can be supposed to take place, can be of service to pthifical persons. It is however probable, that frequently some benefit may be derived from the more moderate temperature and greater purity of the air upon the sea.

DCCCCXV.

In order to take off any inflammatory determination of the blood into the vessels of the lungs, blisters applied to some part of the thorax may often be of service ; and for the
same

same purpose, as well as for moderating the general inflammatory state of the body, issues of various kinds may be employed with advantage.

DCCCCXVI.

The several measures to be pursued in the case of what is properly called an Incipient Phthisis, have now been mentioned ; but they have seldom been employed in such cases in due time, and have therefore, perhaps, seldom proved effectual. It has more commonly happened, that after some time, an inflammation has come upon the tubercle, and an abscess has been formed, which opening into the cavity of the bronchiæ, has produced an ulcer, and a confirmed phthisis.

DCCCCXVII.

In this state of matters, some new indications different from the former may be supposed to arise ; and indications for preventing absorption, for preventing the effects of the absorbed matter upon the blood, and for healing the ulcer, have been actually proposed. I cannot find, however, that any of the means proposed for executing these indications, are either probable or have proved effectual. If, upon some occasions, they have appeared to be useful, it has been probably by answering some other intention.

While

While no antidote against the poison which especially operates here, seems to have been as yet found out, it appears to me, that too great a degree of inflammation has a great share in preventing the healing of the ulcer which occurs ; and such inflammation is certainly what has a great share in urging on its fatal consequences. The only practice, therefore, which I can venture to propose, is the same in the ulcerated as in the crude state of a tubercle ; that is, the employment of means for moderating inflammation, which have been already mentioned DCCCCIX *et seq.*

DCCCCXVIII.

The balsamics, whether natural or artificial, which have been so commonly advised in cases of phthisis, appear to me to have been proposed upon no sufficient grounds, and to have proved commonly hurtful. The resinous and acrid substance of myrrh, lately recommended, has not appeared to me to be of any service, and in some cases to have proved hurtful.

DCCCCXIX.

Mercury, so often useful in healing ulcers, has been speciously enough proposed in this disease ; but whether that it be not adapted to the particular nature of the ulcers of the lungs occurring in phthisis, or that it proved hurtful

ful because it cannot have effect without exciting such an inflammatory state of the whole system, as, in a hectic state, must prove very hurtful, I cannot determine. Upon many trials which I have seen made, it has proved of no service, and commonly has appeared to be manifestly pernicious.

DCCCCXX.

The Peruvian bark has been recommended for several purposes in phthical cases ; and is said, upon some occasions, to have been useful : But I have seldom found it to be so ; and as by its tonic power it increases the phlogistic diathesis of the system, I have frequently found it hurtful. In some cases, where the morning remissions of the fever were considerable, and the noon exacerbations well marked, I have observed the Peruvian bark given in large quantities, have the effect of stopping these exacerbations, and at the same time of relieving the whole of the phthical symptoms ; but in the cases in which I observed this, the fever showed a constant tendency to recur ; and at length the phthical symptoms also returned, and proved quickly fatal.

DCCCCXXI.

Acids of all kinds, as antiseptic and refrigerant, are useful in cases of phthisis ; but the
native

native acid of vegetables is more useful than the fossil acids, as it can be given in much larger quantities and may also be given more safely than vinegar, being less liable to excite coughing.

DCCCCXXII.

Though our art can do so little towards the cure of this disease, we must, however, palliate the uneasy symptoms of it as well as we can. The symptoms especially urgent, are the cough and diarrhœa. The cough may be in some measure relieved by demulcents (DCCCLXXIII) : But the relief obtained by these is imperfect and transitory ; and very often the stomach is disturbed by the quantity of oily, mucilaginous, and sweet substances, which are on these occasions taken into it.

DCCCCXXIII.

The only certain means of relieving the cough, is by employing opiates. These, indeed, certainly increase the phlogistic diathesis of the system ; but commonly they do not so much harm in this way, as they do service by quieting the cough, and giving sleep. They are supposed to be hurtful by checking expectoration : But they do it for a short time only ; and, after a sound sleep, the expectoration in the morning is more easy than usual. In the advanced state of the disease, opiates

seem to increase the sweatings that occur ; but they compensate this, by the ease they afford in a disease which cannot be cured.

DCCCCXXIV.

The diarrhœa which happens in the advanced state of this disease, is to be palliated by moderate astringents, mucilages, and opiates.

Rhubarb, so commonly prescribed in every diarrhœa, and all other purgatives, are extremely dangerous in the colliquative diarrhœa of hectics.

Fresh subacid fruits, supposed to be always laxative, are often, in the diarrhœa of hectics, by their antiseptic quality, very useful.

C H A P . V .

O F T H E H E M O R R H O I S ; O R O F T H E
H E M O R R H O I D A L S W E L L I N G
A N D F L U X .

S E C T . I .

Of the P H E N O M E N A *and* C A U S E S *of the*
H E M O R R H O I S .

D C C C C X X V .

A D I S C H A R G E of blood from small tumours on the verge of the anus, is the symptom which generally constitutes the Hemorrhoids ; or, as it is vulgarly called, the Hemorrhoidal Flux. But a discharge of blood from within the anus, when the blood is of a florid colour, showing it to have come from no great distance, is also considered as the same disease ; and physicians have agreed in making two cases or varieties of it, under

the names of External and Internal Hemorrhoids.

DCCCCXXVI.

In both cases it is supposed that the flow of blood is from tumours previously formed, which are named Hemorrhoids, or Piles ; and it frequently happens, that the tumours exist without any discharge of blood ; in which case, however, they are supposed to be a part of the same disease, and are named Hemorrhoides Cæcæ, or Blind Piles.

DCCCCXXVII.

These tumours, as they appear without the anus, are sometimes separate, round, and prominent, on the verge of the anus ; but frequently the tumour is only one tumid ring, forming, as it were, the anus pushed without the body.

DCCCCXXVIII.

These tumours, and the discharge of blood from them, sometimes come on as an affection purely topical, and without any previous disorder in other parts of the body ; but it frequently happens, even before the tumours are formed, and more especially before the blood flows, that various disorders are felt in different parts of the body, as headach, vertigo,

go, stupor, difficulty of breathing, sickness, colic pains, pain of the back and loins; and often, together with more or fewer of these symptoms, there occurs a considerable degree of pyrexia.

The coming on of the disease with these symptoms, is usually attended with a sense of fullness, heat, itching, and pain in and about the anus.

Sometimes the disease is preceded by a discharge of serous matter from the anus; and sometimes this serous discharge, accompanied with some swelling, seems to be in place of the discharge of blood, and to relieve those disorders of the system which we have mentioned. This serous discharge, therefore, has been named the Hemorrhoids Alba.

DCCCCXXIX.

In the hemorrhoids, the quantity of blood discharged is different upon different occasions. Sometimes the blood flows only upon the person's going to stool; and commonly in larger or lesser quantity, follows the discharge of the fæces. In other cases, the blood flows without any discharge of fæces; and then, generally, it is after having been preceded by the disorders abovementioned, when it is also commonly in larger quantity. This discharge of blood is often very considerable; and, by the repetition, it is often so great, as we could hardly suppose the body to bear but with the

hazard of life. Indeed, though rarely, it has been so great as to prove suddenly fatal. These considerable discharges occur especially to persons who have been frequently liable to the disease. They often induce great debility; and frequently a leucophlegmatia, or dropsy, which proves fatal.

The tumours and discharges of blood in this disease, often recur at exactly stated periods.

DCCCCXXX.

It often happens, in the decline of life, that the hemorrhoidal flux, formerly frequent, ceases to flow; and, upon that event, it generally happens that the persons are affected with apoplexy or palsy.

DCCCCXXXI.

Sometimes hemorrhoidal tumours are affected with considerable inflammation; which, ending in suppuration, gives occasion to the formation of fistulous ulcers in those parts.

DCCCCXXXII.

The hemorrhoidal tumours have been often considered as varicous tumours, or dilatations of veins; and it is true, that in some cases varicous dilatations have appeared upon dissection. These, however, do not always appear; and

and I presume it is not the ordinary case, but that the tumours are formed by an effusion of blood into the cellular texture of the intestine near to its extremity. These tumours, especially when recently formed, frequently contain fluid blood; but, after they have remained for some time, they are commonly of a firmer substance.

DCCCCXXXIII.

From a consideration of their causes, to be hereafter mentioned, it is sufficiently probable, that hemorrhoidal tumours are produced by some interruption of the free return of blood from the veins of the lower extremity of the rectum; and it is possible, that a considerable accumulation of blood in these veins, may occasion a rupture of their extremities, and thus produce the hemorrhagy or tumours I have mentioned. But, considering that the hemorrhagy occurring here, is often preceded by pain, inflammation, and a febrile state, as well as by many other symptoms which show a connexion between the topical affection and the state of the whole system, it seems probable that the interruption of the venous blood, which we have supposed to take place, operates in the manner explained in DCCLXIX; and therefore, that the discharge of blood here is commonly from arteries.

DCCCCXXXIV.

Some physicians have been of opinion, that a difference in the nature of the hemorrhoids, and of its effects upon the system, might arise from the difference of the hemorrhoidal vessels from which the blood issued. But it appears to me, that hardly in any case we can distinguish the vessels from which the blood flows; and that the frequent inosculations of both the arteries and veins which belong to the lower extremity of the rectum, will render the effects of the hemorrhagy nearly the same, from whichever of these vessels the blood proceed.

DCCCCXXXV.

In DCCLXIX, I have endeavoured to explain the manner in which a certain state of the sanguiferous system might give occasion to an hemorrhoidal flux; and I have no doubt, that this flux may be produced in that manner. I cannot, however, by any means admit, that the disease is so often produced in that manner, or that, on its first appearance, it is so frequently a systematic affection, as the Stahlians have imagined, and would have us to believe. It occurs in many persons before the period of life at which the venous plethora takes place; it happens to females, in whom a venous plethora, determined to the hemorrhoidal

hemorrhoidal vessels, cannot be supposed; and it happens to both sexes, and to persons of all ages, from causes which do not affect the system, and are manifestly suited to produce a topical affection only.

DCCCCXXXVI.

These causes of a topical affection are, in the first place, the frequent voiding of hard and bulky fæces, which, not only by their long stagnation in the rectum, but especially when voided, must press upon the veins of the anus, and interrupt the course of the blood in them. It is for this reason that the disease happens so often to persons of a slow and bound belly.

DCCCCXXXVII.

From the causes just now mentioned, the disease happens especially to persons liable to some degree of a prolapsus ani. Almost every person in voiding fæces has the internal coat of the rectum more or less protruded without the body; and this will be to a greater or lesser degree, according as the hardness and bulk of the fæces occasion a greater or lesser effort or pressure upon the anus. While the gut is thus pushed out, it often happens, that the sphincter ani is contracted before the gut is replaced; and, in consequence thereof, a strong constriction is made, which preventing the fallen out gut from being replaced, and at

the same time preventing the return of blood from it, occasions its being considerably swelled, and its forming a tumid ring round the anus.

DCCCCXXXVIII.

Upon the sphincter's being a little relaxed, as it is immediately after its strong contraction, the fallen out portion of the gut is commonly again taken within the body ; but, by the frequent repetition of such an accident, the size and fullness of the ring formed by the fallen out gut, is much increased. It is therefore more slowly and difficultly replaced ; and in this consists the chief uneasiness of hemorrhoidal persons.

DCCCCXXXIX.

As the internal edge of the ring mentioned, is necessarily divided by clefts, the whole often assumes the appearance of a number of distinct swellings ; and it also frequently happens, that some portions of it, more considerably swelled than others, become more protuberant, and form those small tumours more strictly called Hemorrhoids, or Piles.

DCCCCXL.

From considering that the pressure of fæces, and other causes interrupting the return of
venous

venous blood from the lower extremity of the rectum, may operate a good deal higher up in the gut than that extremity, it may be easily understood that tumours may be formed within the anus; and probably it also happens, that some of the tumours formed without the anus, as in DCCCCXXXIX, may continue when taken within the body, and even be increased by the causes just now mentioned. It is thus that I would explain the production of internal piles, which, on account of their situation and bulk, are not protruded on the person's going to stool, and are often, therefore, more painful. The same internal piles are more especially painful, when affected by the hemorrhagic effort described in DCCXLV and DCCLXIX.

DCCCCXLI.

The production of piles is particularly illustrated by this, that pregnant women are frequently affected with them. This is to be accounted for partly from the pressure of the uterus upon the rectum, and partly from the costive habit to which pregnant women are usually liable. I have known many instances of piles occurring for the first time during the state of pregnancy; and there are few women that have born children who are afterwards entirely free from piles. The Stahlians have commonly asserted, that the male sex is more frequently affected with this

disease than the female ; but in this country I have constantly found it otherwise.

DCCCCXLII.

It is commonly supposed, that the frequent use of purgatives, especially of those of the more acrid kind, and more particularly of aloetics, is apt to produce the hemorrhoidal affection ; and as these purgatives stimulate chiefly the great guts, it seems sufficiently probable that they may excite this disease.

DCCCCXLIII.

I have now mentioned several causes which may produce the hemorrhoidal tumours and flux as a topical affection only ; but must observe farther, that although the disease appears first as a purely topical affection, it may, by frequent repetition, become habitual ; and therefore may become connected with the whole system, in the manner already explained, with respect to hemorrhagy in general, in DCCXLVIII.

DCCCCXLIV.

The doctrine now referred to will, it is apprehended, apply very fully to the case of the hemorrhoidal flux ; and will the more readily apply, from the person who has been once affected being much exposed to a renewal

newal of the causes which first occasioned the disease; and from many persons being much exposed to a congestion in the hemorrhoidal vessels, in consequence of their being often in an erect position of the body, and in an exercise which pushes the blood into the depending vessels, while at the same time the effects of these circumstances are much favoured by the abundance and laxity of the cellular texture about the rectum.

DCCCCXLV.

It is thus that the hemorrhoidal flux is so often artificially rendered an habitual and systematic affection; and I am persuaded, that it is this which has given occasion to the Stahlians to consider the disease as almost universally such.

DCCCCXLVI.

It is to be particularly observed here, that when the hemorrhoidal disease has either been originally, or has become, in the manner just now explained, a systematic affection, it then acquires a particular connexion with the stomach, so that certain affections there excite the hemorrhoidal disease, and certain states of the hemorrhoidal affection excite disorders of the stomach.

It

It is perhaps owing to this connexion that the gout sometimes affects the rectum. See DXXV.

S E C T. II.

Of the CURE of HEMORRHOIDAL AFFECTIONS.

DCCCCXLVII.

ALMOST at all times it has been an opinion amongst physicians, and from them spread amongst the people, that the hemorrhoidal flux is a salutary evacuation which prevents many diseases that would otherwise have happened; and that it even contributes to give long life. This opinion, in later times, has been especially maintained by Dr. Stahl and his followers; and has had a great deal of influence upon the practice of physic in Germany.

DCCCCXLVIII.

The question arises with respect to hemorrhagy in general, and indeed it has been extended so far by the Stahlians. I have accordingly considered it as a general question, (DCCLXVII—DCCLXXX); but it has
been

been more especially agitated with regard to the disease now under our consideration: And as to this, although I am clearly of opinion, that the hemorrhoids may take place in consequence of the general state of the system (DCCLXIX); or, what is still more frequent, that by repetition it may become connected with that general state (DCCCCXLIII), and in either case cannot be suppressed without great caution; I must beg leave, notwithstanding this, to maintain, that the first is a rare case, that generally the disease first appears as an affection purely topical (DCCCCXXXV, DCCCCXLII), and that the allowing it to become habitual is never proper. It is a nasty disagreeable disease, ready to go to excess, and to be thereby very hurtful, as well as sometimes fatal. At best it is liable to accidents, and thereby to unhappy consequences. I am therefore of opinion, that not only the first approaches of the disease are to be guarded against; but even that when it has taken place for some time, from whatever cause it may have proceeded, the flux is always to be moderated, and the necessity of it, if possible, superseded.

DCCCCXLIX.

Having delivered these general rules, I proceed to mention more particularly, how the disease is to be treated, according to the different

different circumstances under which it may appear.

When we can manifestly discern the first appearance of the disease to arise from causes acting upon the part only, the strictest attention should be employed in guarding against the renewal of these causes.

DCCCCL.

One of the most frequent of the remote causes of the hemorrhoidal affection, is a slow and bound belly, (DCCCCXXXVI): And this is to be constantly obviated by a proper diet, which each individual's own experience must direct; or, if the management of diet be not effectual, the belly must be kept regular by such medicines as may prove gently laxative, without irritating the rectum. In most cases it will be of advantage to acquire a habit with respect to time, and to observe it exactly.

DCCCCLI.

Another cause of hemorrhoids to be especially attended to, is the prolapsus or protrusion of the anus, which is apt to happen on a person's having a stool (DCCCCXXXVII.) If it shall occur to any considerable degree, and at the same time be not easily and immediately replaced, it most certainly produces piles, or increases them when otherwise produced.

uced. Persons therefore liable to this prolapsus, should, upon their having been at stool, take great pains to have the gut immediately replaced, by lying down in a horizontal posture, and pressing gently upon the anus, till the reduction shall be completely obtained.

DCCCCLII.

When the prolapsus of which I speak is occasioned only by voiding hard and bulky fæces, it should be obviated by the means mentioned in DCCCCL, and may be thereby avoided. But in some persons it is owing to a laxity of the rectum; in which case it is often most considerable upon occasion of a loose stool; and then the disease is to be treated by astringents, as well as by proper artifices for preventing the falling down of the gut.

DCCCCLIII.

These are the means to be employed upon the first approaches of the hemorrhoidal affection; and when from neglect it shall have frequently recurred, and has become in some measure established, they are no less proper. In the latter case, however, some other means are also necessary. It is particularly proper to guard against a plethoric state of the body; consequently, to avoid a sedentary life, a full diet, and particularly intemperance in the use
of

of strong liquor ; which, as I should have observed before, is, in all cases of hemorrhagy, of the greatest influence in increasing the disposition to the disease.

DCCCCLIV.

I need hardly repeat here, that exercise of all kinds must be a chief means of obviating and removing a plethoric state of the body ; but upon occasion of the hemorrhoidal flux immediately approaching, both walking and riding, as increasing the determination of the blood into the hemorrhoidal vessels, are to be avoided. At other times, when no such determination has been already formed, those modes of exercise may be very properly employed.

DCCCCLV.

Cold bathing is another remedy that may be employed to obviate plethora, and prevent hemorrhagy ; but it is to be used with caution. When the hemorrhoidal flux is approaching, it may be dangerous to turn it suddenly aside by cold bathing : But during the intervals of the disease, this remedy may be employed with advantage ; and in persons liable to a prolapsus ani, the frequent washing of the anus with cold water may be very useful.

DCCCCLVI.

DCCCCLVI.

These are the means for preventing the recurrence of the hemorrhoidal flux; and in all cases, when it is not immediately approaching, they are to be employed. When it has actually come on, means are to be employed for moderating it as much as possible, by the persons lying in a horizontal position upon a hard bed; by avoiding exercise in an erect posture; by using a cool diet; by avoiding external heat; and by obviating the irritation of hardened fæces by the use of proper laxatives, (DCCCCL). From what has been said above, as to the being careful not to increase the determination of the blood into the hemorrhoidal vessels, the propriety of these measures must sufficiently appear; and if they were not so generally neglected, many persons would escape the great trouble, and the various bad consequences which so frequently result from this disease.

DCCCCLVII.

With respect to the further cure of this disease, it is almost in two cases only, that hemorrhoidal persons call for the assistance of the physician. The one is when the affection is accompanied with much pain; and of this there are two cases, according as the pain happens

happens to attend the external or the internal piles.

DCCCCLVIII.

The pain of the external piles arises especially when a considerable protrusion of the rectum has happened ; and when, continuing unreduced, it is strangled by the constriction of the sphincter ; while, at the same time, no bleeding happens, to take off the swelling of the protruded portion of the intestine. Sometimes an inflammation supervenes, and greatly aggravates the pain. To relieve the pain in this case, emollient fomentations and poultices are sometimes of service ; but a more effectual relief is to be obtained by applying leeches to the tumid parts.

DCCCCLIX.

The other case in which hemorrhoidal persons seek assistance, is that of excessive bleeding. Upon the opinion so generally received of this discharge being salutary, and from the observation that upon the discharge occurring persons have sometimes found relief from various disorders, the most part of persons liable to it are ready to let it go too far ; and indeed the Stahlians will not allow it to be a disease, unless when it has actually gone to excess. I am, however, well persuaded, that this flux ought always to be cured as soon as possible.

DCCCCLX.

DCCCCLX.

When the disease occurs as a purely topical affection, there can be no doubt of the propriety of this rule ; and, even when it has occurred as a critical discharge in the case of a particular disease, yet when this disease shall have been entirely cured and removed, the preventing any return of the hemorrhoids seems to be both safe and proper.

DCCCCLXI.

It is only when the disease arises from a plethoric state of the body, and from a stagnation of blood in the hypochondriac region ; or when, though originally topical, the disease, by frequent repetition, has become habitual, and has thereby acquired a connexion with the whole system, that any doubt can arise as to the safety of curing it entirely. Even in these cases, however, I apprehend it will be always proper to moderate the bleeding ; lest by its continuance or repetition, the plethoric state of the body, and the particular determination of the blood into the hemorrhoidal vessels, be increased, and the recurrence of the disease, with all its inconveniences and danger, be too much favoured.

DCCCCLXII.

DCCCCLXII.

Further, even in the cases stated (DCCCCLXI), in so far as the plethoric state of the body, and the tendency to that state, can be obviated and removed, this is always to be diligently attempted; and if it can be executed with success, the flux may be entirely suppressed.

DCCCCLXIII.

The Stahlian opinion, that the hemorrhoidal flux is only in excess when it occasions great debility, or a leucophlegmatia, is by no means just; and it appears to me, that the smallest approach towards *producing* either of these, should be considered as an excess, which ought to be prevented from going farther.

DCCCCLXIV.

In all cases therefore of excess, or of any approach towards it, and particularly when the disease depends upon a prolapsus ani (DCCCCLI), I am of opinion that astringents, both internal and external, may be safely and properly employed; not indeed to induce an immediate and total suppression, but to moderate the hemorrhagy, and by degrees to suppress it altogether, while at the same time
measures

measures are taken for removing the necessity of its recurrence.

