

**An account of the late epidemic ague : particularly as it appeared in the neighbourhood of Bridgnorth in Shropshire, in the year 1784 ... to which are added, some observations on a dysentery that prevailed at the same time.**

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A N  
A C C O U N T  
O F T H E L A T E  
E P I D E M I C A G U E,

PARTICULARLY AS IT APPEARED IN  
THE NEIGHBOURHOOD OF BRIDG-  
NORTH IN SHROPSHIRE, IN THE YEAR  
1784; WITH A SUCCESSFUL METHOD  
OF TREATING IT:

*To which are added,  
Some Observations on a*

D Y S E N T E R Y,  
*that prevailed at the same time.*

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By WILLIAM COLEY,  
SURGEON in BRIDGNORTH.

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L O N D O N:

*Printed for the Author; and sold by J. MURRAY  
No. 32, Fleet-street, and Messrs ROBINSONS  
in Pater-noster-row,*

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1785.

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OF THE LATE  
EPIDEMIC AGUE

PARTICULARLY AS IT APPEARED IN  
THE NEIGHBOURHOOD OF BRIDG-  
NORTH IN SHROPSHIRE IN THE YEAR  
1784: WITH A SUCCESSFUL METHOD  
OF TREATING IT:

By John Colley,

Surgeon in the Army.

DYSENTERY,

and its treatment at the same time.

By WILLIAM COLLEY,

Surgeon in the Army.

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Printed for the Author; and sold by J. Murray  
No. 32, Fleet-Street, and Mells Robinsons  
in Paternoster-row.

1785. 8vo. 6s.



# DEDICATION.

TO DR. JAMES MOSELEY M. D. in Ludlow.

Dear Sir,

THE kind permission you have given me to send this pamphlet into the World, under the sanction of your name, affords me the highest satisfaction. It enables me in the manner most congenial to my feelings, to acknowledge the advantages I have deriv'd from your friendship; to make known the success which attended your practice, during your residence in this neighbourhood; and to record the benevolent alacrity with which your assistance was most particularly extended in the cure of the Epidemic Ague. For these estimable qualities your name will be long remembered with the greatest respect; and for the favours conferred upon myself, I shall ever remain,

Dear Sir,

*your much obliged,*

*and most obedient Servant,*

WILLIAM COLEY.



# DEDICATION.

To Dr James Mosley M. D. in London.

Dear Sir,

THE kind permission you have given me to send this pamphlet to the

World, under the sanction of your name, affords me the high satisfaction of

being permitted to recommend it to your notice. I have already been

friendship; to make known the book to which it is related your notice is

this need not be said. I have already been

particularly attended to the case of the epidemic

Ague. I on these estimable qualities your name will be long remembered with the greatest re-

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Dear Sir, your most obliged servant,

WILLIAM COLLYER.

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## P R E F A C E.

THE following tract is published to record a very general epidemic disease which broke out in this neighbourhood, in the year 1784: and to relate the different measures which were made use of in its medical treatment. This indeed has been in some part already executed by a short essay which was published in the *Gentleman's Magazine*; (a) and the author had originally no intention of employing his pen again on the same subject. The disease however having returned this spring, and many people suffering either from their own neglect in not seeking relief, or from the mismanagement of practitioners employed; the writer thought he should be doing an acceptable service to the public, in acquainting them of a method by which it may be safely and easily cured. This he presumes he is in some

(a) See *Gent. Mag.* for Feb. and Mar. 1785.



measure especially qualified to do, from the constant and uncommon experience he has had in its management.

It may be thought remarkable, that in his practice he has neither suggested any new Ideas on the nature of the disease, nor recommended any Improvement in the cure which materially differs from that of modern physicians. This practice however, though generally known, is not universally adopted; and different practitioners have different methods of treating the ague. From these in the late epidemic disease, much *Opprobrium* was brought upon the profession. In many instances the author had occasion to observe that patients had been kept under a course of medicines several weeks together, and in some cases for more than two months, who might have been cured in a few days. He will not say how nearly this conduct borders upon Charlatanical principles, nor how much it ought to be despised; but he will venture to affirm to the more modest  
 practi-



practitioner, or to the patient, that if he will attend to the observations laid down in this treatise, he will seldom or never be disappointed in curing any ague whatever.

An unhappy opinion has prevailed with many people, concerning the operation of the Bark; and it is probable that practitioners have not taken much pains to endeavour to remove the mistaken notion. Nothing is more common than to hear a patient exclaim, “for God’s sake don’t give me the bark, it will certainly lie in my bones, and I shall never be well afterwards.” But this idea, however it may suit a chimerical fancy, has no foundation either in truth, reason, experience, or analogy. With as much argument it may be said, that it will remain in the hairs of the head, or the nails of the fingers; for independent of situation there is no more direct passage from the stomach to the one, than to the other. Every unprejudiced experiment must lead to the opinion, that the bark is a perfectly safe remedy; and in



the quantity necessary to be employed in the cure of an intermittent fever, it is impossible that it can do hurt. It is more probable, that all the mischiefs which have at any time been imputed to it, are either owing to the improper manner in which it has been administered ; or to its having been too sparingly given : and hence leaving the disease imperfectly cured, or continuing in a secret form.

The following pages contain a short history of the ague as it most generally appeared ; and of the different diseases with which it was frequently combined. There are also, an account of the Remote Causes to which agues may at any time be attributed ; a concise Theory of the disease, from Dr. Cullen ; a section on the efficacy of various Prophylactick Remedies ; and lastly, a very particular narrative of the Method of Cure.

On the Prevention of epidemic agues, the author believes no person has before written : and though the observations he has made, are most of  
 them



them such as would occur to any reflecting mind; he is not without hopes that the different hints he has given, if properly attended to, will at any time diminish, if not entirely prevent, the morbid effects of *Marsh Effluvia*.

In the section on the treatment of the disease, a number of Efficacious Prescriptions are added in the way of notes. These, though they may be of no consequence to the medical practitioner, may be serviceable to other readers, as more fully illustrating the method of practice.

To the above are annexed, some Observations on a Dysentery: but they are not advanced as a guide for medical practice; and would not have been here inserted, but that they form a part of the history of the same Unhealthy Season which produced the ague.

In the month of February last, some instances of Agues again occurred: and the affection has ever since continued to appear, though not in a very general way. At the same time, and also in  
the



the month of March, many people were complaining of Quinsies; but they were not of a very violent kind. The symptoms were chiefly a slight inflammation of the tonsils and uvula, attended with pain, a laborious deglutition, and a troublesome clamminess of the mouth. For this disease an Emetick was commonly prescribed, and in almost every instance procured immediate relief. In some cases these symptoms were combined with the ague; and then the same emetick medicine that was useful for the latter affection, generally proved a cure for the quinsy. One instance occurred of a *Cynanche parotidæa* <sup>(b)</sup>, or the Mumps; but it required no particular treatment. A vomit was given, and a camphorated liniment applied to the external fauces: and as soon as the *consequent tumour* came on, a solution of lead or a saturnine poultice was used for a few days with evident advantage. A purging remedy was also given at one period of the disease, when the

(b) See Dr. Cullen's practice of Physick, vol. i. 8vo.



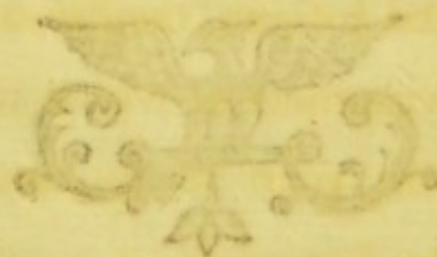
fever was most violent; but bleeding did not appear to be necessary.—Through the whole winter, and great part of this spring, many people were affected with the natural Small-Pox. Most of the patients recovered in a favourable way; though the disease was commonly of the confluent kind, and proved fatal in several instances. Where inoculation was practised, the patients recovered without much trouble, or any danger: but the inoculation was not so general as could have been wished.

BRIDGNORTH, *April*, 1785.



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Baldernham, April, 1785.