DCCCCLXV.

When the circumstances (DCCCCXLVI) marking a connexion between the hemorrhoidal affection and the state of the stomach occur, the measures necessary are the same as in the case of atonic gout.

C H A P. VI.

OF THE MENORRHAGIA, OR THE
IMMODERATE FLOW OF THE
MENSES.

DCCCCLXVI.

BLOOD discharged from the vagina may proceed from different sources in the internal parts: But I here mean to treat of those discharges only, in which the blood may be presumed to flow from the same sources that the menses in their natural state proceed from; and which discharges alone, are those properly comprehended under the present title. The title of *Metrorrhagia*, or *hæmorrhagia uteri*, might comprehend a great deal more.

DCCCCLXVII.

The menorrhagia may be considered as of two kinds; either as it happens to pregnant and lying in women, or as it happens to women neither pregnant nor having recently born children. The first kind, as connected
with

with the circumstances of pregnancy and childbearing, (which are not to be treated of in the present course), I am not to consider here, but shall confine myself to the second kind of menorrhagia only.

DCCCCLXVIII.

The flow of the menses is considered as immoderate, when it recurs more frequently, when it continues longer, or when, during the ordinary continuance, it is more abundant than is usual with the same person at other times.

DCCCCLXIX.

As the most part of women are liable to some inequality with respect to the period, the duration, and the quantity of their menses; so it is not every inequality in these respects that is to be considered as a disease; but only those deviations, which are excessive in degree, which are permanent, and which induce a manifest state of debility.

DCCCCLXX.

The circumstances (DCCCCLXVIII, DCCCCLXIX) are those which chiefly constitute the menorrhagia: But it is proper to observe, that although I allow the frequency, duration, and quantity of the menses to be

judged of by what is usual with the same individual at other times ; yet there is, in these particulars, so much uniformity observable in the whole of the sex, that in any individual in whom there occurs a considerable deviation from the common measure, such a deviation, if constantly recurring, may be considered as at least approaching to a morbid state, and as requiring most of the precautions which I shall hereafter mention as necessary to be attended to by those who are actually in such a state.

DCCCCLXXI.

However we may determine with respect to the circumstances DCCCCLXVIII, DCCCCLXIX, it must still be allowed, that the immoderate flow of the menses is especially to be determined by those symptoms affecting other functions of the body, which accompany and follow the discharge.

When a larger flow than usual of the menses has been preceded by headach, giddiness, or dyspnœa, and has been ushered in by a cold stage, and is attended with much pain of the back and loins, with a frequent pulse, heat, and thirst, it may then be considered as preternaturally large.

DCCCCLXXII.

When, in consequence of the circumstances DCCCCLXVIII—DCCCCLXXI,
and

and the repetition of these, the face becomes pale; the pulse grows weak; an unusual debility is felt in exercise; the breathing is hurried by moderate exercise; when, also, the back becomes pained from any continuance in an erect posture; when the extremities become frequently cold; and when in the evening the feet appear affected with œdematous swelling; we may from these symptoms certainly conclude, that the flow of the menses has been immoderate, and has already induced a dangerous state of debility.

DCCCCLXXIII.

The debility thus induced, does often discover itself also by affections of the stomach, as anorexia and other symptoms of dyspepsia; by a palpitation of the heart, and frequent faintings; by a weakness of mind liable to strong emotions from slight causes, especially when suddenly presented.

DCCCCLXXIV.

That flow of the menses, which is attended with barrenness in married women, may be generally considered as immoderate and morbid.

DCCCCLXXV.

Generally, also, that flow of the menses may be considered as immoderate, which is preceded and followed by a leucorrhœa.

DCCCCLXXVI.

I treat of menorrhagia here as an active hemorrhagy, because I consider menstruation, in its natural state, to be always of that kind; and although there should be cases of menorrhagia which might be considered as purely passive, it appears to me that they cannot be so properly treated of in any other place.

DCCCCLXXVII.

The menorrhagia (DCCCCLXXVIII, *et seq.*) has for its proximate cause, either the hemorrhagic effort of the uterine vessels preternaturally increased, or a preternatural laxity of the extremities of the uterine arteries, the hemorrhagic effort remaining as in the natural state.

DCCCCLXXVIII.

The remote causes of the menorrhagia may be, *1st*, Those which increase the plethoric state of the uterine vessels; such as a full and nourishing diet, much strong liquor, and frequent intoxication. *2dly*, Those which determine the blood more copiously and forcibly

cibly into the uterine vessels; as violent strainings of the whole body; violent shocks of the whole body from falls; violent strokes or contusions on the lower belly; violent exercise, particularly in dancing; and violent passions of the mind. *3dly*, Those which particularly irritate the vessels of the uterus; as excess in venery; the exercise of venery in the time of menstruation; a costive habit, giving occasion to violent straining at stool; and cold applied to the feet. *4thly*, Those which have forcibly overstrained the extremities of the uterine vessels; as frequent abortions; frequent child-bearing without nursing; and difficult tedious labours. Or, *lastly*, Those which induce a general laxity; as living much in warm chambers, and drinking much of warm enervating liquors, such as tea and coffee.

DCCCCLXXIX.

The effects of the menorrhagia are pointed out in DCCCCLXXII, DCCCCLXXIII, where I have mentioned the several symptoms accompanying the disease, and from these the consequences to be apprehended will also readily appear.

DCCCCLXXX.

The treatment and cure of the menorrhagia must be different, according to the different causes of the disease.

In all cases, the first attention ought to be given to avoiding the remote causes, whenever that can be done ; and by that means the disease may be often entirely avoided.

When the remote causes cannot be avoided, or when the avoiding them has been neglected, and therefore a copious menstruation has come on, it should be moderated as much as possible, by abstaining from all exercise, either at the coming on or during the continuance of the menstruation ; by avoiding even an erect posture as much as possible ; by shunning external heat, and therefore warm chambers and soft beds ; by using a light and cool diet ; by taking cold drink, at least as far as former habits will allow ; by avoiding venery ; by obviating costiveness, or removing it by laxatives that give little stimulus.

The sex are commonly negligent, either in avoiding the remote causes or in moderating the first beginnings of this disease. It is by such neglect that it so frequently becomes violent, and of difficult cure ; and the frequent repetition of a copious menstruation, may be considered as a cause of great laxity in the extreme vessels of the uterus.

DCCCCLXXXI.

When the coming on of the menstruation has been preceded by some disorder in other parts of the body, and is accompanied with pains of the back, resembling parturient pains, together

together with febrile symptoms, and when at the same time the flow seems to be copious, then a bleeding at the arm may be proper, but it is not often necessary; and it will in most cases be sufficient to employ, with great attention and diligence, those means for moderating the discharge which have been mentioned in the last paragraph.

DCCCCLXXXII.

When the immoderate flow of the menses shall seem to be owing to a laxity of the vessels of the uterus, as may be concluded from the general debility and laxity of the person's habit; from the remote causes that have occasioned the disease (DCCCCLXXVIII); from the absence of the symptoms which denote increased action in the vessels of the uterus (DCCCCLXXI); from the frequent recurrence of the disease; and particularly from this, that in the intervals of menstruation the person is liable to a leucorrhœa; then in such case the disease is to be treated, not only by employing all the means mentioned in DCCCCLXXX, for moderating the hemorrhagy, but also by avoiding all irritation, every irritation having the greater effect in proportion as the vessels have been more lax and yielding. If, in such a case of laxity, it shall appear that some degree of irritation concurs, opiates may be employed to moderate the discharge;

charge ; but in using these, much caution is requisite.

If, notwithstanding these measures having been taken, the discharge shall prove very large, astringents both external and internal may be employed. In such cases, may small doses of emetics be of service ?

DCCCCLXXXIII.

When the menorrhagia depends on the laxity of the uterine vessels, it will be proper, in the intervals of menstruation, to employ tonic remedies ; as cold bathing and chalybeates. The exercises of gestation, also, may be very useful, both for strengthening the whole system, and for taking off the determination of the blood to the internal parts.

DCCCCLXXXIV.

The remedies mentioned in these two last paragraphs, may be employed in all cases of menorrhagia, from whatever cause it may have proceeded, if the disease shall have already induced a considerable degree of debility in the body.

CHAPTER VII.

OF THE LEUCORRHŒA, FLUOR ALBUS, OR WHITES.

DCCCCLXXXV.

EVERY ferous or puriform discharge from the vagina, may be, and has been comprehended under one or other of the appellations I have prefixed to this chapter. Such discharges, however, may be various; and may proceed from various sources, not yet well ascertained; but I confine myself here to treat of that discharge alone which may be presumed to proceed from the same vessels, which, in their natural state, pour out the menses.

DCCCCLXXXVI.

I conclude a discharge from the vagina to be of this kind; 1. From its happening to women who are subject to an immoderate flow of the menses, and liable to this from

causes weakening the vessels of the uterus. 2. From its appearing chiefly, and often only, a little before, as well as immediately after, the flow of the menses. 3. From the flow of the menses being diminished, in proportion as the leucorrhœa is increased. 4. From the leucorrhœa continuing after the menses have entirely ceased, and with some appearance of its observing a periodical recurrence. 5. From the leucorrhœa being accompanied with the effects of the menorrhagia (DCCCCLXXII, DCCCCLXXIII.) 6. From the discharge having been neither preceded by, nor accompanied with, symptoms of any topical affections of the uterus. 7. From the leucorrhœa not having appeared soon after communication with a person who might be suspected of communicating infection, and from the first appearance of the disease not being accompanied with any inflammatory affection of the pudenda.

DCCCCLXXXVII.

The appearance of the matter discharged in the leucorrhœa, is very various with respect to consistence and colour; but from these appearances, it is not always possible to determine concerning its nature, or the particular source from whence it proceeds.

DCCCCLXXXVIII.

DCCCCLXXXVIII.

The leucorrhœa, of which I am to treat, as ascertained by the several circumstances (DCCCCLXXXVI) seems to proceed from the same causes as that species of menorrhagia which I suppose to arise from the laxity of the extreme vessels of the uterus. It accordingly often follows or accompanies such a menorrhagia; but though the leucorrhœa depends chiefly upon the laxity mentioned, it may have proceeded from irritations inducing that laxity, and seems to be always increased by any irritations applied to the uterus.

DCCCCLXXXIX.

Some authors have alleged, that a variety of circumstances in other parts of the body may have a share in bringing on and in continuing this affection of the uterus now under consideration; but I cannot discover the reality of those causes; and it seems to me, that this leucorrhœa, excepting in so far as it depends upon a general debility of the system, is always primarily an affection of the uterus; and the affections of other parts of the body which may happen to accompany it, are for the most part to be considered as effects, rather than as causes.

DCCCCXC.

The effects of the leucorrhœa are much the same with those of menorrhagia ; inducing a general debility, and in particular, a debility in the functions of the stomach. If, however, the leucorrhœa be moderate, and be not accompanied with any considerable degree of menorrhagia, it may often continue long without inducing any great degree of debility, and it is only when the discharge has been very copious as well as constant, that its effects in that way are very remarkable.

DCCCCXCI.

But, even when its effects upon the whole body are not very considerable, it may still be supposed to weaken the genital system ; and it seems sufficiently probable that this discharge may often have a share in occasioning barrenness.

DCCCCXCII.

The matter discharged in the leucorrhœa, is at first generally mild ; but after some continuance of the disease, it sometimes becomes acrid ; and by irritating, or perhaps eroding, the surfaces over which it passes, induces various painful disorders.

DCCCCXCIII.

DCCCCXCIII.

As I have supposed that the leucorrhœa proceeds from the same causes as that species of menorrhagia which is chiefly owing to a laxity of the uterine vessels, it must be treated, and the cure attempted, by the same means as delivered in DCCCCLXXXII, for the cure of menorrhagia, and with less reserve in respect of the use of astringents.

DCCCCXCIV.

As the leucorrhœa generally depends upon a great loss of tone in the vessels of the uterus, the disease has been relieved, and sometimes cured by certain stimulant medicines, which are commonly determined to the urinary passages, and from the vicinity of these are often communicated to the uterus. Such, for example, are cantharides, turpentine, and other balsams of a similar nature.

C H A P. VIII.

OF THE AMENORRHŒA, OR INTERRUPTION OF THE MENSTRUAL FLUX.

DCCCCXCV.

WHATEVER, in a system of methodical nosology, may be the fittest place for the amenorrhœa, it cannot be improper to treat of it here as an object of practice, immediately after having considered the menorrhagia.

DCCCCXCVI.

The interruption of the menstrual flux is to be considered as of two different kinds ; the one being when the menses do not begin to flow at that period of life at which they usually appear ; and the other being that when, after they have repeatedly taken place for some time, they do, from other causes than conception, cease to return at their usual periods :

The

The former of these cafes is named the *retention*, and the latter the *suppreffion*, of the menfes.

DCCCCXCVII.

As the flowing of the menfes depends upon the force of the uterine arteries impelling the blood into their extremities, and opening thefe fo as to pour out red blood ; fo the interruption of the menftrual flux muft depend, either upon the want of due force in the action of the uterine arteries, or upon fome preternatural refiftance in their extremities. The former I fuppofe to be the moft ufual caufe of retention, the latter the moft common caufe of fuppreffion ; and of each of thefe I fhall now treat more particularly.

DCCCCXCVIII.

The retention of the menfes, the *emanfio menfium* of Latin writers, is not to be confidered as a difeafe merely from the menfes not flowing at that period which is ufual with moft other women. This period is fo different in different women, that no time can be precisely affigned as proper to the fex in general. In this climate, the menfes ufually appear about the age of fourteen ; but in many they appear more early, and in many not till the fixteenth year ; in which laft cafe it is often without any diforder being thereby occafioned. It is not therefore from the age of
the

the person, that the retention is to be considered as a disease; and it is only to be considered as such, when, about the time the menses usually appear, some disorders arise in other parts of the body which may be imputed to their retention; being such as, when arising at this period, are known from experience to be removed by the flowing of the menses.

DCCCCXCIX.

These disorders are, a sluggishness and frequent sense of lassitude and debility, with various symptoms of dyspepsia; and sometimes with a preternatural appetite. At the same time the face loses its vivid colour, becomes pale, and sometimes of a yellowish hue; the whole body becomes pale and flaccid; and the feet, and perhaps also a great part of the body, become affected with œdematous swelling. The breathing is hurried by any quick or laborious motion of the body, and the heart is liable to palpitation and syncope. A head-ach sometimes occurs; but more certainly pains of the back, loins, and haunches.

M.

These symptoms, when occurring in a high degree, constitute the *chlorosis* of authors, hardly ever appearing separate from the retention of the menses; and, attending to these symptoms,

toms, the cause of this retention may, I think, be perceived.

These symptoms manifestly show a considerable laxity and flaccidity of the whole system ; and therefore give reason to conclude, that the retention of the menses accompanying them, is owing to a weaker action of the vessels of the uterus ; which therefore do not impel the blood into their extremities with a force sufficient to open these, and pour out blood by them.

MI.

How it happens that at a certain period of life a flaccidity of the system arises in young women not originally affected with any such weakness or laxity, and of which, but a little time before, they had given no indication, may be difficult to explain ; but I would attempt it in this way.

As a certain state of the ovaria in females, prepares and disposes them to the exercise of venery, about the very period at which the menses first appear, it is to be presumed that the state of the ovaria and that of the uterine vessels are in some measure connected together ; and as generally symptoms of a change in the state of the former appear before those of the latter, it may be inferred, that the state of the ovaria has a great share in exciting the action of the uterine vessels, and producing the menstrual flux. But, analogous to what happens

pens in the male sex, it may be presumed, that in females a certain state of the genitals is necessary to give tone and tension to the whole system ; and therefore that, if the stimulus arising from the genitals be wanting, the whole system may fall into a torpid and flaccid state, and from thence the chlorosis and retention of the menses may arise.

MII.

It appears to me, therefore, that the retention of the menses is to be referred to a certain state or affection of the ovaria : But what is precisely the nature of this affection, or what are the causes of it, I will not pretend to explain ; nor can I explain in what manner that primary cause of retention is to be removed. In this, therefore, as in many other cases, where we cannot assign the proximate cause of diseases, our indications of cure must be formed for obviating and removing the morbid effects or symptoms which appear.

MIII.

The effects, as has been said in M, consist in a general flaccidity of the system, and consequently in a weaker action of the vessels of the uterus ; so that this debility may be considered as the more immediate cause of the retention. This, therefore, is to be cured by restoring the tone of the system in general,
and

and by exciting the action of the uterine vessels in particular.

MIV.

The tone of the system in general is to be restored by exercise, and, in the beginning of the disease, by cold bathing. At the same time, tonic medicines may be employed; and of these the chalybeates have been chiefly recommended.

MV.

The action of the vessels of the uterus may be excited:

1st, By determining the blood into them more copiously; which is to be done by determining the blood into the descending aorta, by purging, by the exercise of walking, by friction, and by warm bathing of the lower extremities. It is also probable that the blood may be determined more copiously into the hypogastric arteries which go to the uterus, by a compression of the iliacs; but the trials of this kind hitherto made have seldom succeeded.

MVI.

2dly, The action of the uterine vessels may be excited by stimulants applied to them. Thus those purgatives which particularly stimulate the intestinum rectum, may also prove

prove stimulant to the uterine vessels connected with those of the rectum. The exercise of venery certainly proves a stimulus to the vessels of the uterus; and therefore may be useful when, with propriety, it can be employed. The various medicines recommended as stimulants of the uterine vessels, under the title of Emmenagogues, have never appeared to me to be effectual; and I cannot perceive that any of them are possessed of a specific power in this respect. Mercury, as an universal stimulant, may act upon the uterus, but cannot be very safely employed in chlorotic persons. One of the most powerful means of exciting the action of the vessels in every part of the system is, the electrical shock; and it has often been employed with success for exciting the vessels of the uterus.

MVII.

The remedies (MIII—MVI) now mentioned, are those adapted to the *retention* of the menses; and I am next to consider the case of *suppression*. In entering upon this, I must observe, that every interruption of the flux, after it has once taken place, is not to be considered as a case of suppression. For the flux, upon its first appearance, is not always immediately established in its regular course; and therefore, if an interruption happen soon after the first appearance, or even in the course of the first, or perhaps second year after, it
may

may often be considered as a case of retention, especially when the disease appears with the symptoms peculiar to that state.

MVIII.

Those which may be properly considered as cases of suppression, are such as occur after the flux has been for some time established in its regular course, and in which the interruption cannot be referred to the causes of retention (MII, MIII) but must be imputed to some resistance in the extremities of the vessels of the uterus. Accordingly, we often find the suppression induced by cold, fear, and other causes which may produce a constriction of these extreme vessels. Some physicians have supposed an obstructing lentor of the fluids to occasion the resistance now mentioned : But this is purely hypothetical, without any proper evidence of the fact ; and it is besides, from other considerations, improbable.

MIX.

There are indeed some cases of suppression that seem to depend upon a general debility of the system, and consequently of the vessels of the uterus. But in such cases, the suppression always appears as symptomatic of other affections, and is therefore not to be considered here.

MX.

The idiopathic cases of suppression (MVIII) seldom continue long without being attended with various symptoms or disorders in different parts of the body; very commonly arising from the blood which should have passed by the uterus, being determined more copiously into other parts, and very often with such force as to produce hemorrhagies in these. Hence hemorrhagies from the nose, lungs, stomach, and other parts, have appeared in consequence of suppressed menses. Besides these, there are commonly hysteric and dyspeptic symptoms produced by the same cause; and frequently colic pains, with a bound belly.

MXI.

In the idiopathic cases of suppression, (MVIII) the indication of cure is to remove the constriction affecting the extreme vessels of the uterus; and for this purpose the chief remedy is warm bathing applied to the region of the uterus. This, however, is not always effectual, and I do not know of any other remedy adapted to the indication. Besides this, we have perhaps no other means of removing the constriction in fault, but that of increasing the action and force of the vessels of the uterus, so as thereby to overcome the
resistance

resistance or constriction of their extremities. This therefore is to be attempted by the same remedies in the case of suppression, as those prescribed in the cases of retention (MIV—MVI). The tonics, however, and cold bathing (MIV) seem to be less properly adapted to the cases of suppression, and have appeared to me of ambiguous effect.

MXII.

It commonly happens in the cases of suppression, that though the menses do not flow at their usual periods, there are often at those periods some marks of an effort having a tendency to produce the discharge. It is therefore at those times especially when the efforts of the system are concurring, that we ought to employ the remedies for curing a suppression; and it is commonly fruitless to employ them at other times, unless they be such as require some continuance in their use to produce their effects.

MXIII.

Nearly similar to the cases of suppression, are those cases in which the menses flow after longer intervals and in lesser quantity than usual; and when these cases are attended with the disorders in the system (MX) they are to be cured by the same remedies as the cases of entire suppression.

MXIV.

MXIV.

It may be proper in this place to take notice of the dysmenorrhœa, or cases of menstruation in which the menses seem to flow with difficulty, and are accompanied with much pain in the back, loins, and lower belly. We impute this disorder partly to some weaker action of the vessels of the uterus, and partly, perhaps more especially, to a spasm of its extreme vessels. We have commonly found the disease relieved by employing some of the remedies of suppression immediately before the approach of the period, and at the same time employing opiates.

C H A P. IX.

OF SYMPTOMATIC HEMORRHAGIES.

MXV.

I HAVE thought it very improper in this work, to treat of those morbid affections that are almost always symptomatic of other more primary diseases; and this for several reasons, particularly because it introduces a great deal of confusion in directing practice, and leads physicians to employ palliative measures only. I shall here, however, deviate a little from my general plan, to make some reflections upon symptomatic hemorrhagies.

MXVI.

The hemorrhagies of this kind that especially deserve our notice, are the Hematemesis, or Vomiting of Blood; and the Hematuria, or the Voiding of Blood from the urinary passage. Upon these I am here to make some remarks;

marks ; because, though they are very generally symptomatic, it is possible they may be sometimes primary and idiopathic affections ; and because they have been treated of as primary diseases in almost every system of the practice of physic.

S E C T. I.

Of the HEMATEMESIS, or VOMITING of BLOOD.

MXVII.