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A N  
A C C O U N T  
*of the late*  
EPIDEMIC AGUE, &c.

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SECT. 1.

*History of the Disease.*

**A**BOUT the middle of January 1784, or towards the latter end of that month, several people in different parts of this neighbourhood, both in town and country were complaining of illness. But those affected at that time were especially children, and poor people who had been much debilitated by age, constitution, or way of living. The symptoms of which they complained, were a violent pain in the head, with great heat of the body, but without perspiration or rigours; they were restless, and sometimes delirious; the appetite was impaired, with sickness at  
stomach,



stomach, and costiveness; the urine was high-coloured, and without sediment; the tongue and *fauces* were dry and clammy, and most of them complained of thirst; the pulse was quick, but not full. These were the first symptoms of this disease; and where nothing had been used for their relief, they continued with little variation for a considerable time. Cases occurred where patients had been thus affected, three weeks or more, without any remission of the symptoms: and in many where medicines had been used (especially the warm cardiacks usually had recourse to by the good old women), much mischief was done by encreasing the fever, and every concomitant symptom. In this way did the affection rage, till the month of March; when for the first time it assumed a different appearance: and then the sick were affected with regular agues.—The pain in the head which had continued from the very beginning of the disease, now became more violent and more general; and they complained of



of pains in different parts of the body, particularly in the small of the back. These symptoms were attended with cold shiverings and sickness, which in many instances continued several hours; and some were affected with a troublesome and painful micturition. As the coldness and shiverings went off, great heats of the body appeared, and these were succeeded by sweatings. In the cold and hot stages, they had a dryness and clamminess of the mouth, attended with thirst; but these symptoms abated as soon as the sweating broke out. In the intermissions of the disease, all of them complained of an aversion to food, with great lassitude; and in many was an obstinate costiveness. The rigours in most cases observed a periodical revolution, and generally returned every second day. There were however some instances, both of quotidians, and quartans; though of these but few cases occurred. In some patients the symptoms of the several stages were particularly violent, such as coma, delirium,



painful micturition(c), &c.—The disease having acquired this regular type, it became more and more general 'till the month of May, when there appeared the greatest number of the diseased at any one period. So general indeed was the complaint, that hardly a family in the country of whatever condition(d) escaped it; though in the town there were comparatively but few instances of the affection. Towards the end of May there was a very evident remission, and there were then but very few instances of the complaint: but about the middle of June the disease returned with nearly equal violence, and continued in full force

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(c) Whether this symptom was peculiar to our epidemic disease, I am not certain; but it is not recorded by any author whom I have perused on the subject of Agues.—There is however no doubt but it wholly depended upon the spasm which supported the fever; for as the cold stage ceased, the micturition abated of its violence, and as soon as any sweating appeared it entirely went off.

(d) Those however of robust constitutions were more rarely affected; and only in some instances where debility had been induced by much exposure to the weather, intemperance in drinking, and some other causes evidently of a debilitating nature, did the disease prevail.

for



for about two weeks, when it again went off; and by the middle of July most of the affected were recovered, and few instances of the disease occurred.

As the fever went off the patients in general were restored to their usual healths; and we had hardly an instance of the disease being succeeded by any other complaint. Some instances however occurred of the ague being conjoined with different affections; particularly with a pain in the thorax, a dyspnœa, and cough, forming the disease which SAUVAGES has termed *tertiana pleuritica* (e); and the few complications of this kind which occurred, were particularly troublesome. In children, the fever appeared in a few instances to be protracted, by the irritation arising from worms in the bowels. Some cases, which had continued a long time without proper (or perhaps without any) remedies having been administered, were combined with an *anasarca*, usually of the

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(e) Gen. morb. gen. 88. sp. 4.



lower extremities only : but in two or three cases it appeared more general ; and I had one instance of an incipient *ascites*. But the disease with which the ague was most frequently combined, was a common Cold, or Catarrh : this however required no particular treatment, for as the strength recruited the catarrh went off, commonly by a very kind expectoration.

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## SECT: 2.