I HAVE said above (in DCCCCXLV) in what manner blood thrown out from the mouth may be known to proceed from the stomach, and not from the lungs ; but it may be proper here to say more particularly, that this may be certainly known, when the blood is brought up manifestly by vomiting without any coughing ; when this vomiting has been preceded by some sense of weight, anxiety, and pain, in the region of the stomach ; when the blood brought up is of a black and grumous appearance, and when it is manifestly mixed with other contents of the stomach ; we can seldom have any doubt of the source from whence the blood proceeds, and therefore of the existence of the disease we treat of.

MXVIII.

MXVIII.

We must allow it to be possible that a plethoric state of the body from general causes may be accompanied with causes of a peculiar determination and afflux of blood to the stomach, so as to occasion an hemorrhagy there, and thence a vomiting of blood; and in such a case this appearance might be considered as a primary disease. But the history of diseases in the records of physic, afford little foundation for such a supposition; and on the contrary, the whole of the instances of a vomiting of blood which have been recorded, are pretty manifestly symptomatic of a more primary affection.

Of such symptomatic vomitings of blood, the chief instances are the following.

MXIX.

One of the most frequent is that which appears in consequence of a suppression of an evacuation of blood which had been for some time before established in another part of the body, particularly that of the menstrual flux in women.

MXX.

There are instances of a vomiting of blood happening from the *retention* of the menses:

M 2

But

But such instances are very uncommon; as a retention of the menses rarely happens in consequence of, or even with, a plethoric state of the body; and as rarely does it produce that, or the hemorrhagy in question.

There are instances of a vomiting of blood happening to pregnant women; that might therefore also be imputed to the suppression of the menses, which happens to women in that state. There have indeed been more instances of this than of the former case; but the latter are still very rare; for although the blood which used to flow monthly before impregnation, is, upon this taking place, retained, it is commonly so entirely employed in dilating the uterine vessels, and in the growth of the foetus, that it is seldom found to produce a plethoric state of the body, requiring a vicarious outlet.

The vomiting of blood, therefore, that is vicarious of the menstrual flux, is that which commonly and almost only happens upon a suppression of that flux, after it had been for some time established.

MXXI.

When such a suppression happens, it may be supposed to operate by inducing a plethoric state of the whole body, and thereby occasioning hemorrhagy from other parts of it; and hemorrhagies from many different parts of the body have been observed by physicians

as occurring in consequence of the suppression we speak of. It is however the great variety of such hemorrhagies, that leads me to think, that with the plethoric state of the whole body there must be always some peculiar circumstances in the part from which the blood flows, that determines its afflux to that particular, often singularly odd, part; and therefore, that such hemorrhagies may from these circumstances occur without any considerable plethora at the same time prevailing in the whole system.

MXXII.

It is to be observed, that if we are to expect an hemorrhagy in consequence of a suppression of the menses inducing a plethoric state of the system, we should expect especially an hemoptysis, or hemorrhagy from the lungs, as a plethora might be expected to shew its effects especially there; and accordingly, upon occasion of suppressed menses, that hemorrhagy occurs more frequently than any other: But even this, when it does happen, neither in its circumstances nor its consequences, leads us to suppose, that at the same time any considerable or dangerous plethora prevails in the body.

MXXIII.

These considerations in MXXI, MXXII, will, I apprehend, apply to our present sub-

ject ; and I would therefore allege, that a hematemesis may perhaps depend upon particular circumstances of the stomach determining an afflux of blood to that organ, and may therefore occur without any considerable or dangerous plethora prevailing in the system. What are the circumstances of the stomach, which, upon the occasion mentioned, may determine an afflux of blood to it, I cannot certainly or clearly explain ; but presume that it depends upon the connexion and consent which we know to subsist between the uterus and the whole of the alimentary canal, and especially that principal part of it the stomach.

MXXIV.

From these reflections, we may, I think, draw the following conclusions.

I. That the hematemesis we speak of is hardly ever a dangerous disease.

II. That it will hardly ever require the remedies suited to the cure of active hemorrhagy ; and at least that it will require these only in those unusual cases in which there appear strong marks of a general plethora, and in which the vomiting of blood appears to be considerably active, very profuse, and frequently recurring.

III. That a vomiting of blood from suppressed menses, ought seldom to prevent the use of these remedies of amenorrhœa, which
might

might be improper in the case of an active idiopathic hemorrhagy.

MXXV.

Another case of symptomatic hematemesis quite analogous to that already mentioned, is the hematemesis following, and seemingly depending upon, the suppression of an hemorrhoidal flux, which had been established and frequent for some time before.

This may perhaps be explained by a general plethoric state induced by such a suppression; and indeed some degree of a plethoric state must in such a case be supposed to take place; but that supposition alone will not explain the whole of the case; for a general plethora would lead us to expect an hemoptysis (MXXII) rather than an hematemesis; and there is therefore something still wanting, as in the former case, to explain the particular determination to the stomach.

Whether such an explanation can be got from the connexion between the different parts of the sanguiferous vessels of the alimentary canal, or from the connexion of the whole of these vessels with the vena portarum, I shall not venture to determine. But in the mean time I imagine, that the explanation required is rather to be obtained from that connexion of the stomach with the hemorrhoidal affection that I have taken notice of in DCCCCXLVI.

MXXVI.

However we may explain the hematemesis occasioned by a suppression of the hemorrhoids, the considerations in MXXI, MXXII, will apply here as in the analogous case of hematemesis from suppressed menses; and will therefore allow us also to conclude here, that the disease we now treat of will seldom be dangerous, and will seldom require the same remedies that idiopathic and active hemorrhagy does.

MXXVII.

The cases of hematemesis already mentioned, may be properly supposed to be hemorrhagies of the arterial kind; but it is probable that the stomach is also liable to hemorrhagies of the venous kind. (DCCLXVIII).

In the records of physic there are many instances of vomitings of blood, which were accompanied with a tumefied spleen, which had compressed the vas breve, and thereby prevented the free return of venous blood from the stomach. How such an interruption of the venous blood may occasion an hemorrhagy from either the extremities of the veins themselves, or from the extremities of their correspondent arteries, we have explained above in DCCLXIX, and the histories of tumefied spleens compressing the vasa brevia, afford an
 excellent

excellent illustration and confirmation of our doctrine on that subject, and render it sufficiently probable that vomitings of blood often arise from such a cause.

MXXVIII.

It is also possible, that an obstruction of the liver resisting the free motion of the blood in the vena portarum, may sometimes interrupt the free return of the venous blood from the vessels of the stomach, and thereby occasion a vomiting of blood; but the instances of this are neither so frequent nor so clearly explained as those of the former case.

MXXIX.

Beside these cases depending on the state of the liver or spleen, it is very probable that other hemorrhagies of the stomach are frequently of the venous kind.

The disease named by Sauvages Melæna, and by other writers commonly termed the Morbus Niger (DCCLXXII), consisting in an evacuation either by vomiting or by stool, and sometimes in both ways, of a black and grumous blood, can hardly be otherwise occasioned, than by a venous hemorrhagy from some part of the internal surface of the alimentary canal.

It is, indeed, possible, that the bile may sometimes put on a black and viscid appearance,

ance, and give a real foundation for the appellation of an *Atra Bilis* : But it is certain, that instances of this are very rare ; and it is highly probable, that what gave occasion to the notion of an *atra bilis* among the ancients, was truly the appearance of blood poured into the alimentary canal in the manner I have mentioned ; and which appearance, we know, the blood always puts on when it has stagnated there for any length of time. I suppose it is now generally thought, that Boerhaave's notion of such a matter existing in the mass of blood, is without any foundation ; whilst, by dissections in modern times, it appears very clearly, that the *morbis niger* presenting such an appearance of blood, always depends upon the effusion and stagnation I have mentioned.

MXXX.

From this account of the *melæna* it will appear, that vomitings of blood may arise in consequence of blood being poured out in the manner I have mentioned, either into the cavity of the stomach itself, or into the superior portions of the intestines, from whence matters often pass into the stomach.

MXXXI.

Both in the case of the *malæna*, and in the analogous cases from affections of the spleen or liver, it will appear, that the vomitings of
blood

blood occurring must be considered as symptomatic affections, not at all to be treated as a primary active hemorrhagy, but by remedies, if any such be known, that may resolve the primary obstructions.

MXXXII.

I believe I have now mentioned almost the whole of the causes producing an hematemesis; and certainly the causes mentioned, are those which most commonly give occasion to that symptom. Possibly, however, there may be some other causes of it, such as that singular one mentioned by Sauvage of an aneurism of the aorta bursting into the stomach; and it is possible, that some diseases of other contiguous parts, which have become closely adhering to the stomach, may sometimes, by a rupture into the cavity of the stomach, pour blood into it, which is afterwards rejected by vomiting. It is possible also, that abscesses and ulcerations of the stomach itself, may sometimes pour blood into its cavity to be thrown up by vomiting.

I did not think it necessary, among the symptomatic vomitings of blood, to enumerate those from external violence, nor, what is analogous to it, that which arises from violent straining to vomit; which last, however, is much more rare than might be expected. In either of these cases the nature of the disease cannot be doubtful, and the management of it

will be readily understood from what has been delivered above with respect to moderating and restraining hemorrhagy in general.

S E C T. II.

Of the HEMATURIA, or the VOIDING of BLOOD from the URINARY PASSAGE.

MXXXIII.

IT is alleged, that an hematuria has occurred without any other symptom of an affection of the kidneys or urinary passages being present at the same time ; and as this happened to plethoric persons, and recurred at fixed periods, such a case has been supposed to be an instance of idiopathic hematuria, and of the nature of those active hemorrhagies I have treated of before.

MXXXIV.

I cannot positively deny the existence of such a case ; but must observe, that there are very few instances of such upon the records of physic ; that none have ever occurred to my observation, or to that of my friends ; and that the observations adduced may be fallacious, as I have frequently observed an hematuria

turia without symptoms of other affection of the kidney or urinary passages being, for the time, present ; whilst, however, fits of a nephralgia calculosa having, before or soon after, happened, rendered it to me sufficiently probable, that the hematuria was owing to a wound made by a stone present in some part of the urinary passages.

MXXXV.

The existence of an idiopathic hematuria is further improbable, as a general plethora is more likely to produce an hemoptysis (MXXII), and as we do not well know of any circumstances which might determine more particularly to the kidneys. An idiopathic hematuria, therefore, must certainly be a rare occurrence ; and instances of symptomatic affections of the same kind are very frequent.

MXXXVI.

One of the most frequent is, that hematuria which attends the nephralgia calculosa, and seems manifestly to be owing to a stone wounding the internal surface of the pelvis of the kidney or of the ureter. In such cases, the blood discharged with the urine is sometimes of a pretty florid colour, but for the most part is of a dark hue ; the whole of it is sometimes diffused or dissolved, and therefore
entirely

entirely suspended in the urine; but if it is in any large quantity, a portion of it is deposited to the bottom of the vessel containing the voided blood and urine. On different occasions the blood voided puts on different appearances. If the blood poured out in the kidney has happened to stagnate for some time in the ureters or bladder, it is sometimes coagulated, and the coagulated part is afterwards broken down into a grumous mass of a black or dark colour, and therefore gives the same colour to the urine voided; or if the quantity of broken down blood is small, it gives only a brownish urine resembling coffee.

It sometimes also happens, that the blood stagnating and coagulating in the ureters, takes the form of these vessels, and is therefore voided under the appearance of a worm; and if the coagulated blood happens to have, as it may sometimes have, the gluten separated from the red globules, these wormlike appearances have their external surface whitish, and the whole seemingly forming a tube containing a red liquor. I have sometimes observed the blood which had seemingly been coagulated in the ureter, come away in an almost dry state, resembling the half burnt wick of a candle.

MXXXVII.

These are the several appearances of the blood voided in the hematuria calculosa, when
it

it proceeds especially from the kidneys or ureter ; and many of the same appearances are observed when the blood proceeds only from the bladder when a stone is lodged there ; but the attending symptoms will commonly point out the different seat of the disease.

In one case, when a quantity of blood from the kidney or ureter is coagulated in the bladder, and is therefore difficultly thrown out from this, the pain and uneasiness on such an occasion may appear chiefly to be in the bladder, though it contains no stone ; but the antecedent symptoms will commonly discover the nature of the disease.

MXXXVIII.

In any of the cases of the hematuria calculosa it will hardly be necessary to employ the remedies suited to an active hemorrhagy. It will be proper only to employ the regimen fit for moderating hemorrhagy in general, and particularly here to avoid every thing or circumstance that might irritate the kidneys or ureters. Of such cases of irritation there is none more frequent or more considerable than the presence of hardened fæces in the colon ; and these therefore are to be frequently removed, by the frequent use of gentle laxatives.

MXXXIX.

The hematuria calculosa may be properly considered as a case of the hematuria violenta ;
and

and therefore I subjoin to that the other instances of hematuria from external violence; such as that from external contusion on the region of the kidney, and that from the violent or long continued exercise of the muscles incumbent on the kidneys. An instance of the latter cause occurs especially in riding.

MXL.

It may also be considered as a case of the hematuria violenta, when the disease occurs in consequence of the taking in of certain acrid substances, which pass again especially by the urinary passages; and, by inflaming and swelling the neck of the bladder, bring on a rupture of the over distended blood vessels, and give occasion to a bloody urine. The most noted instance of this is in the effect of cantharides in a certain quantity, any way introduced into the body. And possibly some other acrids may have the same effect.

MXLI.

Beside these most frequent instances of hematuria, which cannot be considered as idiopathic hemorrhagies, there are some other instances of hematuria mentioned by authors, that are still however manifestly symptomatic; such as a discharge of blood from the urinary passages, in consequence of a suppression of either the menstrual or hemorrhoidal flux.

flux. These may be considered as analogous to the hematemesis produced by the like causes; and the several reflections made above on that subject, will, I think, apply here, and particularly the conclusions formed in MXXIV. Instances, however, of either of these cases, and especially of the first, have been extremely rare.

MXLII.

Of such symptomatic hematuria there is however one instance deserving notice; and that is, when a suppression of the hemorrhoidal flux, either by a communication of vessels, or merely by the vicinity of parts, occasions a determination of the blood into the vessels of the neck of the bladder, which in consequence of a rixis or anastomosis, pour out blood to be voided either with or without the urine. This case is what has been named the Hemorrhoides Vesicæ; and with some propriety, when it is manifestly an evacuation vicarious of what had before been usually made from the rectum. With respect to the management of the hemorrhoides vesicæ, I would apply the whole of the doctrines that I have delivered above, with respect to the cure of the proper hemorrhoidal affection.

MXLIII.

There remains still to be mentioned one other instance of symptomatic hematuria, which

which is that which happens in the case of confluent and putrid small pox, as well as in several other instances of putrid diseases. The blood, in such cases, may be presumed to come from the kidneys; and I apprehend that it comes from thence in consequence of that fluidity which is always produced in the blood approaching to a putrid state. Such hematuria, therefore, is not to be considered as a symptom of any affection of the kidneys, but merely as a mark of the putrescent state of the blood.

MXLIV.

In certain diseases the urine is discharged of such a deep red colour, as to give a suspicion of its being tinged by blood present in it; and this has given occasion to Sauvages, amongst the other species of hematuria, to mark the hematuria spuria, and the hematuria lateritia; both of which, however, he supposes to be without any blood present in the urine. In many cases it is of importance, in ascertaining the nature of a disease, to determine whether the red colour of urine be from blood present in it, or from a certain state of the salts and oils which are always in greater or lesser proportion constituent parts of the urine; and the question may be commonly determined by the following considerations.

It has been observed above, that when any considerable quantity of blood is voided with the urine, there is always a portion of it deposited

posited at the bottom of the vessel containing the voided blood and urine ; and in such a case there will be no doubt in attributing the colour of the urine floating above to some part of the blood diffused in it. The question, therefore, with respect to the presence of blood in the urine can only occur when no such deposition as I have mentioned appears ; and when the blood that may be supposed to be present is dissolved or diffused, and therefore entirely suspended in the urine. In this case the presence of the blood may be commonly known, 1st, By the colour which blood gives, different from any urine without blood that I have ever seen ; and I think a little experience will enable most persons to make this distinction. 2dly, By this, that the presence of blood always diminishes the transparency of the urine with which it is mixed ; and it is very seldom that urine, though very high coloured, loses its transparency ; at least this hardly ever appears, if the urine is examined when recently voided. 3dly, When urine has blood mixed with it, it tinges a piece of linen dipped into it with a red colour, which the highest coloured urine without blood, never does. 4thly, High coloured urine without blood, upon cooling, and remaining at rest in a vessel, almost always deposits a lateritious sediment ; and if upon any occasion bloody urine should deposit a sediment that may be of a portion of the blood formerly diffused in it, the difference, however, may be discerned

discerned by this, that the sediment deposited by urine without blood, upon the urine's being again heated, will be entirely redissolved, which will not happen to any sediment from blood. Lastly, we know no state of urine without blood, which shews any portion of it coagulable by a heat equal to that of boiling water; but blood diffused in urine is still coagulable by such a heat; and by this test, therefore, the presence of blood in urine may be commonly ascertained.



B O O K V.

OF PROFLUVIA, OR FLUXES,
WITH PYREXIA.

MXLV.

FORMER nosologists have established a class of diseases under the title of Fluxes, or Profluvia; but as in this class they have brought together a great number of diseases, which have nothing in common, excepting the single circumstance of an increased discharge of fluids, and which also are, in other respects, very different from one another; I have avoided so improper an arrangement, and have distributed most of the diseases comprehended in such a class by the nosologists, into places more natural and proper for them. I have, indeed, still employed here the general title; but I confine it to such

such fluxes only as are constantly attended with pyrexia, and which therefore necessarily belong to the class of diseases of which I am now treating.

Of the fluxes which may be considered as being very constantly febrile diseases, there are only two, the *catarrh* and *dysentery*; and of these therefore I now proceed to treat.

C H A P. I.

O F T H E C A T A R R H.

MXLVI.

THE catarrh is an increased excretion of mucus from the mucous membrane of the nose, fauces, and bronchiæ, attended with pyrexia.

Practical writers and nosologists have distinguished the disease by different appellations, according as it happens to affect those different parts of the mucous membrane, the one part more or less than the other : But I am of opinion, that the disease, although affecting different parts, is always of the same nature, and proceeds from the same cause. Very commonly, indeed, those different parts are affected at the same time ; and therefore there can be little room for the distinction mentioned.

The disease has been frequently treated of under the title of Tussis, or Cough ; and a
cough.

cough, indeed, always attends the chief form of catarrh, that is, the increased excretion from the bronchiæ; but a cough is so often a symptom of many other affections, which are very different from one another, that it is improperly employed as a generic title.

MXLVII.

The remote cause of catarrh is most commonly cold applied to the body. This application of cold producing catarrh, can in many cases be distinctly observed; and I believe it would always be so, were men acquainted with, and attentive to, the circumstances which determine cold to act upon the body. See XCIV—XCVI.

From the same paragraphs we may learn what in some persons gives a predisposition to catarrh.

MXLVIII.

The disease, of which I am now to treat, generally begins with some difficulty of breathing through the nose, and with a sense of some fulness stopping up that passage. This is also often attended with some dull pain and a sense of weight in the forehead, as well as some stiffness in the motion of the eyes. These feelings, sometimes at their very first beginning, and always soon after, are attended with the distillation from the nose; and sometimes from

from the eyes, of a thin fluid, which is often found to be somewhat acrid, both by its taste, and by its fretting the parts over which it passes.

MXLIX.

These symptoms constitute the *coryza* and *gravedo* of medical authors, and are commonly attended with a sense of lassitude over the whole body. Sometimes cold shiverings are felt, at least the body is more sensible than usual to the coldness of the air; and with all this the pulse becomes, especially in the evenings, more frequent than ordinary.

ML.

These symptoms seldom continue long before they are accompanied with some hoarseness, and a sense of roughness and soreness in the trachea, and with some difficulty of breathing, attributed to a sense of straitness of the chest, and attended with a cough, which seems to arise from some irritation felt at the glottis. The cough is generally at first dry, occasioning pains about the chest, and more especially in the breast. Sometimes, together with these symptoms, pains resembling those of the rheumatism are felt in several parts of the body, particularly about the neck and head. While these symptoms take place,

the appetite is impaired, some thirst arises, and a general lassitude is felt over all the body.

MLI.

These symptoms (MXLVIII—ML) mark the violence and height of the disease; which, however, does not commonly continue long. By degrees the cough becomes attended with a copious excretion of mucus; which is at first thin, but gradually becoming thicker, is brought up with less frequent and less laborious coughing. The hoarseness and foreness of the trachea likewise going off, the febrile symptoms abating, the cough becoming less frequent, and with less expectoration, the disease soon after ceases altogether.

MLII.

Such is generally the course of this disease, which is commonly neither tedious nor dangerous; but, upon some occasions, it is in both respects otherwise. A person affected with catarrh seems to be more than usually liable to be affected by cold air; and in that condition, if exposed to cold, the disease, which seemed to be yielding, is often brought back with greater violence than before; and is rendered not only more tedious than otherwise it would have been, but also more dangerous by the supervening of other diseases.

MLIII.

MLIII.

Some degree of the cynanche tonsillaris often accompanies the catarrh ; and, when the latter is aggravated by a fresh application of cold, the cynanche also becomes more violent and dangerous, in consequence of the cough which is present at the same time.

MLIV.

When a catarrh has been occasioned by a violent cause ; when it has been aggravated by improper management ; and especially when it has been rendered more violent by fresh and repeated applications of cold, it often passes into a pneumonic inflammation attended with the utmost danger.

MLV.

Unless, however, such accidents as those of MLII—MLIV, happen, a catarrh, in sound persons not far advanced in life, is, I think, always a slight disease, and attended with little danger. But, in persons of a phthical disposition, a catarrh may readily produce an hæmoptysis, or perhaps form tubercles in the lungs ; and more certainly, in persons who have tubercles already formed in the lungs, an accidental catarrh may occasion the inflam-

mation of these tubercles, and in consequence produce a phthisis pulmonalis.

MLVI.

In elderly persons, a catarrh sometimes proves a dangerous disease. Many persons, as they advance in life, and especially after they have arrived at old age, have the natural mucus of the lungs poured out in greater quantity, and consequently requiring a frequent expectoration. If therefore a catarrh happen to such persons, and increase the afflux of fluids to the lungs, with some degree of inflammation, it may produce the peripneumonia notha, which in such cases is very often fatal. See CCCLXXVI—CCCLXXXII.

MLVII.

The proximate cause of catarrh seems to be an increased afflux of fluids to the mucous membrane of the nose, fauces, and bronchiæ, along with some degree of inflammation affecting these parts. The latter circumstance is confirmed by this, that in the case of catarrh, the blood drawn from a vein, commonly exhibits the same inflammatory crust which appears in the case of phlegmasiæ.

MLVIII.

The application of cold which occasions a catarrh, probably operates by diminishing the perspiration usually made by the skin, and which is therefore determined to the mucous membrane of the parts above mentioned. As a part of the weight which the body daily loses by insensible evacuation, is owing to an exhalation from the lungs, there is probably a connexion between this exhalation and the cutaneous perspiration, so that the one may be increased in proportion as the other is diminished : And therefore we may understand how the diminution of cutaneous perspiration, in consequence of the application of cold, may increase the afflux of fluids to the lungs, and thereby produce a catarrh.

MLIX.

There are some observations made by Dr. James Keil which may seem to render this matter doubtful ; but there is a fallacy in his observations. The evident effects of cold in producing coryza, leave the matter in general without doubt ; and there are several other circumstances which show a connexion between the lungs and the surface of the body.

MLX.

Whether, from the suppression of perspiration, a catarrh be produced merely by an increased afflux of fluids, or whether the matter of perspiration be at the same time determined to the mucous glands, and there excite a particular irritation, may be uncertain; but the latter supposition is sufficiently probable.

MLXI.

Although, in the case of a common catarrh, which is in many instances sporadic, it may be doubtful whether any morbid matter be applied to the mucous glands; it is, however, certain, that the symptoms of a catarrh do frequently depend upon such a matter being applied to these glands; as appears from the case of measles, chincough, and especially from the frequent occurrence of contagious and epidemical catarrh.

MLXII.

The mention of this last leads me to observe, that there are two species of catarrh, as I have marked in my Synopsis of Nosology. One of these, as I suppose, is produced by cold alone, as has been explained above; and the other seems manifestly to be produced by a specific contagion.

Of

Of such contagious catarrhs, I have pointed out in the Synopsis many instances occurring from the 14th century down to the present day. In all these instances the phenomena have been much the same; and the disease has always been particularly remarkable in this, that it has been the most widely and generally spreading epidemic known. It has seldom appeared in any one country of Europe, without appearing successively in every other part of it; and in some instances, it has been even transferred to America, and has been spread over that continent, so far as we have had opportunities of being informed.

MLXIII.

The catarrh from contagion appears with nearly the same symptoms as those mentioned MXLVIII—ML. It seems often to come on in consequence of the application of cold. It comes on with more cold shivering than the catarrh arising from cold alone, and sooner shows febrile symptoms, and these likewise in a more considerable degree. Accordingly, it more speedily runs its course, which is commonly finished in a few days. It sometimes terminates by a spontaneous sweat; and this, in some persons, produces a miliary eruption. It is, however, the febrile state of this disease especially, that is finished in a few days; for the cough, and other catarrhal symptoms, do frequently continue longer; and often, when

they appear to be going off, they are renewed by any fresh application of cold.

MLXIV.

Considering the number of persons who are affected with catarrh, of either the one species or the other, and escape from it quickly without any hurt, it may be allowed to be a disease very free from danger ; but it is not always to be considered as such ; for in some persons it is accompanied with pneumonic inflammation. In the phthisically disposed, it often accelerates the coming on of phthisis ; and in elderly persons, it frequently proves fatal in the manner explained above, MLIV and MLVI.

MLXV.

The cure of catarrh is nearly the same, whether it proceed from cold or contagion ; with this difference, that in the latter case, remedies are commonly more necessary than in the former.

In the cases of a moderate disease, it is commonly sufficient to avoid cold, and to abstain from animal food for some days ; or perhaps to lie a bed, and, by taking frequently of some mild and diluent drink a little warmed, to promote a very gentle sweat ; and after these to take care to return very gradually only, to the use of the free air.

MLXVI.

MLXVI.

When the disease is more violent, not only the antiphlogistic regimen must be exactly observed, but various remedies also become necessary.

To take off the phlogistic diathesis which always attends this disease, bloodletting, in a larger or smaller quantity, and repeated according as the symptoms shall require, is the proper remedy.

For restoring the determination of the fluids to the surface of the body, and at the same time for expediting the secretion of mucus in the lungs, which may take off the inflammation of its membrane, vomiting is the most effectual means.

For the latter purpose, it has been supposed, that squills, gum ammoniac, the volatile alkali, and some other medicines, might be useful: But their efficacy has never appeared to me to be considerable; and, if squills have ever been very useful, it seems to have been rather by their emetic, than by their expectorant powers.

When the inflammatory affections of the lungs seem to be considerable, it is proper, besides bloodletting, to apply blisters on some part of the thorax.

As a cough is often the most troublesome circumstance of this disease, so demulcents

may be employed to alleviate it. See CCCLXXIII.

But, after the inflammatory symptoms have much abated, if the cough should still continue, opiates afford the most effectual means of relieving it; and, in the circumstances just now mentioned, they may be very safely employed. See CCCLXXV.

After the inflammatory and febrile states of this disease are almost entirely gone, the most effectual means of discussing all remains of the catarrhal affection, is by some exercise of gestation diligently employed.

C H A P . II.

O F T H E D Y S E N T E R Y .

M L X V I I .

TH E dysentery is a disease in which the patient has frequent stools, accompanied with much griping, and followed by a tenesmus. The stools, though frequent, are generally in small quantity ; and the matter voided is chiefly mucus, sometimes mixed with blood. At the same time, the natural fæces seldom appear ; and, when they do, it is generally in a compact and hardened form.

M L X V I I I .

This disease occurs especially in summer and autumn, at the same time with autumnal intermittent and remittent fevers ; and with these it is sometimes combined or complicated.

MLXIX.

The disease comes on sometimes with cold shiverings, and other symptoms of pyrexia; but more commonly the symptoms of the topical affection appear first. The belly is colic, with an unusual flatulence in the bowels. Sometimes, though more rarely, some degree of diarrhœa is the first appearance. In most cases the disease begins with griping, and a frequent inclination to go to stool. In indulging this, little is voided; but some tenesmus attends it. By degrees the stools become more frequent, the griping more severe, and the tenesmus more considerable. Along with these symptoms there is a loss of appetite; and frequently sickness, nausea, and vomiting, also affecting the patient. At the same time there is always more or less of pyrexia present, which is sometimes of the remittent kind, and observes a tertian period. Sometimes the fever is manifestly inflammatory, and very often of a putrid kind. These febrile states continue to accompany the disease during its whole course, especially when it terminates soon in a fatal manner. In other cases, the febrile state almost entirely disappears, while the proper dysenteric symptoms remain for a long time after.

MLXX.

In the course of the disease, whether of a shorter or longer duration, the matter voided by stool is very various. Sometimes it is merely a mucous matter, without any blood, exhibiting that disease which Dr. Roderer has named the *morbus mucosus*, and others the *dysenteria alba*. For the most part, however, the mucus discharged is more or less mixed with blood. This sometimes appears only in streaks amongst the mucus; but at other times is more copious, tinging the whole of the matter discharged; and upon some occasions a pure and unmixed blood is voided in considerable quantity. In other respects, the matter voided is variously changed in colour and consistence, and is commonly of a strong and unusually fetid odour. It is probable, that sometimes a genuine pus is voided; and frequently a putrid sanies, proceeding from gangrenous parts. There are very often mixed with the liquid matter some films of a membranous appearance, and frequently some small masses of a seemingly sebaceous matter.

MLXXI.

While the stools consisting of these various matters, are, in many instances, exceedingly frequent, it is seldom that natural fæces appear in them; and when they do appear, it
is,

is, as I have mentioned, in the form of scybala, that is, in somewhat hardened, separate balls. When these are voided, whether by the efforts of nature, or as solicited by art, they procure a remission of all the symptoms, and more especially of the frequent stools, griping, and tenesmus.

MLXXII.

Accompanied with these circumstances, the disease proceeds for a longer or a shorter time. When the pyrexia attending it is of a violent inflammatory kind, and more especially when it is of a very putrid nature, the disease often terminates fatally in a very few days, with all the marks of a supervening gangrene. When the febrile state is more moderate, or disappears altogether, the disease is often protracted for weeks, and even for months; but, even then, after a various duration, it often terminates fatally, and generally in consequence of a return and considerable aggravation of the inflammatory and putrid states. In some cases, the disease ceases spontaneously; the frequency of stools, the griping, and tenesmus, gradually diminishing, while natural stools return. In other cases, the disease, with moderate symptoms, continues long, and ends in a diarrhoea, sometimes accompanied with lenteric symptoms.

MLXXIII.

The remote causes of this disease have been variously judged of. It generally arises in summer or autumn, after considerable heats have prevailed for some time, and especially after very warm and at the same time very dry states of the weather ; and the disease is much more frequent in warm, than in cooler climates. It happens, therefore, in the same circumstances and seasons which considerably affect the state of the bile in the human body ; but as the cholera is often without any dysenteric symptoms, and copious discharges of bile have been found to relieve the symptoms of dysentery, it is difficult to determine what connexion the disease has with the state of the bile.

MLXXIV.

It has been observed, that the effluvia from very putrid animal substances, readily affect the alimentary canal ; and upon some occasions they certainly produce a diarrhœa ; but, whether they ever produce a genuine dysentery, I have not been able to learn with certainty.

MLXXV.

The dysentery does often manifestly arise from the application of cold, but the disease
is

is always contagious ; and, by the propagation of such contagion, independent of cold, or other exciting causes, it becomes epidemic in camps and other places. It is, therefore, to be doubted, if the application of cold does ever produce the disease, unless where the specific contagion has been previously received into the body : And upon the whole, it is probable, that a specific contagion is to be considered as always the remote cause of this disease.

MLXXVI.

Whether this contagion, like many others, be of a permanent nature, and only shows its effects in certain circumstances which render it active, or if it be occasionally produced, I cannot determine. Neither, if the latter supposition be received, can I say by what means it may be generated. As little do we know any thing of its nature, considered in itself ; or at most this only, that, in common with many other contagions, it appears to be commonly of a putrid nature, and capable of inducing a putrescent tendency in the human body. This, however, does not at all explain its peculiar power in inducing those symptoms which properly and essentially constitute the disease of dysentery. (MLXXVII).

MLXXVII.

Of these symptoms the proximate cause is still obscure. The common opinion has been, that the disease depends upon an acrid matter received into, or generated in the intestines themselves, exciting their peristaltic motion, and thereby producing the frequent stools which occur in this disease. But this supposition cannot be admitted; for, in all the instances known of acrid substances applied to the intestines and producing frequent stools, they at the same time produce copious stools, as might be expected from acrid substances applied to any length of the intestines. This, however, is not the case in dysentery; in which the stools, however frequent, are generally in very small quantity, and such as may be supposed to proceed from the lower parts of the rectum only. With respect to the superior portions of the intestines, and particularly those of the colon, it is probable they are under a preternatural and considerable degree of constriction: For, as I have observed above, the natural fæces are seldom voided; and when they are, it is in a form which gives reason to suppose, they have been long retained in the cells of the colon, and consequently that the colon had been affected with a preternatural constriction. This is confirmed by almost all the dissections which have been made of the bodies of dysenteric patients,

in

in which, when gangrene had not entirely destroyed the texture and form of the parts, considerable portions of the great guts have been found affected with a very considerable constriction.

MLXXVIII.

I apprehend, therefore, that the proximate cause of dysentery, or at least the chief part of the proximate cause, consists in a preternatural constriction of the colon, occasioning at the same time those spasmodic efforts which are felt in severe gripings, and which efforts, propagated downwards to the rectum, occasion there the frequent mucous stools and tenesmus. But, whether this explanation shall be admitted or not, it will still remain certain, that hardened fæces retained in the colon are the cause of the griping, frequent stools, and tenesmus; for the evacuation of these fæces, whether by nature or by art, gives relief from the symptoms mentioned; and it will be more fully and usefully confirmed by this, that the most immediate and successful cure of dysentery is obtained by an early and constant attention to the preventing the constriction, and the frequent stagnation of fæces in the colon.

MLXXIX.

In this manner I have endeavoured to ascertain the proximate cause of dysentery, and
therefore

therefore to point out also the principal part of the cure, which, from want of the proper view of the nature of the disease, seems to have been in several respects fluctuating and undetermined among practitioners.

MLXXX.

The most eminent of our late practitioners, and of greatest experience in this disease, seem to be of opinion, that the disease is to be cured most effectually by purging assiduously employed. The means may be various; but the most gentle laxatives are usually sufficient; and as they must be frequently repeated, the most gentle are the most safe; the more especially as an inflammatory state so frequently accompanies the disease. Whatever laxatives produce an evacuation of natural fæces, and a consequent remission of the symptoms, will be sufficient to effectuate the cure. But if gentle laxatives shall not produce the evacuation now mentioned, some more powerful medicines must be employed; and I have found nothing more proper or convenient than tartar emetic, given in small doses, and at such intervals as may determine their operation to be chiefly by stool. Rhubarb, so frequently employed, is in several respects amongst the most improper purgatives.

MLXXXI.

MLXXXI.

Vomiting has been held a principal remedy in this disease ; and may be usefully employed in the beginning of it, with a view to both the state of the stomach and of the fever ; but it is not necessary to repeat it often ; and unless the emetics employed operate also by stool, they are of little service. Ipecacuanha seems to possess no specific power ; and it proves only useful when so managed as to operate chiefly by stool.

MLXXXII.

For relieving the constriction of the colon, and evacuating the retained fæces, glysters may sometimes be useful ; but they are seldom so effectual as laxatives given by the mouth ; and acrid glysters, if they be not effectual in evacuating the colon, may prove hurtful by stimulating the rectum too much.

MLXXXIII.

The frequent and severe griping attending this disease, leads almost necessarily to the use of opiates, and they are very effectual for the purpose of relieving from the gripes ; but by occasioning an interruption of the action of the small guts, they favour the constriction of the colon, and thereby sometimes aggravate the

the disease ; and if at the same time the use of them supersede in any measure the employing of purgatives, it commonly does much mischief ; I believe it indeed to be only the neglect of purging that renders the use of opiates very necessary.

MLXXXIV.

When the gripes are both frequent and severe, they may sometimes be relieved by the employment of a semicupium, or by a fomentation of the abdomen, continued for some time. In the same case, the pains may be relieved, and, as I think, the constriction of the colon may be taken off, by blisters applied to the lower belly.

MLXXXV.

At the beginning of this disease, when the fever is any way considerable, bloodletting, in patients of tolerable vigour, may be proper and necessary ; and, when the pulse is full and hard, with other symptoms of an inflammatory disposition, bloodletting ought to be repeated. But, as the fever attending dysentery is often of a putrid kind, or does, in the course of the disease, become soon of that nature, bloodletting must be employed with great caution.

MLXXXVI.

MLXXXVI.

From the account now given of the nature of this disease, it will be sufficiently obvious, that the use of astringents in the beginning of it must be absolutely pernicious.

MLXXXVII.

Whether an acrid matter be the original cause of this disease, may be uncertain ; but from the indigestion and the stagnation of fluids in the stomach which attend the disease, it may be presumed, that some acrid matters are constantly present in the stomach and intestines, and therefore that demulcents may be always usefully employed. At the same time, from this consideration that mild oily matters thrown into the intestines in considerable quantity always prove laxative, I am of opinion that the oleaginous demulcents are the most useful.

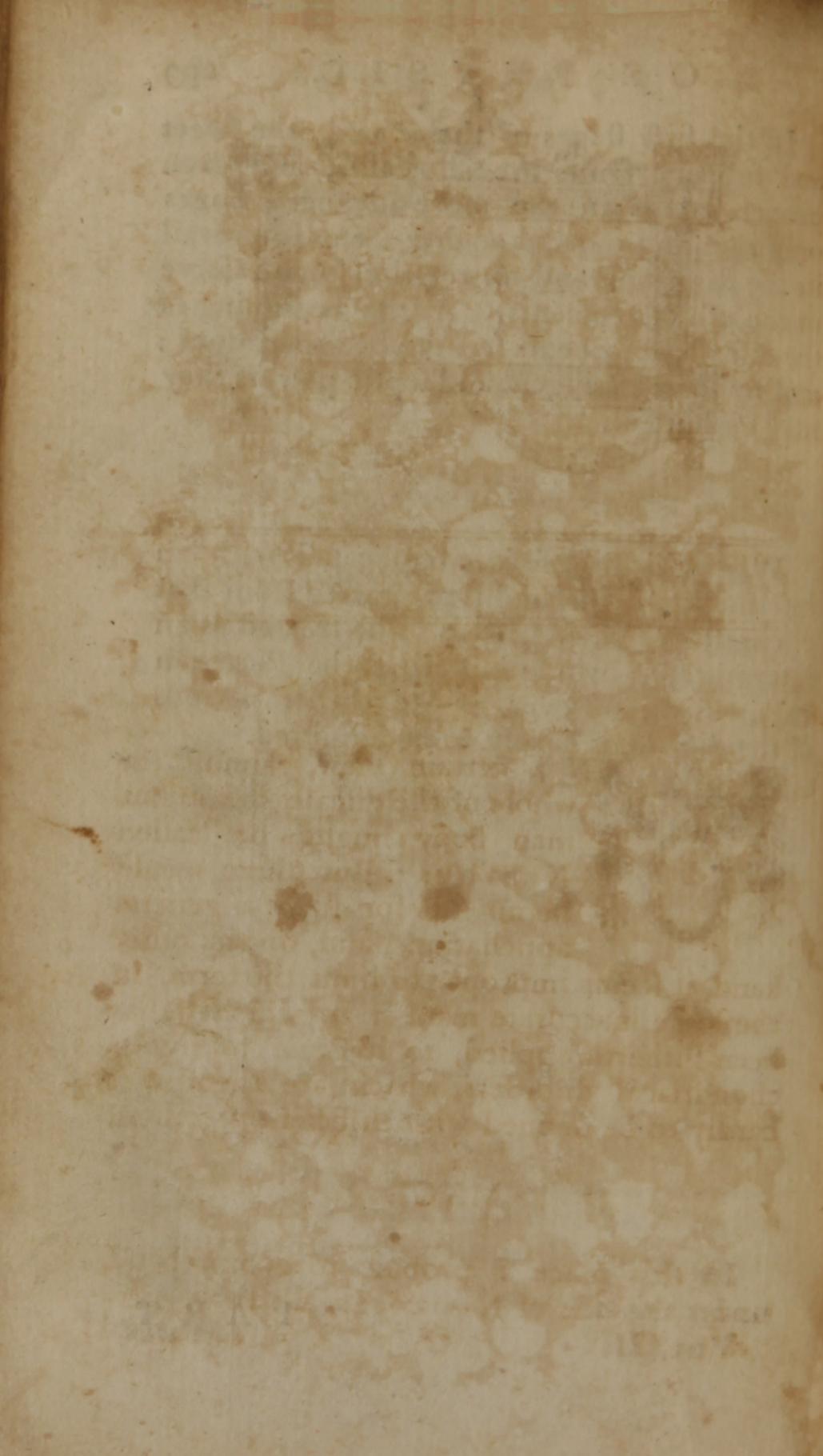
MLXXXVIII.

As this disease is so often of an inflammatory or of a putrid nature, it is evident that the diet employed in it should be vegetable and acescent. Milk in its entire state is of doubtful quality in many cases ; but some portion of the cream is often allowable, and whey is always proper.

In the first stages of the disease, the sweet and subacid fruits are allowable, and even proper. It is in the more advanced stages only that any morbid acidity seems to prevail in the stomach, and to require some reserve in the use of acescents. At the beginning of the disease, absorbents seem to be superfluous; and by their astringent and septic powers they may be hurtful.

MLXXXIX.

When this disease is complicated with an intermittent fever, and is protracted from that circumstance chiefly, it is to be treated as an intermittent, by administering the Peruvian bark, which, however, in the earlier periods of the disease, is hardly to be admitted.



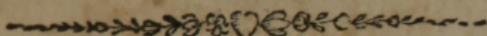
ternatural affections of sense or motion which are without pyrexia, as a part of the primary disease ; and all those which do not depend upon a topical affection of the organs, but upon a more general affection of the nervous system, and of those powers of the system upon which sense and motion more especially depend.

MXCII.

Of such diseases I have established a class, under the title of **NEUROSES**, or **NERVOUS DISEASES**. These I again distinguish, as they consist, either in the interruption and debility of the powers of sense and motion, or in the irregularity with which these powers are exercised ; and have accordingly arranged them under the four orders of *Comata*, *Adynamia*, *Spasmi*, and *Vesania*, to be defined as we proceed to treat of them more particularly.



B O O K I.

OF COMATA ; OR, OF THE LOSS OF
VOLUNTARY MOTION.

MXCIII.

UNDER this title are comprehended those affections which have been commonly called the Soporose diseases ; but they are most properly distinguished by their consisting in some interruption or suppression of the powers of sense and voluntary motion, or of what are called the animal functions. These are indeed usually suspended in the time of natural sleep : But of all the diseases to be comprehended under our title, sleep, or even the appearance of it, is not constantly a symptom. Of such diseases I can mark and properly explain two genera only, which come under the titles of *Apoplexy* and *Palsy*.

C H A P. I.

OF A P O P L E X Y.

MXCIV.

APOPLEXY is that disease in which the whole of the external and internal senses, and the whole of the voluntary motions, are in some degree abolished; while respiration and the action of the heart continue to be performed. By its being an affection of the *whole* of the powers of sense and of voluntary motion, we distinguish it from *Palsy*; and by its being with the continuance of respiration and the action of the heart, it is distinguished from *Syncope*. I have further added to the ordinary definition of apoplexy, that the abolition of the powers of sense and motion is in *some degree* only; meaning by this to imply, that, under the title of Apoplexy, are here comprehended those diseases which, as differing from it in degree only, cannot, with a view either to pathology or practice, be properly distinguished from it:

Such

Such are the diseases sometimes treated of under the names of *Carus*, *Cataphora*, *Coma*, and *Lethargus*.

MXCV.

Apoplexy, in all its different degrees, most commonly affects persons advanced in life, and especially those above sixty years of age. It most usually affects persons of large heads and short necks, persons of a corpulent habit, persons who have passed an indolent life and used a full diet, and especially those who have indulged in frequent intoxication. Men who have long laboured under a frequent and copious discharge of blood from the hemorrhoidal vessels, upon either the suppression or spontaneous ceasing of that discharge, are particularly liable to be affected with apoplexy.