### *Of the Remote Causes of the Disease.*

**A**S this disease was so generally prevalent, many people were of opinion that it was contagious ; and the circumstance of its frequently passing through very large families, affecting every individual successively, seemed to favour such an opinion. The idea however, probably had not gone forth, had it been considered that the same causes which affected one, were at the same time operating upon the rest ; and that in various instances the disease broke out, where there had  
evidently



evidently been no kind of communication with any infected person. Rejecting therefore, human contagion (f) as a cause of this disease, I shall proceed to the consideration of *Marsh Miasma*; and hope to make it appear sufficiently evident, that *that* alone had the principal share in producing all the different symptoms which appeared. Of the nature of this miasma however, little is known: nor have the observations of the most accurate physicians determined, "whether or not it differs "in kind. "Dr. Cullen is of opinion "that it does "not ; and that it differs only in the degree of its "power, or perhaps in its quantity, in a given "space." (g)

The same illustrious author (speaking of inter-

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(f) By human contagion is to be understood, that particular effluvia which arises "*from the body of man under disease,*" entirely independent of any contagion which may be retained in his cloaths, body-linen, &c. and which in that way may produce disease. The contagious matter thus accumulated often proves a powerful source of infection, and I shall hereafter have occasion to consider it as one of the remote causes of epidemic agues.

(g) See first Lines of the practice of Physick, by Wm. Cullen, M. D. and P. vol. 1. 2d. edit. pag. 69.

mittent



mittent fevers) further observes, that "we know  
 "with certainty only one species of miasma,  
 "which can be considered as the cause of fever;  
 "and, from the universality of this, it may be  
 "doubted if there be any other. The miasma  
 "so universally the cause of fever, is that which  
 "arises from marshes or moist ground, acted upon  
 "by heat. So many observations have now  
 "been made with respect to this, in so many dif-  
 "ferent regions of the earth, that there is neither  
 "any doubt of its being in general a cause of fe-  
 "vers, nor of its being universally the cause of  
 "intermittent fevers, in all their different forms." (h)

These observations will be in some measure confirmed, by the following short statement of the weather, as it appeared previous to the breaking out of this epidemic disease, and during great part of its continuance. From this account it will appear, that the season was such as may be presumed to be very powerful, in disposing to the

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(h) Idem page 68.



formation of that miasma or effluvia, which we have considered as being the cause of the disease.

*Of the state of the weather.*(i)

FOR some time previous to the 25th of December 1783, the air had been uncommonly mild; so much so that abundance of spring-flowers were in blossom in an open garden in this town (j). The air on that day was intensely cold, particularly in the morning part; and about noon there came down a large shower of snow, which continued descending many hours; at the same time there was a disposition to freeze, and at night the frost was exceedingly severe. This continued with a very cold wind, for the most part northern, till the 2d. of January, when there

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(i) These observations on the weather do not extend so far back as I could wish, nor are so accurate as they ought to have been; but it is to be observed, that they were hastily and cursorily taken for my own satisfaction, without any intention of publishing them. Such as they are I can only vouch for their veracity, and hope they may be in some measure useful.

(j) Mr. Rhodes's Cann-hall.



was a fall of rain (k) which lasted the whole day ; but at night the frost returned with encreased severity, and in a few hours the ground was covered with ice. The latter frost, which was of seven weeks continuance, did not remit till February 21st, in the afternoon, when there came down a very kind, gentle, and continued rain. Indeed some small showers of rain had fallen during the frost, but were frozen in their passage from the clouds ; appearing more like showers of ice than rain. Very few fine open days occurred, the atmosphere being for the most thick, humid, and cloudy. And during great part of this period, the snow returned many different times, often for a whole day together, and lay prodigiously deep upon the ground. The snow appearing at the same time with the frost, large quantities were accumulated upon trees, and in many orchards did considerable damage, the trees breaking under the

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(k) The rain on that day had a peculiar appearance, being frozen as it descended from the clouds.



weight of the frozen snow. The river Severn was frozen over in many places, and rendered unnavigable for a long time. After this frost and snow, though they were dissolved in the most favourable manner, very large floods succeeded in every part contiguous to rivers, which continued many days. The ground in every situation for a long time afterwards was very cold and wet: at the same time there was a chilly or cold air, with a N. or N. E. wind (except for a few days), without any rain till the 10th of May, on which day the atmosphere was uncommonly warm and sultry. In the afternoon of this day, violent thunder-storms suddenly poured from the clouds: and these were succeeded by very constant heavy rain, which continued all night, and part of the following day. Indeed throughout the whole of the following month, we had rain more or less almost daily, with a S. or S. W. wind: but with the beginning of July fine weather again returned, though during great part of that

D. month



month we had much rain.