MXCVI.

This disease frequently comes on very suddenly : But in many cases it is preceded by various symptoms, such as frequent fits of giddiness, frequent headaches, a hemorrhagy from the nose, some transitory interruptions of seeing and hearing, some false vision and hearing, some transitory degree of numbness or loss of motion in the extremities, some faltering of the tongue in speaking, a loss of memory, a frequent drowsiness, and frequent fits of incubus.

MXCVII.

An attention to these symptoms, and to the predisponent circumstances (MXCV), will often enable us to foresee the more violent attacks of this disease.

MXCVIII.

When the disease comes on suddenly to a considerable degree, it has been frequently observed to have been immediately induced by violent exercise ; by a full and long continued inspiration ; by a fit of anger ; by much external heat, especially that arising from a crowded assembly of people ; by warm bathing ; by intoxication ; by long stooping with the head down ; and by a tight ligature about the neck. The disease has been remarked to make its attacks most frequently in the spring season, and especially when the vernal heat suddenly succeeds to the winter cold.

MXCIX.

The symptoms denoting the presence of this disease will be sufficiently known from the definition given MXCIV. Although the whole of the body is affected with the loss of sense and motion, it sometimes takes place more upon one side of the body than the other ; and, in that case, the side least affected with

with palsy is sometimes affected with convulsions. In this disease there is often a stertorous breathing ; and this has been said to be a mark of the most violent state of the disease : But it is not always present even in the most complete form or most violent degree of the disease.

MC.

The proximate cause of this disease may be, in general, whatever interrupts the motion of the nervous power from the brain to the muscles of voluntary motion ; or, in so far as sense is affected, whatever interrupts the motion of the nervous power from the sentient extremities of the nerves to the brain.

MCI.

Such an interruption of the motions of the nervous power may be occasioned, either by *some compression of the origin of the nerves*, or by *something destroying the mobility of the nervous power*. Both these causes we must treat of more particularly ; and, first, of that of compression, seemingly the most frequent occasion of apoplexy, and perhaps the occasion of all those apoplexies arising from internal causes.

MCII.

The loss of sense and motion in particular parts of the body, may be occasioned by a compression, either of the origin of certain nerves only, or of the same nerves in some part of their course from the brain to the organs of sense and motion. Such cases of partial compression will be more properly considered hereafter; and the affection I am now to treat of being general, it must depend upon a very general compression of the origin of the nerves, or medullary portion of the brain; and therefore, this more general compression only is to be considered here.

MCIII.

This compression of the origin of the nerves, or medullary portion of the brain, may be produced in different ways; as,

1. By external violence fracturing and pressing in a part of the cranium.

2. By tumours, sometimes soft, sometimes bony, formed in different parts of the brain, or in its membranes, and becoming of such a bulk as to compress the medullary substance of the brain.

3. By the blood accumulated in the blood-vessels of the brain, and distending them to such a degree as to compress the medullary portion of the same.

4. By

4. By fluids effused in different parts of the brain, or into the cavity of the cranium, and accumulated in such quantity as to occasion the compression we treat of.

And, as to this last, it is to be remarked here, that the fluids effused may be of two kinds; that is, they may be either a portion of the common mass of blood, poured out from red vessels; or a portion of serum or colourless fluid, poured out chiefly by exhalants.

MCIV.

Of these several causes of compression, the first is not to be considered here, because the removing it does not belong to our province; and the consideration of the second may be omitted, as in most instances it is neither to be discerned nor cured by any means yet known. The third and fourth causes of compression, as they are the most frequent, and are also most properly the subjects of our art, so they are those which deserve our particular attention; and we shall therefore endeavour to trace them further back in the series of causes which may produce them.

MCV.

Both the states of over distention and of effusion, may be produced by whatever increases the afflux and impetus of the blood in

the arteries of the head ; such as violent exercise, a violent fit of anger, external heat applied, or any strong pressure upon the descending aorta.

MCVI.

But both these states of over distention and of effusion, may also and seem to be more frequently produced by causes that operate by preventing the free return of the venous blood from the vessels of the head to the right ventricle of the heart.

MCVII.

The venous vessels of the brain are of a conformation and distribution so peculiar, as lead us to believe, that Nature intended to retard the motion of the blood, and accumulate it in these vessels ; and therefore, even very small additional resistances to the motion of the blood from these towards the right ventricle of the heart, may still more readily accumulate the blood in them. Such accumulation will most readily happen in advanced life, when the venous system in general is in a plethoric state, and when this plethora takes place especially in the venous vessels of the brain. It will, in like manner, be most apt to occur in persons whose heads are large with respect to the rest of the body ; and in persons of a short neck, which is unfavourable

to the return of the venous blood from the head. The accumulation of blood in the venous vessels of the brain, will also be most likely to occur in persons of a corpulent habit, either because these may be considered to be in a plethoric state, or because obesity, by occasioning a compression of the bloodvessels in other parts of the body, more readily fills those of the brain, which are entirely free from any such compression.

MCVIII.

These are the circumstances in the constitution of the body, which, producing a slower motion and return of the venous blood from the vessels of the head, favour an accumulation and distention in them; and we now proceed to mention the several occasional causes, which, in every person, may directly prevent the free return of the blood from the vessels of the head towards the heart. Such are,

1. Stooping down with the head, or other situations of the body in which the head is long kept in a depending state, and in which the gravity of the blood increases the afflux of it by the arteries, and opposes the return of it by the veins.

2. A tight ligature about the neck, which compresses the veins more strongly than the arteries.

3. Any obstruction of a considerable number of the veins carrying the blood from the head, and more especially any considerable obstruction of the ascending vena cava.

4. Any considerable impediment of the free passage of the blood from the veins into the right ventricle of the heart ; and it is commonly by this, and the immediately preceding circumstance, that polypous concretions in the cava, or right ventricle, are found to occasion apoplexy.

5. The return of blood from the veins of the head towards the heart, is especially interrupted by every circumstance that produces a more difficult transmission of the blood through the vessels of the lungs. It is well known, that, at the end of every expiration, some interruption is given to the free transmission of the blood through the lungs ; and that this at the same time gives an interruption to the motion of the blood from the veins into the right ventricle of the heart. This clearly appears from that regurgitation of the blood in the veins which occasions the alternate heaving and subsiding that is perceived in the brain of living animals when the cranium is removed, and which is observed to be synchronous with the alternate motions of respiration. From this we readily perceive, that whatever occasions a difficulty in the transmission of the blood through the lungs, must also interrupt the free return of the venous blood from the vessels of the head ; and must therefore

therefore favour, and perhaps produce, an accumulation of blood, and an over distention in these vessels.

It is further to be observed, that as a very full inspiration, continued for any length of time, occasions such an interruption of the free transmission of the blood through the lungs, as produces a suffusion of face, and a manifest turgescence of the blood vessels of the head and neck; so every full and long continued inspiration may occasion an accumulation of blood in the vessels of the head, to a very considerable degree. Thus, as every strong exertion of the muscular force of the body requires, and is attended with, a very full and long continued inspiration, we thence learn why the violent exertions of muscular force have been so often the immediate or exciting causes of apoplexy.

It may also be remarked, that corpulency and obesity seem to operate very much, by occasioning a more difficult transmission of the blood through the vessels of the lungs. It appears, that in fat persons, from the compression of the bloodvessels in many parts of the body, the vessels of the lungs are thereby kept very full; so that upon the least increase of bodily motion, which sends the blood faster into the lungs, a more frequent and laborious respiration becomes in such persons immediately necessary. This shows, that, in such persons, the blood is not freely transmitted through the lungs; a circumstance which, as
in

in other instances, must give a constant resistance to the return of blood from the vessels of the head, and therefore favour or occasion an accumulation of blood in them.

Is the motion of the blood in the vessels of the head rendered slower by study, care, and anxiety?

MCIX.

It is to be observed further, that these several causes (MCV—MCVIII) of a preternatural fulness in the bloodvessels of the brain, may produce apoplexy in different ways, according as the fulness takes place in the arteries or in the veins.

MCX.

Accordingly, *first*, the increased afflux of blood into the arteries of the brain, and an increased action in these, may either occasion a rupture of their extremities, and thereby an effusion of red blood producing compression; or the same afflux and increased action may occasion an increased exhalation from their extremities, of a serous fluid, which, if not as quickly reabsorbed, may soon accumulate in such quantity as to produce compression.

MCXI.

Secondly, The plethoric state of the venous vessels of the brain, may operate in three different ways.

1. The fulness of the veins may give such resistance to the blood flowing into them from the arteries, as to determine the impetus of the blood to be so much greater upon the extremities of the arteries as to occasion a rupture of these, and consequently an effusion of red blood, or the *Hæmorrhagia cerebri*, which HOFFMAN considers as a frequent cause of apoplexy, and which we have before explained in DCCLXXII.

2. Whilst the same resistance to the blood flowing from the arteries into the veins, increases the impetus of the blood in the former, this may, without occasioning rupture, increase the exhalation from their exhalant extremities, and produce an effusion of a serous fluid; in the same manner as such resistance in the veins produces hydropic effusions in other parts of the body.

3. If we may suppose, as no lymphatics have been yet discovered in the brain, that the ordinary absorbents are not present there, and that the exhaled fluids are absorbed or taken up by the extremities of the veins; this will show still more clearly that a resistance to the motion of the blood in the veins of the brain, may readily produce an accumulation

lation of ferous fluid in its cavities, and consequently a compression producing apoplexy.

MCXII.

Besides these cases of apoplexy from afflux in the arteries, or resistance in the veins, an effusion of serum may happen from two other causes. The one is a relaxation of the exhalants, as in other cases of hydropic diathesis prevailing in the body; and it is not unusual for a general dropsy to end in apoplexy. The second is an over proportion of watery parts in the mass of blood, which is therefore ready to run off by the exhalants, as in the case of an ischuria renalis; which when it proves incurable, very commonly terminates in apoplexy.

MCXIII.

We have now mentioned the several causes of apoplexy depending upon compression; and from the whole it will appear, that the most frequent of all these causes is a plethoric state, or an accumulation and congestion of blood in the venous vessels of the head, operating, according to its degree, in producing over distention or effusion. The frequent operation of such a cause will especially appear from a consideration of the predisponent circumstances (MXCV), and from the antecedent symptoms (MXCVI).

MCXIV.

MCXIV.

From the view I have now given of the causes of apoplexy arising from compression, it will readily appear that there is a foundation for the common distinction of this disease into the two kinds of Sanguine and Serous. But this distinction cannot be very usefully applied in practice, as both kinds may often depend on the same cause, that is, a venous plethora, and therefore requiring very nearly the same method of cure. The only distinction that can be properly made of apoplexies from compression, is perhaps the distinction of serous apoplexy, into that depending on the plethora mentioned MCXIII, and that depending upon hydropic diathesis or an over proportion of water in the blood (MCXII); the former causes giving a proper idiopathic, the latter only a symptomatic, disease.

MCXV.

Beside the causes now mentioned, occasioning apoplexy by compression, I allege there are other causes producing the same disease, by directly destroying the mobility of the nervous power. Such causes seem to be the mephitic air arising from fermenting liquors, and from many other sources; the fumes arising from burning charcoal; the fumes.

fumes of mercury, of lead, and of some other metallic substances; opium, alcohol, and many other narcotic poisons: To all which I would add the power of cold, of concussion, of electricity, and of certain passions of the mind.

MCXVI.

None of these poisons or noxious powers seem to kill by acting first upon the organs of respiration, or upon the sanguiferous system; and I believe their immediate and direct action to be upon the nervous power, destroying its mobility, because the same poisons shew their power in destroying the irritability of muscles and of the nerves connected with them, when both these are entirely separated from the rest of the body.

MCXVII.

It appears to me probable, that the apoplectic state in some degree accompanying, and almost always succeeding, an epileptic paroxysm, does not depend upon compression, but upon a certain state of immobility of the nervous power, produced by certain circumstances in the nervous system itself, which sometimes seem to be communicated from one part of the body to another, and at length to the brain.

MCXVIII.

MCXVIII.

The same observation may be made with respect to many instances of hysteric paroxysm; and the circumstances, both of epileptic and hysteric paroxysms, ending in coma, or a degree of apoplexy, lead me to think, that also the apoplexy proceeding from retrocedent or atonic gout is of the same kind, or that it depends upon an immobility of the nervous power, rather than upon compression.

MCXIX.

It may indeed happen, that as the apoplectic and gouty predispositions do often concur in the same person; so it may consequently happen, that the apoplexy coming upon gouty persons, may sometimes depend upon compression; and dissections may, accordingly, discover that the circumstances of such a cause had preceded.

But, in many cases of apoplexy following a retrocedent or atonic gout, no such antecedent or concomitant circumstances, as commonly occur in cases of compression, do distinctly or clearly appear; while others present themselves, which point out an affection of the nervous power alone.

MCXX.

With respect, however, to the circumstances which may appear upon the dissection of persons dead of apoplexy, there may be some fallacy in judging, from those circumstances, of the cause of the disease. Whatever takes off or diminishes the mobility of the nervous power, may very much retard the motion of the blood in the vessels of the brain; and that perhaps to the degree of increasing exhalation, or even of occasioning rupture and effusion; so that, in such cases, the marks of compression may appear, upon dissection, though the disease had truly depended on causes destroying the mobility of the nervous power. This seems to be illustrated and confirmed from what occurs in many cases of epilepsy. In some of these, after a repetition of fits, recovered from in the usual manner, a fatuity is induced, which commonly depends upon a watery inundation of the brain: And in other cases of epilepsy, when fits have been often repeated without any permanent consequence, there happens at length a fatal paroxysm; and upon dissection it appears, that an effusion of blood had happened. This, I think, is to be considered as a cause of death, not as a cause of the disease; for in such cases, I suppose that the disease had diminished the action of the vessels of the brain, and thereby given occasion to a stagnation, which

which produced the appearances mentioned. And I apprehend the same reasoning will apply to the cases of retrocedent gout, which, by destroying the energy of the brain, may occasion such a stagnation as will produce rupture, effusion, and death; and in such a case, the appearances upon dissection might lead us to think that the apoplexy had depended entirely upon compression.

MCXXI.

The several causes mentioned in MCXV, are often of such power as to occasion immediate death; and therefore have not commonly been taken notice of as affording instances of apoplexy; but, as the operation of the whole of these causes is similar and analogous, and as in most instances of the operation of these causes an apoplectic state is manifestly produced, there can be little doubt in considering most of the instances of their effects as cases of apoplexy, and therefore such as fall properly under our consideration here.

MCXXII.

This disease of apoplexy is sometimes entirely recovered from; but more frequently it ends in death, or in a hemiplegia. Even when an attack of the disease is recovered from, we generally find it disposed to return; and the repeated attacks of it almost always, sooner

sooner or later, bring on the events we have mentioned.

MCXXIII.

The several events of this disease, in health, death, or another disease, may be expected and foreseen from a consideration of the predisponent circumstances (MXCV); of the antecedent symptoms (MXCVI); of the exciting causes (MXCVIII); of the violence and degree of the symptoms when the disease has come on (MXCIV); of the duration of the disease; and of the effects of the remedies employed.

MCXXIV.

From the great danger attending this disease when it has come on (MCXXII), it will readily appear, that our care should be chiefly directed to the prevention of it. This, I think, may be often done by avoiding the remote and exciting causes; and how this may be accomplished, will be obvious from the enumeration of those causes given above (MXCVIII.) But it will also appear from what is said above, that the prevention of this disease will especially depend upon obviating the predisponent cause; which, in most cases, seems to be a plethoric state of the bloodvessels of the brain. This, I think, may be obviated by different means; and, in the first
place,

place, by a proper management of exercise and diet.

MCXXV.

The exercise ought to be such as may support the perspiration, without heating the body or hurrying respiration; and, therefore, commonly by some mode of gestation. In persons not liable to frequent fits of giddiness, and who are accustomed to riding on horseback, this exercise is, of all others, the best. Walking, and some other modes of bodily exercise, may be employed with the restrictions just now mentioned; but in old men, and in men of corpulent habits, bodily exercise ought always to be very moderate.

MCXXVI.

In persons who pretty early in life show the predisposition to apoplexy, it is probable that a low diet, with a good deal of exercise, might entirely prevent the disease; but, in persons who are advanced in life before they think of taking precautions, and are at the same time of a corpulent habit, which generally supposes their having been accustomed to full living, it might not be safe to put them upon a low diet; and it may be enough that their diet be rendered more moderate than usual, especially with respect to animal food;

food ; and that, at supper, such food should be abstained from altogether.

In drinking, all heating liquors are to be abstained from, as much as former habits will allow ; and the smallest approach to intoxication is to be carefully shunned. For ordinary draught, small beer is to be preferred to plain water, as the latter is more ready to occasion costiveness, which in apoplectic habits is to be carefully avoided. The large use of tobacco in any shape, may be hurtful ; and except in cases where it has been accustomed to occasion a copious excretion from the head, the interruption of which might not be safe, the use of tobacco should be avoided ; and even in the circumstance mentioned, where it may be in some measure necessary, the use of it should at least be rendered as moderate as possible.

MCXXVII.

Evacuations by stool may certainly contribute to relieve the plethoric state of the vessels of the head ; and, upon an appearance of any unusual turgescence in these, purging will be very properly employed : But, when no such turgescence appears, the frequent repetition of large purging might weaken the body too much ; and, for preventing apoplexy, it may for the most part be enough to keep the belly regular, and rather open, by gentle laxatives. In the
summer

summer season, it may be useful to drink, every morning, of a gentle laxative mineral water, but never in large quantity.

MCXXVIII.

In the case of a plethoric state of the system, it might be supposed that bloodletting would be the most effectual means of diminishing the plethora, and of preventing its consequences: And, when an attack of apoplexy is immediately threatened, bloodletting is certainly the remedy to be depended upon; and blood should be taken largely, if it can be done, from the jugular vein, or temporal artery. But, when no threatening turgescence appears, the obviating plethora is not judiciously attempted by bloodletting, as we have endeavoured to demonstrate above, DCCLXXXVII. In doubtful circumstances, leeches applied to the temples, or scarifications of the hind head, may be more safe than general bleedings.

MCXXIX.

When there are manifest symptoms of a plethoric state in the vessels of the head, a seton, or pea issue, near the head, may be very useful in obviating any turgescence of the blood.

MCXXX.

These are the means to be employed for preventing the apoplexy which might arise from a plethoric state of the vessels of the brain; and if, at the same time, great care is taken to avoid the exciting causes (MXCVIII), these means will be generally successful.

In the cases proceeding from other causes (MCXV), as their application is so immediately succeeded by the disease, they hardly allow any opportunity for prevention.

MCXXXI.

For the CURE of apoplexies from internal causes, and which I suppose to be chiefly those from compression, the usual violence and fatality of it require that the proper remedies be immediately and largely employed.

The patient is to be kept as much as possible in somewhat of an erect posture, and in cool air; and therefore neither in a warm chamber, nor covered with bed clothes, nor surrounded with a crowd of people.

MCXXXII.

In all cases of a full habit, and where the disease has been preceded by marks of a plethoric state, bloodletting is to be immediately employed, and very largely. In my opinion,

ion, it will be most effectual when the blood is taken from the jugular vein; but, if that cannot be properly done, it may be taken from the arm. The opening of the temporal artery, when a large branch can be opened, so as suddenly to pour out a considerable quantity of blood, may also be an effectual remedy; but, in execution, it is more uncertain, and may be inconvenient. It may be in some measure supplied, by cupping and scarifying on the temples or hind head. This, indeed, should seldom be omitted; and these scarifications are always preferable to the application of leeches.

With respect to every mode of bloodletting, this is to be observed, that when in any case of apoplexy, it can be perceived that one side of the body is more affected with the loss of motion than the other, the bloodletting, if possible, should be made on the side opposite to that most affected.

MCXXXIII.

Another remedy to be employed is purging, to be immediately attempted by acrid glysters; and at the same time, if any power of swallowing remain, by drastic purgatives given by the mouth. These, however, lest they may excite vomiting, should be given in divided portions at proper intervals.

MCXXXIV.

Vomiting has been commended by some practitioners and writers : But, apprehending that this might impel the blood with too much violence into the vessels of the head, I have never employed it.

MCXXXV.

Another remedy to be immediately employed is blistering ; and I judge that this is more effectual when applied to the head, or near to it, than when it is applied to the lower extremities. This remedy I do not consider as a stimulant, or capable of making any considerable revulsion : But, applied to the head, I suppose it useful in taking off the hemorrhagic disposition so often prevailing there.

MCXXXVI.

It has been usual with practitioners, together with the remedies already mentioned, to employ stimulants of various kinds : But I am disposed to think them generally hurtful ; and they must be so, wherever the fulness of the vessels, and the impetus of the blood in these, is to be diminished. Upon this principle it is therefore agreed, that stimulants are absolutely improper in what is supposed

posed to be a sanguine apoplexy; but they are commonly supposed to be proper in the serous. If, however, we be right in alleging that this also commonly depends upon a plethoric state of the bloodvessels of the brain, stimulants must be equally improper in the one case as in the other.

MCXXXVII.

It may be argued from the almost universal employment of stimulants, and sometimes with seeming advantage, that they may not be so hurtful as my notions of the causes of apoplexy lead me to suppose. But this argument is, in several respects, fallacious; and particularly in this, that in a disease which, under every management, often proceeds so quickly to a fatal termination, the effects of remedies are not to be easily ascertained.

MCXXXVIII.

I have now mentioned the several remedies which I think adapted to the cure of apoplexy arising from compression, and should next proceed to treat of the cure of apoplexy arising from those causes that directly destroy the mobility of the nervous power. But many of those causes are often so powerful, and thereby so suddenly fatal in their effects, as hardly to allow of time for the use of remedies; and such cases therefore have been so

seldom the subjects of practice, that the proper remedies are not so well ascertained as to enable me to say much of them here.

MCXXXIX.

When, however, the application of the causes (MCXV) is not so powerful as immediately to kill, and induces only an apoplectic state, some efforts are to be made to obviate the consequences, and to recover the patient; and even in some cases where the causes referred to, from the ceasing of the pulse and of respiration, and from a coldness coming upon the body, have induced an appearance of death; yet, if these appearances have not continued long, there may be means of recovering the persons to life and health. I cannot, indeed, treat this subject completely; but for the cure of apoplexy from several of the causes mentioned MCXV, shall offer the following general directions.

1. When a poison capable of producing apoplexy has been recently taken into the stomach, if a vomiting spontaneously arises, it is to be encouraged; or, if it does not spontaneously come on, a vomiting is to be immediately excited by art, in order that the poison may be thrown out as quickly as possible. If, however, the poison has been taken into the stomach long before its effects have appeared, we judge that, upon their appearance,

ance, the exciting of vomiting will be useless, and may perhaps be hurtful.

2. When the poison taken into the stomach, or otherwise applied to the body, has already induced an apoplectic state, as those causes do commonly at the same time occasion a stagnation or slower motion of the blood in the vessels of the brain and of the lungs, so it will generally be proper to relieve this congestion by taking some blood from the jugular vein, or from the veins of the arm.

3. Upon the same supposition of a congestion in the brain or lungs, it will generally be proper to relieve it by means of acrid glysters producing some evacuation from the intestines.

4. When these evacuations by bloodletting and purging have been made, the various stimulants which have been commonly proposed in other cases of apoplexy, may be employed here with more probability and safety. One of the most effectual means of rousing apoplectics of this kind seems to be throwing cold water on several parts of the body, or washing the body all over with it.

5. Although the poison producing apoplexy happens to be so powerful as very soon to occasion the appearances of death above mentioned; yet if this state has not continued long, the patient may often be recoverable; and the recovery is to be attempted

by the same means that are directed to be employed for the recovery of drowned persons, and which are now commonly known.

C H A P: II.

OF P A L S Y.

MCXL.

PALSY is a disease consisting in a loss of the power of voluntary motion, but affecting certain parts of the body only, and by this it is distinguished from apoplexy (MXCIV). One of the most frequent forms of palsy is when it affects the whole of the muscles on one side of the body; and then the disease is named a *Hemiplegia*.

MCXLI.

The loss of the power of voluntary motion may be owing either to a morbid affection of the muscles or organs of motion, by which they are rendered unfit for motion; or to an interruption of the influx of the nervous power in-

to them, which is always necessary to the motions of those that are under the power of the will. The disease, from the first of these causes, as consisting in an organic and local affection, we refer entirely to the class of local diseases. I am here to consider that disease only which depends upon the interrupted influx of the nervous power; and it is to this disease alone I would give the appellation of *Palsy*. A disease depending on an interrupted influx of the nervous power, may indeed often appear as merely a local affection; but as it depends upon an affection of the most general powers of the system, it cannot be properly separated from the systematic affections.

MCXLII.

In palsy, the loss of motion is often accompanied with a loss of sense: But as this is not constantly the case, and as therefore the loss of sense is not an essential symptom of palsy, I have not taken it into my definition (MCXL); and I shall not think it necessary to take any further notice of it in this treatise; because, in so far as it is in any case a part of the paralytic affection, it must depend upon the same causes, and will be cured also by the very same remedies, as the loss of motion.

MCXLIII.

MCXLIII.

The palsy then, or loss of motion, which is to be treated of here, may be distinguished as of two kinds; one of them depending upon an affection of the origin of the nerves in the brain, and the other depending upon an affection of the nerves in some part of their course between the brain and the organs of motion. Of the latter, as appearing in a very partial affection, I am not to speak particularly here; I shall only treat of the more general paralytic affections, and especially of the hemiplegia (MCXL). At the same time I expect, that what I shall say upon this subject will readily apply to both the pathology and practice in the cases of affections more limited.

MCXLIV.

The hemiplegia (MCXL) usually begins with, or follows, a paroxysm of apoplexy; and when the hemiplegia, after subsisting for some time, becomes fatal, it is commonly by passing again into the state of apoplexy. The relation therefore or affinity between the two diseases, is sufficiently evident; and is further strongly confirmed by this, that the hemiplegia comes upon persons of the same constitution (MXCV), and is preceded by the

same symptoms (MXCVIII), that have been taken notice of with respect to apoplexy.

MCXLV.

When a fit of apoplexy has gone off, and there remains a state of palsy appearing as a partial affection only, it might perhaps be supposed that the origin of the nerves is in a great measure relieved; but in so far as commonly there still remain the symptoms of the loss of memory, and of some degree of fatuity, these, I think, show that the organ of intellect, or the common origin of the nerves, is still considerably affected.

MCXLVI.

Thus, the hemiplegia, from its evident connexion with, and near relation to apoplexy, may be properly considered as depending upon like causes; and consequently, either upon a compression preventing the flow of the nervous power from the brain into the organs of motion, or upon the application of narcotic or other powers (MCXV) rendering the nervous power unfit to flow in the usual and proper manner.

MCXLVII.

We begin with considering the cases depending upon compression.

The

The compression occasioning hemiplegia may be of the same kind, and of all the different kinds that produce apoplexy ; and therefore either from tumour, over distention, or effusion. The existence of tumour giving compression, may often be better discerned in the case of palsy than in that of apoplexy, as its effects often appear at first in a very partial affection.

MCXLVIII.

The other modes of compression, that is, of over distention and effusion, may, and commonly do, take place, in hemiplegia ; and when they do, their operation here differs from that producing apoplexy, by its effects being partial, and on one side of the body only.

It may seem difficult to conceive that an over distention can take place in the vessels on one side of the brain only ; but it may be understood : And in the case of a palsy which is both partial and transitory, it is perhaps the only condition of the vessels of the brain that can be supposed. In a hemiplegia, indeed, which subsists for any length of time, there is probably always an effusion, either sanguine or serous : But it is likely that even the latter must be supported by a remaining congestion in the bloodvessels.

MCXLIX.

That a sanguine effusion can happen without becoming very soon general, and thereby occasioning apoplexy and death, may also seem doubtful: But dissections prove that in fact it does happen occasioning palsy only; though it is true, that this more commonly depends upon an effusion of serous fluid, and of this only.

MCL.

Can a palsy occasioned by a compression remain, though the compression be removed?

MCLI.

From what has been said MCXLIV, it will be obvious, that the hemiplegia may be prevented by all the several means proposed MCXXV *et seq.* for the prevention of apoplexy.

MCLII.

Upon the same grounds, the CURE of palsy must be very much the same with that of apoplexy (MCXXX *et seq.*); and when palsy has begun as an apoplexy, it is presumed, that, before it is to be considered as palsy,

all

all those several remedies have been employed. Indeed, even when it happens that on the first attack of the disease the apoplectic state is not very complete, and that the very first appearance of the disease is as a hemiplegia, the affinity between the two diseases (MCXLIV) is such as to lead to the same remedies in both cases. This is certainly proper in all those cases in which we can with much probability impute the disease to compression; and it is indeed seldom that a hemiplegia from internal causes comes on but with a considerable affection of the internal, and even of the external senses, together with other marks of a compression of the origin of the nerves.

MCLIII.

Not only, however, where the disease can be imputed to compression, but even where it can be imputed to the application of narcotic powers, if the disease come on with the appearances mentioned at the end of last paragraph, it is to be treated in the same manner as an apoplexy by MCXXXI—MCXXXIX.

MCLIV.

The cure of hemiplegia, therefore, on its first attack, is the same, or very nearly the same,

same, with that of apoplexy: And it seems requisite that it should be different only, 1. When the disease has subsisted for some time; 2. When the apoplectic symptoms, or those marking a considerable compression of the origin of the nerves, are removed; and particularly, 3. When there are no evident marks of compression, and it is at the same time known that narcotic powers have been applied.

MCLV.

In all these cases, the question arises, Whether stimulants may be employed, or how far the cure may be entirely trusted to such remedies? Upon this question, with respect to apoplexy, I have offered my opinion in MCXXXVI. And, with respect to hemiplegia, I am of opinion, that stimulants are almost always equally dangerous as in the cases of complete apoplexy; and particularly, 1. In all the cases of hemiplegia succeeding to a paroxysm of complete apoplexy; 2. In all the cases coming upon persons of the temperament mentioned in MXCV, and after the same antecedents as those of apoplexy (MCXVI); and, 3. In all the cases coming on with symptoms of apoplexy from compression.

MCLVI.

MCLVI.

It is, therefore, in the cases MCLIV only, that stimulants are properly admissible: And even in the two first of these cases, in which a plethoric state of the bloodvessels of the brain may have brought on the disease, in which a disposition to that state may still continue, and in which even some degree of congestion may still remain, the use of stimulants must be an ambiguous remedy; so that perhaps it is in the third of these cases only that stimulants are clearly indicated and admissible.

MCLVII.

These doubts with respect to the use of stimulants, may perhaps be overlooked or disregarded by those who allege that stimulants have been employed with advantage even in those cases (MCLV) in which I have said they ought to be avoided.

MCLVIII.

To compromise this contrariety of opinion, I must observe, that even in the cases of hemiplegia depending upon compression, although the origin of the nerves be so much compressed as to prevent so full a flow of the nervous power as is necessary to muscular motion, yet
it

it appears from the power of sense still remaining, that the nerves are, to a certain degree, still pervious; and therefore it is possible that stimulants applied, may excite the energy of the brain so much, as in some measure to force open the compressed nerves, and to show some return of motion in paralytic muscles. Nay, further, it may be allowed, that if these stimulants be such as act more upon the nervous than upon the sanguiferous system, they may possibly be employed without any very hurtful consequence.

MCLIX.

But still it will be obvious, that although certain stimulants act chiefly upon the nervous system, yet they also act always in some measure upon the sanguiferous; so that, when they happen to have the latter effect in any considerable degree, they may certainly do much harm; and in a disease which they do not entirely cure, the mischief arising from them may not be discerned.

MCLX.

Whilst the employment of stimulants is so often an ambiguous practice, we may perhaps go some length towards ascertaining the matter, by considering the nature of the several stimulants which may be employed, and some

of the circumstances of their administration. With this view, therefore, I shall now mention the several stimulants that have been commonly employed, and offer some remarks upon their nature and use.

MCLXI.

They are in the first place to be distinguished as external or internal. Of the first kind, we again distinguish them as they are applied to particular parts of the body only, or as they are more generally applied to the whole system. Of the first kind are,

1. The concentrated acids of vitriol or nitre; involved, however, in oily or unctuous substances, which may obviate their corrosive, without destroying their stimulant power.

2. The volatile alkaline spirits, especially in their caustic state; but involved also in oils, for the purpose just now mentioned.

3. The same volatile spirits are frequently employed by being held to the nose, when they prove a powerful stimulus to the nervous system; but it is at the same time probable, that they may also prove a strong stimulant to the bloodvessels of the brain.

4. A brine, or strong solution of sea salt.

5. The essential oils of aromatic plants, or of their parts.

6. The essential oils of turpentine, or of other such resinous substances.

7. The

7. The distilled oils of amber, or of other bituminous fossils.

8. The rectified empyreumatic oils of animal or vegetable substances.

9. Various vegetable acrids, particularly mustard.

10. The acrid matter found in several insects, particularly cantharides.

Some of these stimulants may be either applied in substance; or may be dissolved in ardent spirits, by which their stimulant power may be increased, or more conveniently applied.

MCLXII.

The greater part of the substances now enumerated show their stimulant power by inflaming the skin of the part to which they are applied; and when their application is so long continued as to produce this effect, it interrupts the continuance of their use; and the inflammation of the part does not seem to do so much good as the frequent repetition of a more moderate stimulus.

MCLXIII.

Analogous to these stimulants is the stinging of nettles, which has been frequently commended.

Among the external stimulants, the mechanical one of friction with the naked hand, the

the flesh brush, or flannel, is justly to be reckoned. Can the impregnation of the flannels to be employed, with the fumes of burning mastic, olibanum, &c. be of any service ?

MCLXIV.

With respect to the whole of these external stimulants, it is to be observed, that they affect the part to which they are applied much more than they do the whole system, and they are therefore indeed safer in ambiguous cases ; but, for the same reason, they are of less efficacy in curing a general affection.

MCLXV.

The external applications which may be applied to affect the whole system, are the powers of heat and cold, and of electricity.

Heat, as one of the most powerful stimulants of the animal economy, has been often employed in palsies, especially by warm bathing. But as, both by stimulating the solids and rarefying the fluids, this proves a strong stimulus to the sanguiferous system, it is often an ambiguous remedy ; and has frequently been manifestly hurtful in palsies depending upon a congestion of blood in the vessels of the brain. The most certain, and therefore the most proper use of warm bathing in palsies, seems to be in those that have been occasioned

caſioned by the application of narcotic powers. Are the natural baths more uſeful by the matters with which they may be naturally impregnated?

MCLXVI.

Cold applied to the body for any length of time, is always hurtful to paralytic perſons; but if it be not very intenſe, nor the application long continued, and if at the ſame time the body be capable of a brisk reaction, ſuch an application of cold is a powerful ſtimulant of the whole ſyſtem, and has often been uſeful in curing palsy. But, if the power of reaction in the body be weak, any application of cold may prove very hurtful.

MCLXVII.

Electricity, in a certain manner applied, is certainly one of the moſt powerful ſtimulants that can be employed to act upon the nervous ſyſtem of animals; and therefore much has been expected from it in the cure of palsy. But, as it ſtimulates the ſanguiferous as well as the nervous ſyſtem, it has been often hurtful in palsies depending upon a compreſſion of the brain; and eſpecially when it has been ſo applied as to act upon the veſſels of the head. It is ſafer when its operation is confined to particular parts ſomewhat remote from the head; and, further, as the operation

of

of electricity, when very strong, can destroy the mobility of the nervous power, I am of opinion, that it is always to be employed with caution, and that it is only safe when applied with moderate force, and when confined to certain parts of the body remote from the head. It is also my opinion, that its good effects are to be expected from its repetition rather than from its force, and that it is particularly suited to the cure of those palsies which have been produced by the application of narcotic powers.

MCLXVIII.

Amongst the remedies of palsy, the use of exercise is not to be omitted. In a hemiplegia, bodily exercise cannot be employed; and in a more limited affection, if depending upon a compression of some part of the brain, it would be an ambiguous remedy: But, in all cases where the exercises of gestation can be employed, they are proper; as, even in cases of compression, the stimulus of such exercise is moderate, and therefore safe; and, as it always determines to the surface of the body, it is a remedy in all cases of internal congestion.

MCLXIX.

The internal stimulants employed in palsy are various, but chiefly the following.

1. The

1. The volatile alkaline salts, or spirits, as they are called, are very powerful and diffusive stimulants, operating especially on the nervous system; and even although they operate on the sanguiferous, yet, if given in frequently repeated small rather than in large doses, their operation being transitory, is tolerably safe.

2. The vegetables of the class named Tetradinamia, are many of them powerful diffusive stimulants; and at the same time, as quickly passing out of the body, and therefore of transitory operation, they are often employed with safety. As they commonly prove diuretic, they may in this way also be of service in some cases of serous palsy.

3. The various aromatics, whether employed in substance, in tincture, or in their essential oils, are often powerful stimulants; but being more adhesive and inflammatory than those last mentioned, they are therefore, in all ambiguous cases, less safe.

4. Some other acrid vegetables have been employed; but we are not well acquainted with their peculiar virtues, or proper use.

5. Some resinous substances, as guaiacum, and the terebinthinate substances, or their essential oils, have been, with some probability, employed; but they are apt to become inflammatory. Decoctions of guaiacum, and some other sudorifics, have been directed to excite sweating by the application of the fumes of burning spirit of wine in the laticum,

conicum, and have in that way been found useful.

6. Many of the fetid antispasmodic medicines have been frequently employed in palsy; but I do not perceive in what manner they are adapted to the cure of this disease, and I have not observed their good effects in any cases of it.

7. Bitters, and the Peruvian bark, have also been employed; but with no propriety or advantage that I can perceive.

MCLXX.

With respect to the whole of these internal stimulants, it is to be observed, that they seldom prove very powerful; and wherever there is any doubt concerning the nature or state of the disease, they may readily do harm, and are often therefore of ambiguous use.



B O O K II.

OF ADYNAMIÆ, OR DISEASES CONSISTING IN A WEAKNESS OR LOSS OF MOTION IN EITHER THE VITAL OR NATURAL FUNCTIONS.

C H A P. I.

OF SYNCOPE, OR FAINTING.

MCLXXI.

THIS is a disease in which the action of the heart and respiration become considerably weaker than usual, or in which for a certain time these functions cease altogether.

MCLXXII.

MCLXXII.

Physicians having observed that this affection occurs in different degrees, have endeavoured to distinguish these by different appellations: But as it is not possible to ascertain these different degrees with any precision, so there can be no strict propriety in employing those different names; and I shall here comprehend the whole of the affections of this kind under the title of Syncope,

MCLXXIII.

This disease sometimes comes on suddenly to a considerable degree, but sometimes also it comes on gradually; and in the latter case, it usually comes on with a sense of languor, and of anxiety about the heart, accompanied at the same time, or immediately after, with some giddiness, dimness of sight, and sounding in the ears. Together with these symptoms, the pulse and respiration become weak; and often so weak, that the pulse is scarcely to be felt, or the respiration to be perceived; and sometimes these motions, for a certain time, cease altogether. While these symptoms take place, the face and whole surface of the body become pale, and more or less cold according to the degree and duration of the paroxysm. Very commonly, at the beginning of this, and during its continuance, a

cold sweat appears, and perhaps continues, on the forehead, as well as on some other parts of the body. During the paroxysm, the animal functions, both of sense and motion, are always in some degree impaired, and very often entirely suspended. A paroxysm of syncope is often, after some time, spontaneously recovered from; and this recovery is generally attended with a sense of much anxiety about the heart.

Fits of syncope are frequently attended with, or end in, vomiting; and sometimes with convulsions, or an epileptic fit.

MCLXXIV.

These are the phenomena in this disease; and from every view of the greatest part of them, there cannot be a doubt that the proximate cause of this disease is a very weak or a total ceasing of the action of the heart. But it will be a very difficult matter to explain in what manner the several remote causes operate in producing the proximate cause. This, however, I shall attempt, though with that diffidence which becomes me in attempting a subject that has not hitherto been treated with much success.

* MCLXXIV.

The remote cause of syncope may, in the first place, be referred to two general heads.

The

The one is, of those causes existing and acting in the brain, or in parts of the body remote from the heart, but acting upon it by the intervention of the brain. The other general head of the remote causes of syncope, is of those existing in the heart itself, or in parts very immediately connected with it, and thereby acting more directly upon it in producing this disease.

MCLXXV.

In entering upon the consideration of the first set of those causes (MCLXXIV), I must assume a proposition which I suppose to be fully established in Physiology. It is this: That, though the muscular fibres of the heart be endowed with a certain degree of inherent power, they are still, for such action as is necessary to the motion of the blood, very constantly dependent upon a nervous power sent into them from the brain. At least this is evident, that there are certain powers acting primarily, and perhaps only in the brain, which influence and variously modify the action of the heart. I suppose, therefore, a force very constantly during life exerted in the brain, with respect to the moving fibres of the heart, as well as of every part of the body; which force I shall call the Energy of the Brain; and which I suppose may be, on

different occasions, stronger or weaker with respect to the heart.

MCLXXVI.

Admitting these propositions, it will be obvious, that if I can explain in what manner the first set of remote causes (MCLXXIV) diminish the energy of the brain, I shall at the same time explain in what manner these causes occasion a syncope.

MCLXXVII.

To do this, I observe, that one of the most evident of the remote causes of syncope is a hemorrhagy, or an evacuation of blood, whether spontaneous or artificial. And as it is very manifest that the energy of the brain depends upon a certain fulness and tension of its bloodvessels, for which nature seems to have industriously provided by such a conformation of those bloodvessels as retards the motion of the blood both in the arteries and veins of the brain; so we can readily perceive, that evacuations of blood, by taking off the fulness and tension of the bloodvessels of the brain, and thereby diminishing its energy with respect to the heart, may occasion a syncope. In many persons, a small evacuation of blood will have this effect; and in such cases there is often a clear proof of the manner in which the cause operates, from this circumstance,

cumstance, that the effect can be prevented by laying the body in a horizontal posture; which, by favouring the afflux of the blood by the arteries, and retarding the return of it by the veins, preserves the necessary fulness of the vessels of the brain.

It is farther to be remarked here, that not only an evacuation of blood occasions syncope, but that even a change in the distribution of the blood, whereby a larger portion of it flows into one part of the system of bloodvessels, and consequently less into others, may occasion a syncope. It is thus I explain the syncope that readily occurs upon the evacuation of hydropic waters, which had before filled the cavities of the abdomen, or thorax. It is thus also I explain the syncope that sometimes happens on bloodletting, but which does not happen till the ligature which had been employed is untied, and admits a larger afflux of blood into the bloodvessels of the arm. Both these cases of syncope show, that an evacuation of blood does not always occasion the disease by any general effect on the whole system, but often merely by taking off the requisite fulness of the bloodvessels of the brain.

MCLXXVIII.

The operation of some others of the remote causes of syncope, may be explained on the following principles. Whilst the energy of

the brain is, upon different occasions, manifestly stronger or weaker, it seems to be with this condition, that a stronger exertion of it is necessarily followed by a weaker state of the same. It seems to depend upon this law in the constitution of the nervous power, that the ordinary contraction of a muscle is always alternated with a relaxation of the same; that, unless a contraction proceeds to the degree of spasm, the contracted state cannot be long continued: And it seems to depend upon the same cause that the voluntary motions, which always require an unusual increase of exertion, occasion fatigue, debility, and at length irresistible sleep.

From this law, therefore, of the nervous power, we may understand, why a sudden and violent exertion of the energy of the brain is sometimes followed by such a diminution of it as to occasion a syncope; and it is thus I suppose that a violent fit of joy produces syncope, and even death. It is upon the same principle also, I suppose, that an exquisite pain may sometimes excite the energy of the brain more strongly than can be supported, and is therefore followed by such a diminution as must occasion fainting. But the effect of this principle appears more clearly in this, that a fainting readily happens upon the sudden remission of a considerable pain; and thus I have seen a fainting occur upon the reduction of a painful dislocation.

MCLXXIX.

It seems to be quite analogous when a syncope immediately happens on the finishing of any great and long continued effort, whether depending on the will, or upon a propensity; and in this way a fainting sometimes happens to a woman on the bearing of a child. This may be well illustrated by observing, that in persons already much weakened, even a very moderate effort will sometimes occasion fainting.

MCLXXX.

To explain the operation of some other causes of syncope, it may be observed, that as the exertions of the energy of the brain are especially under the influence of the will, so it is well known that those modifications of the will which are named Passions and Emotions, have a powerful influence on the energy of the brain in its actions upon the heart, either in increasing or diminishing the force of that energy. Thus, anger has the former, and fear the latter effect; and thence it may be understood how terror often occasions a syncope sometimes of the most violent kind, named Asphyxia, and sometimes death itself.

MCLXXXI.

As, from what I have just mentioned, it appears, that the emotions of desire increase, and those of averfion diminish, the energy of the brain ; fo it may be understood, how a ftrong averfion, a horror, or the feeling which arifes upon the fight of a very difagreeable object, may occafion fainting. As an example of this, I have known more than one instance of a perfon's fainting at the fight of a fore in another perfon.

MCLXXXII.

To this head of horror and difgult, I refer the operation of thofe odours which in certain perfons occafion fyncope. It may be fupposed, that thofe odours are endowed with a directly fedative power, and may thereby occafion fyncope ; but they are, many of them, with refpect to other perfons, evidently of a contrary quality : And it appears to me, that thofe odours occafion fyncope only in thofe perfons to whom they are extremely difagreeable.

MCLXXXIII.

It is, however, very probable, that among the caufes of fyncope, there are fome which, analogous to all thofe we have already mentioned,

tioned, act by a directly sedative power: And such may either be diffused in the mass of blood, and thereby communicated to the brain; or may be only taken into the stomach, which so readily and frequently communicates its affections to the brain.

MCLXXXIV.

Having now enumerated, and, as I hope, explained, the most part of the remote causes of syncope, that either operate immediately upon the brain, or whose operation upon other parts of the body is communicated to the brain, it is proper to observe, that the most part of these causes operate upon certain persons more readily and more powerfully than upon others; and this circumstance, which may be considered as the predisponent cause of syncope, deserves to be inquired into.

It is, in the first place, obvious, that the operation of some of those causes depends entirely upon an idiosyncrasy in the persons upon whom they operate; which, however, I cannot pretend to explain. But, in the next place, with respect to the greater part of the other causes, their effects seem to depend upon a temperament which is in one degree or other in common to many persons. This temperament seems to consist in a great degree of sensibility and mobility, arising from a state of debility, sometimes depending upon

original conformation, and sometimes produced by accidental occurrences in the course of life.

MCLXXXV.

The second set of the remote causes of syncope (MCLXXIV), or those acting directly upon the heart itself, are certain organic affections of the heart itself, or of the parts immediately connected with it, particularly the great vessels which pour blood into or immediately receive it from the cavities of the heart. Thus a dilatation or aneurism of the heart, a polypus in its cavities, abscesses or ulcerations in its substance, a close adherence of the pericardium to the surface of the heart, aneurisms of the great vessels near to the heart, polypus in these, and ossifications in these or in the valves of the heart, are one or other of them conditions which, upon dissection, have been discovered in those persons who had before laboured under frequent syncope.

MCLXXXVI.

It is obvious, that these conditions are all of them, either such as may, upon occasion, disturb the free and regular influx into, or the free egress of the blood from, the cavities of the heart; or such as may otherwise disturb its regular action, by sometimes interrupting

rupting it, or sometimes exciting it to more violent and convulsive action. The latter is what is named the Palpitation of the Heart, and it commonly occurs in the same persons who are liable to syncope.

MCLXXXVII.

It is this, as I judge, that leads us to perceive in what manner these organic affections of the heart and great vessels may occasion syncope: For it may be supposed, that the violent exertions made in palpitations may either give occasion to an alternate great relaxation (MCLXXXVIII), or to a spasmodic contraction; and in either way suspend the action of the heart, and occasion syncope. It seems to me probable, that it is a spasmodic contraction of the heart that occasions the intermission of the pulse so frequently accompanying palpitation and syncope.

MCLXXXVIII.

Though it frequently happens that palpitation and syncope arise, as we have said, from the organic affections above mentioned, it is proper to observe, that these diseases, even when in a violent degree, do not always depend on such causes acting directly on the heart, but are often dependent on some of those

those causes which we have mentioned above as acting primarily on the brain.

MCLXXXIX.

I have thus endeavoured to give the pathology of syncope; and of the cure I can treat very shortly.

The cases of syncope depending on the second set of causes (MCLXXIV), and fully recited in MCLXXXV, I suppose to be generally incurable; as our art, so far as I know, has not yet taught us to cure any one of those several causes of syncope (MCLXXXV).

The cases of syncope depending on the first set of causes (MCLXXIV), and whose operation I have endeavoured to explain in MCLXXVII *et seq.* I hold to be generally curable, either by avoiding the several occasional causes there pointed out, or by correcting the predisponent causes (MCLXXXIV). The latter, I think, may generally be done by correcting the debility or mobility of the system, by the means which I have already had occasion to point out in another place.

C H A P. II.

O F D Y S P E P S I A, O R I N D I G E S T I O N.

M C X C.

A WANT of appetite, a squeamishness, sometimes a vomiting, sudden and transient distentions of the stomach, eructations of various kinds, heartburn, pains in the region of the stomach, and a bound belly, are symptoms which frequently concur in the same person, and therefore may be presumed to depend upon one and the same proximate cause. In both views, therefore they may be considered as forming one and the same disease, to which we have given the appellation of *Dyspepsia*, set at the head of this chapter.

M C X C I.

But as this disease is also frequently a secondary and sympathetic affection, so the symptoms above mentioned are often joined with
many

many others ; and this has given occasion to a very confused and undetermined description of it, under the general title of Nervous Diseases, or under that of Chronic Weakness. It is proper, however, to distinguish ; and I apprehend the symptoms enumerated above are those essential to the idiopathic affection I am now to treat of.

MCXCII.

It is indeed to be particularly observed, that these symptoms are often truly accompanied with a certain state of mind which may be considered as a part of the idiopathic affection : But I shall take no further notice of this symptom in the present chapter, as it will be fully and more properly considered in the next, under the title of Hypochondriasis.

MCXCIII.

That there is a distinct disease attended always with the greater part of the above symptoms, is rendered very probable by this, that all these several symptoms may arise from one and the same cause ; that is, from an imbecility, loss of tone, and weaker action in the muscular fibres of the stomach : And I conclude therefore, that this imbecility may be considered as the proximate cause of the
disease

disease I am to treat of under the name of Dyspepsia.

MCXCIV.

The imbecility of the stomach, and the consequent symptoms (MCXC), may, however, frequently depend upon some organic affection of the stomach itself, as tumour, ulcer, or scirrhusity; or upon some affection of other parts of the body communicated to the stomach, as in gout, amenorrhœa, and some others. In all these cases, however, the dyspeptic symptoms are to be considered as secondary or sympathetic affections, to be cured only by curing the primary disease. Such secondary and sympathetic cases cannot, indeed, be treated of here: But as I presume that the imbecility of the stomach may often take place without either any organic affection of this part, or any more primary affection in any other part of the body; so I suppose and expect it will appear, from the consideration of the remote causes, that the dyspepsia may be often an idiopathic affection, and that it is therefore properly taken into the system of methodical Nosology, and becomes the subject of our consideration here.

MCXCV.

There can be little doubt, that, in most cases, the weaker action of the muscular fibres
of

of the stomach, is the most frequent and chief cause of the symptoms mentioned in MCXC; but I dare not maintain it to be the only cause of idiopathic dyspepsia. There is, pretty certainly, a peculiar fluid in the stomach of animals, or at least a peculiar quality in the fluids, that we know to be there, upon which the solution of the aliments taken into the stomach chiefly depends: And it is at the same time probable, that the peculiar quality of the dissolving or digesting fluids may be variously changed, or that their quantity may be, upon occasion, diminished. It is therefore sufficiently probable, that a change in the quality or quantity of these fluids may produce a considerable difference in the phenomena of digestion, and particularly may give occasion to many of the morbid appearances mentioned in MCXC.

MCXCVI.

This seems to be very well founded, and points out another proximate cause of dyspepsia beside that we have already assigned: But, notwithstanding this, as the peculiar nature of the digestive fluid, the changes which it may undergo, or the causes by which it may be changed, are all matters so little known, that I cannot found any practical doctrine upon any supposition with respect to them; and as, at the same time, the imbecility of the stomach, either as causing the

change

change in the digestive fluid, or as being induced by that change, seems always to be present, and to have a great share in occasioning the symptoms of indigestion; so I shall still consider the imbecility of the stomach as the proximate and almost sole cause of dyspepsia. And I more readily admit of this manner of proceeding; as, in my opinion, the doctrine applies very fully and clearly to the explaining the whole of the practice which experience has established as the most successful in this disease.

MCXCVII.

Considering this, then, as the proximate cause of dyspepsia, I proceed to mention the several remote causes of this disease; as they are such, as, on different occasions, seem to produce a loss of tone in the muscular fibres of the stomach. They may, I think, be considered under two heads. The *first* is, of those which act directly and immediately upon the stomach itself: The *second* is, of those which act upon the whole body, or particular parts of it, but in consequence of which the stomach is chiefly or almost only affected.

MCXCVIII.

Of the first kind are,

1. Certain sedative or narcotic substances taken into the stomach; such as tea, coffee, tobacco,

tobacco, ardent spirits, opium, bitters, aromatics, putrids, and acescents.

2. The large and frequent drinking of warm water, or of warm watery liquids.

3. Frequent surfeit, or immoderate repletion of the stomach.

4. Frequent vomiting, whether spontaneously arising, or excited by art.

5. Very frequent spitting, or rejection of saliva.

MCXCIX.

Those causes which act upon the whole body, or upon particular parts and functions of it, are,

1. An indolent and sedentary life.
2. Vexation of mind, and disorderly passions of any kind.
3. Intense study, or close application to business too long continued.
4. Excess in venery.
5. Frequent intoxication; which partly belongs to this head, partly to the former.
6. The being much exposed to moist and cold air when without exercise.

Though the disease, as proceeding from the last set of causes, may be considered as a symptomatic affection only; yet as the affection of the stomach is generally the first, always the chief, and often the only effect which these causes produce or discover, I think the affection of the stomach may be considered

considered as the disease to be attended to in practice ; and the more properly so, as in many cases the general debility is only to be cured by restoring the tone of the stomach, and by remedies first applied to this organ.

MCCI.

For the cure of this disease, we form three several indications ; a preservative, a paliative, and a curative.

The *first* is, to avoid or remove the remote causes just now enumerated.

The *second* is, to remove those symptoms which especially contribute to aggravate and continue the disease. And,

The *third* is, to restore the tone of the stomach ; that is, to correct or remove the proximate cause of the disease.

MCCII.

The propriety and necessity of the first indication is sufficiently evident, as the continued application, or frequent repetition of those causes, must continue the disease ; may defeat the use of remedies ; or, in spite of these, may occasion the recurrence of the disease. It is commonly the neglect of this indication which renders this disease so frequently obstinate. How the indication is to be executed, will be sufficiently obvious from the consideration of the several causes : But
it

it is proper for the practitioner to attend to this, that the execution is often exceedingly difficult, because it is not easy to engage men to break in upon established habits, or to renounce the pursuit of pleasure; and particularly, to persuade men that these practices are truly hurtful which they have often practised with seeming impunity.

MCCIII.

The symptoms of this disease which especially contribute to aggravate and continue it, and therefore require to be more immediately corrected or removed, are, first, the crudities of the stomach already produced by the disease, and discovered by a loss of appetite, by a sense of weight and uneasiness in the stomach, and particularly by the eructation of imperfectly digested matters.

Another symptom to be immediately corrected, is an unusual quantity, or a higher degree than usual, of acidity present in the stomach, discovered by various disorders in digestion, and by other effects to be mentioned afterwards.

The third symptom aggravating the disease, and otherwise in itself urgent, is colliciveness, and therefore constantly requiring to be relieved.

MCCIV.

The *first* of these symptoms is to be relieved by exciting vomiting; and the use of this
remedy,

remedy, therefore, usually and properly begins the cure of this disease. The vomiting may be excited by various means, more gentle or more violent. The former may answer the purpose of evacuating the contents of the stomach : But emetics, and vomiting, may also excite the ordinary action of the stomach ; and both, by variously agitating the system, and particularly by determining to the surface of the body, may contribute to remove the causes of the disease. But these latter effects can only be obtained by the use of emetics of the more powerful kind, such as the antimonial emetics especially are.

MCCV.

The *second* symptom to be palliated, is an excess of acidity, either in quantity or quality, in the contents of the stomach. In man there is a quantity of acedent aliment almost constantly taken in, and, as I think, always undergoes an acetous fermentation in the stomach ; and it is therefore that, in the human stomach, and in the stomachs of all animals using vegetable food, there is always found an acid present. This acid, however, is generally innocent, and occasions no disorder, unless either the quantity of it is very large, or the acidity proceeds to a higher degree than usual. But, in either of these cases, the acid occasions various disorders, as flatulency, eructation, heartburn, gnawing pains
of

of the stomach, irregular appetites and cravings, looseness, griping, emaciation, and debility. To obviate or remove these effects aggravating and continuing the disease, it is not only necessary to correct the acid present in the stomach ; but, especially as this acid proves a ferment determining and increasing the acescency of the aliments afterwards taken in, it is proper also, as soon as possible, to correct the disposition to excessive acidity.

MCCVI.

The acidity present in the stomach may be corrected by the use of alkaline salts, or absorbent earths ; or by such substances, containing these, as can be decomposed by the acid of the stomach. Of the alkalines, the caustic is more effectual than the mild ; and this accounts for the effects of lime water. By employing absorbents, we avoid the excess of alkali, which might sometimes take place. The absorbents are different, as they form a neutral more or less laxative ; and hence the difference between magnesia alba and other absorbents. It is to be observed, that alkalines and absorbents may be employed to excess ; as, when employed in large quantity, they may deprive the animal fluids of the acid necessary to their proper composition.

MCCVII.

The disposition to acidity may be obviated by avoiding acescent aliments, and using
animal

animal food little capable of acescency. This, however, cannot be long continued without corrupting the state of our blood; and as vegetable food cannot be entirely avoided, the excess of their acescency may in some measure be avoided, by choosing vegetable food the least disposed to a vinous fermentation, such as leavened bread and well fermented liquors, and, instead of fresh native acids, employing vinegar.

MCCVIII.

The acid arising from acescent matters in a sound state of the stomach, does not proceed to any high degree, or is again soon involved and made to disappear: But this does not always happen; and a more copious acidity, or a higher degree of it, may be produced, either from a change in the digestive fluids, become less fit to moderate fermentation and to cover acidity, or from their not being supplied in due quantity. How the former may be occasioned, we do not well understand; but we can readily perceive that the latter, perhaps the former also, may proceed from a weaker action of the muscular fibres of the stomach. In certain cases, sedative passions, immediately after they arise, occasion the appearance of acidity in the stomach which did not appear before; and the use of stimulants often corrects or obviates an acidity that would otherwise have appeared. From these considerations, we conclude, that the production and subsistence of acidity in the stomach, is to be

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especially prevented by restoring and exciting the proper action of it, by the several means to be mentioned hereafter.

MCCIX.

But it is also to be further observed, that though there are certain powers in the stomach for preventing a too copious acidity, or a high degree of it, they are not however always sufficient for preventing acescency, or for covering the acidity produced; and therefore, as long as vegetable substances remain in the stomach, their acescency may go on and increase. From hence we perceive, that a special cause of the excess of acidity may be, the too long retention of acescent matters in the stomach; whether this may be from these matters being of more difficult solution, or from the weakness of the stomach more slowly discharging its contents into the duodenum, or from some impediment to the free evacuation of the stomach by the pylorus. The latter of these causes we are well acquainted with, in the case of a scirrhus pylorus, producing commonly the highest degree of acidity. In all the instances of this scirrhusity I have met with, I have found it incurable: But the first of these causes is to be obviated by avoiding such aliments as are of difficult solution; and the second is to be mended by the several remedies for exciting the action of the stomach, to be mentioned afterwards.

MCCX.

The *third* symptom commonly accompanying dyspepsia, which requires to be immediately removed, is costiveness. There is so much connexion between the several portions of the alimentary canal with respect to the peristaltic motion, that, if accelerated or retarded in any one part, the other parts of it are commonly affected in the same manner. Thus, as the brisker action of the stomach must accelerate the action of the intestines, so the slower action of the intestines must in some measure retard that of the stomach. It is therefore of consequence to the proper action of the stomach, that the peristaltic motion of the intestines determining their contents downwards, be regularly continued; and that all costiveness, or interruption of that determination, be avoided. This may be done by the various means of exciting the action of the intestines: But it is to be observed here, that as every considerable evacuation of the intestines weakens their action, and is ready therefore to induce costiveness when the evacuation is over; so those purgatives which produce a large evacuation, are unfit for correcting the habit of costiveness. This, therefore, should be attempted by medicines which do no more than solicit the intestines to a more ready discharge of their present contents, without either hurrying their action, or increasing the excretions made into their cavity; either of which effects might produce a purging. There are,

I think, certain medicines peculiarly proper on this occasion, as they seem to stimulate especially the great guts, and to act little on the higher parts of the intestinal canal.

MCCXI.

We have thus mentioned the several means of executing our second indication; and I proceed to the *third*, which is, as we have said, the proper curative; and it is to restore the tone of the stomach, the loss of which we consider as the proximate cause of the disease, or at least as the chief part of it. The means of satisfying this indication we refer to two heads. One is, of those means which operate directly and chiefly on the stomach itself; and the other is, of those means which, operating upon the whole system, have their tonic effects thereby communicated to the stomach.

MCCXII.

The medicines which operate directly on the stomach, are either stimulants or tonics.

The stimulants are saline or aromatic.

The saline are acids or neutrals.

Acids of all kinds seem to have the power of stimulating the stomach, and therefore often increase appetite: But the native acids, as liable to fermentation, may otherwise do harm, and are therefore of ambiguous use. The acids, therefore, chiefly and successfully employed, are the vitriolic, muriatic, and the distilled acid of vegetables, as it is found in tar-water, which are all of them antizymics.

The

The neutral salts answering this intention, are especially those which have the muriatic acid in their composition, though it is presumed that neutrals of all kinds have more or less of the same virtue.

MCCXIII.

The aromatics, and perhaps some other acrids, certainly stimulate the stomach, as they obviate the acescency and flatulency of vegetable food: But their stimulus is transitory; and if frequently repeated, and taken in large quantities, they may hurt the tone of the stomach.

MCCXIV.

The tonics employed to strengthen the stomach are bitters, bitters and astringents combined, and chalybeates.

Bitters are undoubtedly tonic medicines, both with respect to the stomach and the whole system: But their long continued use has been found to destroy the tone of the stomach, and of the whole system; and, whether this is from the mere repetition of their tonic operation, or from some narcotic power joined with the tonic in them, I am uncertain.

MCCXV.

Bitters and astringents combined, are, probably, more effectual tonics than either of them taken singly; and we suppose such a combination to take place in the Peruvian bark; which therefore proves a powerful tonic, both

with respect to the stomach and to the whole system. But I have some ground to suspect, that the long continued use of this bark may, like bitters, destroy both the tone of the stomach and of the whole system.

MCCXVI.

Chalybeates may be employed as tonics in various forms, and in considerable quantities, with safety. They have been often employed in the form of mineral waters, and seemingly with success: But whether this is owing to the chalybeate in the composition of these waters, or to some other circumstances attending their use, I dare not positively determine; but the latter opinion seems to me the more probable.

MCCXVII.

The remedies which strengthen the stomach, by being applied to the whole body, are, exercise and the application of cold.

As exercise strengthens the whole body, it must also strengthen the stomach; but it does this also in a particular manner, by promoting perspiration, and exciting the action of the vessels on the surface of the body, which have a particular consent with the muscular fibres of the stomach. This particularly explains why the exercises of gestation, though not the most powerful in strengthening the whole system, are, however, very powerful in strengthening the stomach; of which we have a remarkable proof in the effects of sailing.

In

In strengthening the general system, as fatigue must be avoided, so bodily exercise is of ambiguous use; and perhaps it is thereby, that riding on horseback has been so often found to be one of the most powerful means of strengthening the stomach, and thereby of curing dyspepsia.

MCCXVIII.

The other general remedy of dyspepsia, is the application of cold: Which may be in two ways; that is, either by the application of cold air, or of cold water. It is probable, that, in the atmosphere constantly surrounding our bodies, a certain degree of cold, considerably less than the temperature of our bodies themselves, is necessary to the health of the human body. Such a degree of cold seems to strengthen the vessels on the surface of the body, and therefore the muscular fibres of the stomach. But, further, it is well known, that if the body is in exercise sufficient to support such a determination to the surface, as to prevent the cold from producing an entire constriction of the pores; a certain degree of cold in the atmosphere, with such exercise, will render the perspiration more considerable. From the sharp appetite that in such circumstances is commonly produced, we can have no doubt, that by the application of such cold, the tone of the stomach is considerably strengthened. Cold air, therefore, applied with exercise, is a most powerful tonic with respect to the stomach; and this explains

why, for that purpose, no exercifes within doors, or in clofe carriages, are fo useful as thofe in the open air.

MCCXIX.

From the fame reasoning, we can perceive, that the application of cold water, or cold bathing, while it is a tonic with refpect to the fyftem in general, and efpecially as exciting the action of the extreme veffels, muft in both refpects be a powerful means of ftrengthening the tone of the ftomach.

MCCXX.

Thefe are the remedies to be employed towards a radical cure of idiopathic dyspepfia; and it might be, perhaps, expected here, that I fhould treat alfo of the various cafes of the fympathic difeafe. But it will be obvious that this cannot be properly done without treating of all the difeafes of which the dyspepfia is a fympptom, which cannot be proper in this place. It has been partly done already, and will be further treated of in the courfe of this work. In the mean time, it may be proper to obferve, that there is not fo much occafion for diftinguifhing between the idiopathic and fympathic dyspepfia, as there is in many other cafes of idiopathic and fympathic difeafes. For, as the fympathic cafes of dyspepfia are owing to a lofs of tone in fome other part of the fyftem, which is from thence communicated to the ftomach; fo the tone of the ftomach reftored, may be communicated to the
part

part primarily affected; and therefore the remedies of the idiopathic may be often usefully employed, and are often the remedies chiefly employed, in sympathetic dyspepsia.

MCCXXI.

Another part of our business here might be to say, how some other of the urgent symptoms, besides those above mentioned, are to be palliated. On this subject, I think it is enough to say, that the symptoms chiefly requiring to be immediately relieved, are flatulency, heartburn, other kinds of pain in the region of the stomach, and vomiting.

The dyspeptic are ready to suppose that the whole of their disease consists in a flatulency. In this it will be obvious that they are mistaken; but, although the flatulency is not to be entirely cured, but by mending the imbecility of the stomach by the means above mentioned; yet the flatulent distention of the stomach may be relieved by carminatives, as they are called, or medicines that produce a discharge of wind from the stomach; such are the various antispasmodics, of which the most effectual is the vitriolic æther.

The heartburn may be relieved by absorbents, antispasmodics, or demulcents.

The other pains of the stomach may be sometimes relieved by carminatives, but most certainly by opiates.

Vomiting is to be cured most effectually by opiates thrown by injection into the anus.

C H A P. III.

OF HYPOCHONDRIASIS, OR THE HYPOCHONDRIAC AFFECTION, COMMONLY CALLED VAPOURS OR LOW SPIRITS.

MCCXXII.

IN certain persons there is a state of mind distinguished by a concurrence of the following circumstances: A languor, listlessness, or want of resolution and activity with respect to all undertakings; a disposition to seriousness, sadness, and timidity; as to all future events, an apprehension of the worst or most unhappy state of them; and therefore, often upon slight grounds, an apprehension of great evil. Such persons are particularly attentive to the state of their own health, to every the smallest change of feeling in their bodies; and from any unusual feeling, perhaps of the slightest kind, they apprehend great danger, and even death itself. In respect to all these feelings and apprehensions, there is commonly the most obstinate belief and persuasion.

MCCXXIII.

This state of mind is the Hypochondriasis of medical writers. See Linnæi Genera Morborum, Gen. 76. et Sagari Systema Symp-
tomaticum,

tomaticum, Class XIII. Gen. 5. The same state of mind is what has been commonly called *Vapours* and *Low Spirits*. Though the term *Vapours* may be founded on a false theory, and therefore improper, I beg leave, for a purpose that will immediately appear, to employ it for a little here.

MCCXXIV.

Vapours, then, or the state of mind described above, is, like every other state of mind, connected with a certain state of the body, which must be inquired into in order to its being treated as a disease by the art of physic.

MCCXXV.

This state of the body, however, is not very easily ascertained: For we can perceive, that on different occasions it is very different; vapours being combined sometimes with dyspepsia, sometimes with hysteria, and sometimes with melancholia, which are diseases seemingly depending on very different states of the body.

MCCXXVI.

The combination of vapours with dyspepsia is very frequent, and in seemingly very different circumstances. It is, especially, these different circumstances that I would wish to ascertain; and I remark, that they are manifestly of two different kinds. First, as the disease occurs in young persons of both

sexes, in persons of a sanguine temperament, and of a lax and flaccid habit. Secondly, as it occurs in elderly persons of both sexes, of a melancholic temperament, and of a firm and rigid habit.

MCCXXVII.

These two different cases of the combination of vapours and dyspepsia, I consider as two distinct diseases, to be distinguished chiefly by the temperament prevailing in the persons affected.

As the dyspepsia of sanguine temperaments is often without vapours; and as the vapours, when joined with dyspepsia in such temperaments, may be considered as, perhaps, always a symptom of the affection of the stomach; so to this combination of dyspepsia and vapours, I would still apply the appellation of *Dyspepsia*, and consider it as strictly the disease treated of in the preceding chapter.

But the combination of dyspepsia and vapours in melancholic temperaments, as the vapours or the turn of mind peculiar to the temperament, nearly that described above in MCCXXII, are essential circumstances of the disease; and as this turn of mind is often with few, or only slight symptoms of dyspepsia; and, even though the latter be attending, as they seem to be rather the effects of the general temperament, than of any primary or topical affection of the stomach; I consider this combination as a very different disease from

from the former, and would apply to it strictly the appellation of *Hypochondriasis*.

MCCXXVIII.

Having thus pointed out a distinction between *Dyspepsia* and *Hypochondriasis*, I shall now, using these terms in the strict sense above mentioned, make some observations which may, I think, illustrate the subject, and more clearly and fully establish the distinction proposed.

MCCXXIX.

The *dyspepsia* often appears early in life, and is frequently much mended as life advances: But the *hypochondriasis* seldom appears early in life, and more usually in more advanced years only; and more certainly still, when it has once taken place, it goes on increasing as life advances to old age.

This seems to be particularly well illustrated, by our observing the changes in the state of the mind which usually take place in the course of life. In youth, the mind is cheerful, active, rash, and moveable: But as life advances, the mind by degrees becomes more serious, slow, cautious, and steady; till at length, in old age, the gloomy, timid, distrustful, and obstinate state of melancholic temperaments, is more exquisitely formed. In producing these changes, it is true, that moral causes have a share; but it is at the same time obvious, that the temperament of the body determines the operation of these moral causes,

es, sooner or later, and in a greater or lesser degree, to have their effects. The sanguine temperament retains longer the character of youth, while the melancholic temperament brings on more early the manners of old age.

MCCXXX.

Upon the whole, it appears, that the state of the mind which attends, and especially distinguishes hypochondriasis, is the effect of that same rigidity of the solids, torpor of the nervous power, and peculiar balance between the arterial and venous systems which occur in advanced life, and which at all times take place more or less in melancholic temperaments. If therefore there be also somewhat of a like state of mind attending the dyspepsia which occurs early in life in sanguine temperaments and lax habits, it must depend upon a different state of the body, and probably upon a weak and moveable state of the nervous power.

MCCXXXI.

Agreeable to all this, in dyspepsia, there is more of spasmodic affection, and the affection of the mind (MCCXXII) is often absent, and, when present, is perhaps always of a slighter kind: While, in hypochondriasis, the affection of the mind is more constant, and the symptoms of dyspepsia, or the affections of the stomach, are often absent, or, when present, are in a slighter degree.

I believe

I believe the affection of the mind is commonly different in the two diseases. In *dyspepsia*, it is often languor and timidity only, easily dispelled; while in *hypochondriasis*, it is generally the gloomy and rivetted apprehension of evil.

The two diseases are also distinguished by some other circumstances. *Dyspepsia*, as I have said, is often a symptomatic affection; while *hypochondriasis* is, perhaps, always a primary and idiopathic disease.

As debility may be induced by many different causes, *dyspepsia* is a frequent disease; while *hypochondriasis*, depending upon a peculiar temperament, is more rare.

MCCXXXII.

Having thus endeavoured to distinguish the two diseases, I suppose the peculiar nature and proximate cause of *hypochondriasis* will be understood; and I proceed therefore to treat of its cure.

So far as the affections of the body, and particularly of the stomach, are the same here as in the case of *dyspepsia*, the method of cure might be supposed to be also the same; and accordingly the practice has been carried on with little distinction: But I am persuaded that a distinction is often necessary.

MCCXXXIII.

There may be a foundation here for the same preservative indication as first laid down
in

in the cure of *dyspepsia* (MCCII); but I cannot treat this subject so clearly or fully as I could wish, because I have not yet had so much opportunity of observation as I think necessary to ascertain the remote causes; and I can hardly make use of the observations of others, who have seldom or never distinguished between the two diseases. What, indeed, has been said with respect to the remote causes of *melancholia*, will often apply to the *hypochondriasis*, which I now treat of; but the subject of the former has been so much involved in a doubtful theory, that I find it difficult to select the facts that might properly and strictly apply to the latter. I delay this subject, therefore, till another occasion; but in the mean time trust, that what I have said regarding the nature of the disease, and some remarks I shall have occasion to offer in considering the method of cure, may in some measure supply my deficiency on this subject of the remote causes.

MCCXXXIV.

The *second* indication laid down in the cure of *dyspepsia* (MCCI) has properly a place here; but it is still to be executed with some distinction.

MCCXXXV.

An anorexia, and accumulation of crudities in the stomach, does not so commonly occur in *hypochondriasis* as in *dyspepsia*; and therefore vomiting (MCCIV) is not so often necessary in the former as in the latter.

MCCXXXVI.

MCCXXXVI.

The symptom of excess of acidity, from the slow evacuation of the stomach in melancholic temperaments, often arises to a very high degree in hypochondriasis; and therefore, for the same reason as in MCCV, it is to be obviated and corrected with the utmost care. It is upon this account that the several antacids, and the other means of obviating acidity, are to be employed in hypochondriasis, and with the same attentions and considerations as in MCCVI, and following; with this reflection, however, that the exciting the action of the stomach there mentioned, is to be a little differently understood, as shall be hereafter explained.

MCCXXXVII.

As costiveness, and that commonly to a considerable degree, is a very constant attendant of hypochondriasis, so it is equally hurtful as in dyspepsia. It may be remedied by the same means in the former as in the latter, and they are to be employed with the same restrictions as in MCCX.

MCCXXXVIII.

It is especially with respect to the *third* indication laid down in the cure of dyspepsia (MCCI), that there is a difference of practice to be observed in the cure of hypochondriasis; and that often one directly opposite to that in the case of dyspepsia, is to be followed.

MCCXXXIX.

MCCXXXIX.

In dyspepsia, the chief remedies are the tonic medicines, which to me seem neither necessary nor safe in hypochondriasis; for in this there is not a loss of tone, but a want of activity that is to be remedied.

Chalybeate mineral waters have commonly been employed in hypochondriasis, and seemingly with success. But this is probably to be imputed to the amusement and exercise usually accompanying the use of these waters, rather than to the tonic power of the small quantity of iron which they contain. Perhaps the elementary water, by favouring the excretions, may have a share in relieving the disease.

MCCXL.

Cold bathing is often highly useful to the dyspeptic, and, as a general stimulant, may sometimes seem useful to the hypochondriac; but it is not commonly so to the latter; while, on the other hand, warm bathing, hurtful to the dyspeptic, is often extremely useful to the hypochondriac.

MCCXLI.

Another instance of a contrary practice necessary in the two diseases, and illustrating their respective natures, is, that the drinking tea and coffee is always hurtful to the dyspeptic,

peptic, but is commonly extremely useful to the hypochondriac.

MCCXLII.

Exercise, as it strengthens the system, and thereby the stomach, and more especially, as, by increasing the perspiration, it excites the action of the stomach, it proves one of the most useful remedies in dyspepsia; and further, as, by increasing the perspiration, it excites the activity of the stomach, it likewise proves an useful remedy in the hypochondriasis. However, in the latter case, as I shall explain presently, it is still a more useful remedy by its operation upon the mind than by that upon the body.

MCCXLIII.

It is now proper that we proceed to consider the most important article of our practice in this disease, and which is, to consider the treatment of the mind; an affection of which sometimes attends dyspepsia, but is always the chief circumstance in hypochondriasis. What I am to suggest here, will apply to both diseases; but it is the hypochondriasis that I am to keep most constantly in view.

MCCXLIV.

The management of the mind, in hypochondriacs, is often nice and difficult. The
firm

firm persuasion that generally prevails in such patients, does not allow their feelings to be treated as imaginary, nor their apprehension of danger to be considered as groundless, though the physician may be persuaded that it is the case in both respects. Such patients, therefore, are not to be treated either by railery or by reasoning.

It is said to be the manner of hypochondriacs to change often their physician ; and indeed they often do it consistently : For a physician who does not admit the reality of the disease, cannot be supposed to take much pains to cure it, or to avert the danger of which he entertains no apprehension.

If in any case the pious fraud of a placebo be allowable, it seems to be in treating hypochondriacs ; who, anxious for relief, are fond of medicines, and, though often disappointed, will still take every new drug that can be proposed to them.

MCCXLV.

As it is the nature of man to indulge every present emotion, so the hypochondriac cherishes his fears, and, attentive to every feeling, finds in trifles light as air a strong confirmation of his apprehensions. His cure therefore depends especially upon the interruption of his attention, or upon its being diverted to other objects than his own feelings.

MCCXLVI.

Whatever aversion to application of any kind may appear in hypochondriacs, there is nothing more pernicious to them than absolute idleness, or a vacancy from all earnest pursuit. It is owing to wealth admitting of indolence, and leading to the pursuit of transitory and unsatisfying amusements, or to that of exhausting pleasures only, that the present times exhibit to us so many instances of hypochondriacism.

The occupations of business suitable to their circumstances and situation in life, if neither attended with emotion, anxiety, nor fatigue, are always to be admitted, and persisted in by hypochondriacs. But occupations upon which a man's fortune depends, and which are always therefore, objects of anxiety to melancholic men; and more particularly where such occupations are exposed to accidental interruptions, disappointments, and failures, it is from these that the hypochondriac is certainly to be withdrawn.

MCCXLVII.

The hypochondriac who is not necessarily, by circumstances or habits, engaged in business, is to be drawn from his attention to his own feelings by some amusement.

The various kinds of sport and hunting, as pursued with some ardor, and attended with exercise,

exercise, if not too violent, are amongst the most useful.

All those amusements which are in the open air, joined with moderate exercise, and requiring some dexterity, are generally of use.

Within doors, company which engages attention, which is willingly yielded to, and is at the same time of a cheerful kind, will be always found of great service.

Play, in which some skill is required, and where the stake is not an object of much anxiety, if not too long protracted, may often be admitted.

In dyspeptics, however, gaming, liable to sudden and considerable emotions, is dangerous; and the long continuance of it, with night watching, is violently debilitating. But in melancholics, who commonly excel in skill, and are less susceptible of violent emotions, it is more admissible, and is often the only amusement that can engage them.

Music, to a nice ear, is a hazardous amusement, as long attention to it is very fatiguing.

MCCXLVIII.

It frequently happens, that amusements of every kind are rejected by hypochondriacs; and in that case, mechanical means of interrupting thought are the remedies to be sought for.

Such is to be found in brisk exercise, which requires some attention in the conduct of it.

Walking

Walking is seldom of this kind ; though, as gratifying to the restlessness of hypochondriacs, it has sometimes been found useful.

The required interruption of thought is best obtained by riding on horseback, or in driving a carriage of any kind.

The exercise of sailing, except it be in an open boat, engaging some attention, does very little service.

Exercise in an easy carriage, in the direction of which the traveller takes no part, unless it be upon rough roads, or driven pretty quickly, and with long continuance, is of little advantage.

MCCXLIX.

Whatever exercise may be employed, it will be most effectual when employed in the pursuit of a journey ; first, because it withdraws a person from many objects of uneasiness and care which might present themselves at home ; secondly, as it engages in more constant exercise, and in a greater degree of it than is commonly taken in airings about home ; and, lastly, as it is constantly presenting new objects which call forth a person's attention.

MCCL.

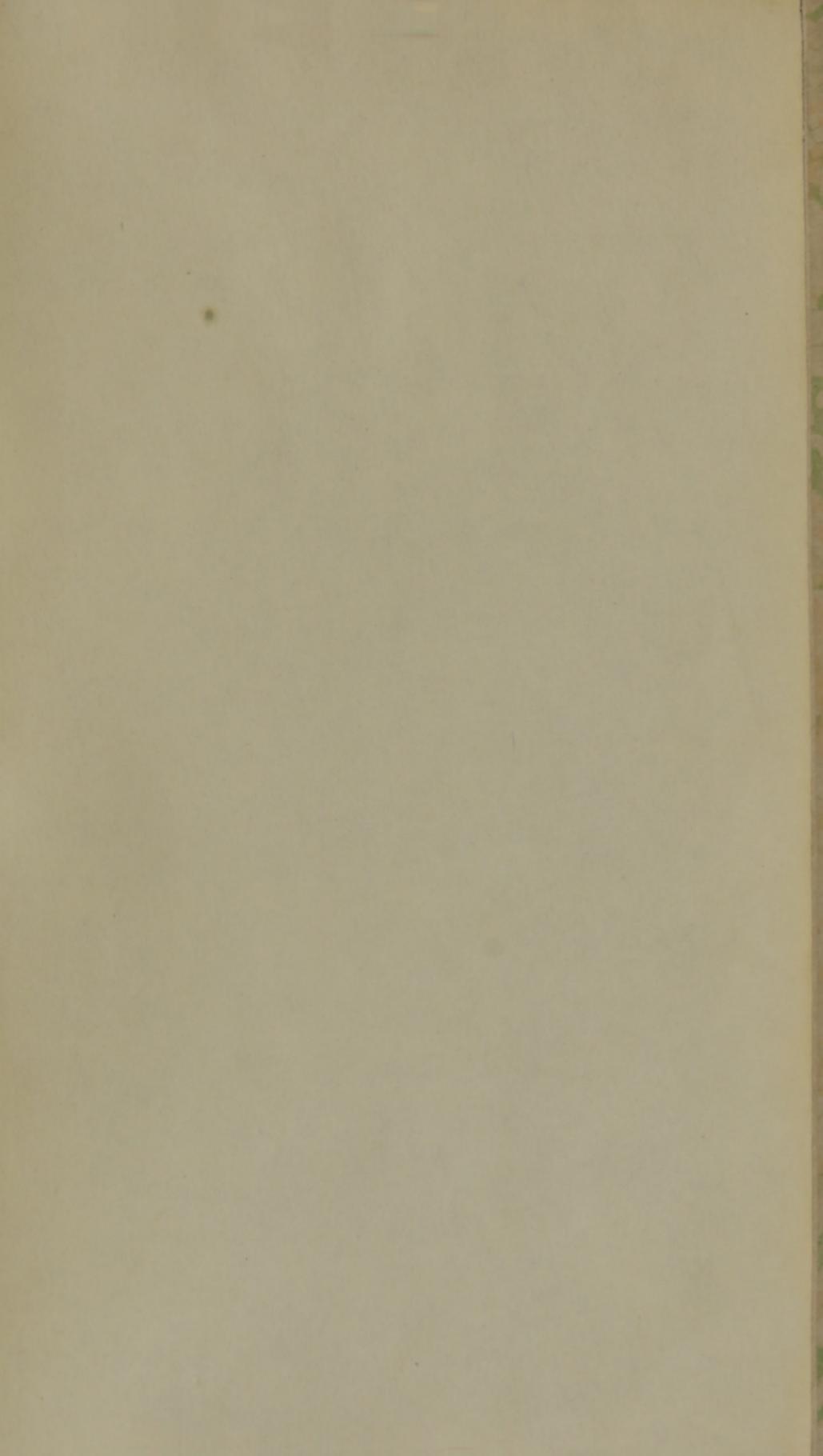
In our system of Nosology we have, next to Hypochondriasis, placed the Chlorosis, because

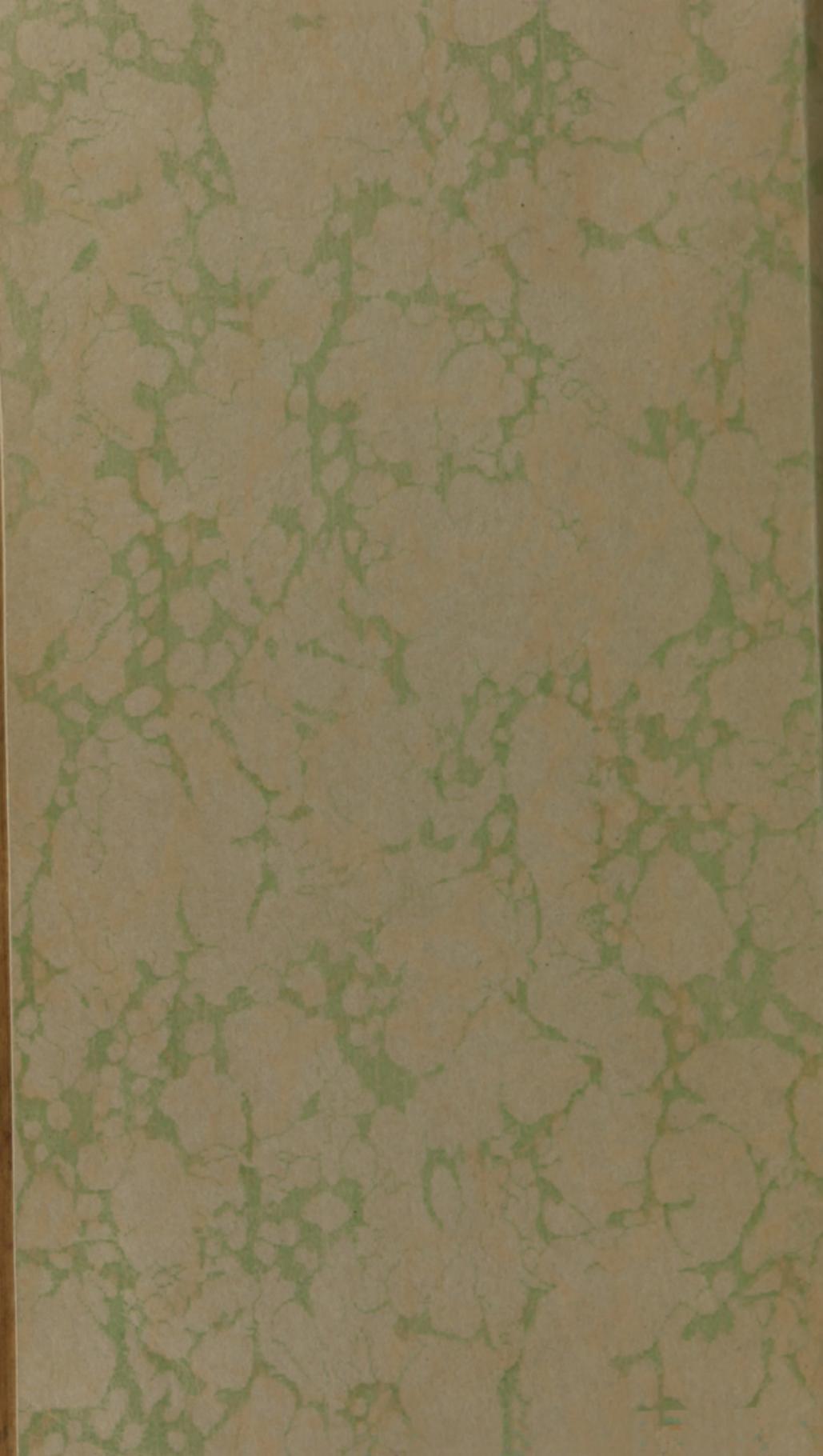
cause I once thought it might be considered as a genus, comprehending, besides the Chlorosis of Amenorrhœa, some species of Cachexy : But, as I cannot find this to be well founded, and cannot distinctly point out any such disease, I now omit considering Chlorosis as a genus here ; and, as a symptom of Amenorrhœa, I have endeavoured before to explain it under that title.

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