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I Have considered marsh miasma, or that particular effluvia which arises from moist grounds acted upon by heat (and which is probably diffused and circulated by the air (1), retaining its activity for a considerable time), as the principal remote cause of intermittent fevers; but I have neither shown its method of introduction into the system, nor explained its consequent mode of operation. It is probable, that the miasma may be introduced in different ways, as by inspiration, or by the absorbent vessels on the surface of the body; but to explain this would be a difficult undertaking, and I don't know that it has ever been executed in a satisfactory manner. In this

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(1) That the contagious matter which produced this ague was very widely diffused in the atmosphere, I have no doubt. In every situation the disease raged; and was at one time equally as universal in those places where the soil was dry, sandy and gravelly, as in other situations where the marshy ground was more general.

imperfect



imperfect state of our knowledge (where every hypothesis is conjecture), I am neither satisfied with the observations of others, nor have I any new ones of my own to offer. Of its effects therefore we can only with certainty speak; and many considerations lead me in common with others to believe, that its action is primarily upon the nerves, as originating from the brain: and that it operates by a specific sedative power, producing a debility of that system of vessels, and at length of the whole body. That the brain itself is affected, appears evident from its diminished energy. This indeed takes place more particularly in the cold stage of fevers; but a want of excitement in that organ may be perceived, even in the intermissions of the disease.—The greatest part of our system is composed of muscular fibres, whose action depends upon an energy, constantly communicated to them from the brain. What is the precise nature of this energy has not been explained, but it has certainly universal influence  
on



on every part of our bodies. Whatever produces a debility of the nervous power, will consequently occasion a weakness of the whole system: I consider debility therefore as laying the foundation of fevers; and when we come to speak of the proximate cause of the disease, I shall endeavour to explain the way, in which it produces the several phenomena that occur.<sup>(m)</sup>

It is probable that some other debilitating causes, as cold, fear, and intemperance in drinking, concurred in some instances to render the disease more general. Fear and intemperance, indeed, either seperately or conjoined, produce sedative effects in every constitution; but concerning

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(m) Nothing can be more evident than the operation of debility in agues, both in giving originally the disposition to the disease, and in protracting it when it has come on. There was scarcely a weakly person in this neighbourhood but what was affected; and those agues in which the marks of preceding debility were most evident, appeared to suffer the most from the affection. At one time hardly any constitution however vigorous escaped, but particularly those in which the predisposition was brought on, from intemperance, exposure to the weather, the operation of cold &c. Debility therefore, in every view, both in disposing to, and in maintaining the disease when it has come on, must be considered as the *sine qua non* of agues.



the operation of cold there may be some doubt, as in different circumstances it is observed to have different effects. It commonly produces either a sedative, or stimulant effect; and its operation is more powerful, "in proportion as the body, and particularly the vigour of the circulation, is previously more weakened."<sup>(n)</sup> It is extremely probable, however, that its fundamental operation is always sedative; and that its stimulant power depends upon that reaction of the system, that increased circulation, which cold always excites in vigorous constitutions. Its sedative effects are more powerful, when concurring with a moist or wet atmosphere.—Cold has also, on some occasions an astringent effect; thereby obstructing perspiration, and producing a constriction of the extreme vessels on the surface of the body. This constriction is also sometimes communicated to the whole body, and then its operation is directly that of a tonic power.

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(n) See Cullen's Practice, vol. 1. p. 77.



In the beginning of this section, I attempted to refute the opinion of the contagious nature of this epidemic ague, and said that it was not to be produced by human effluvia; but I neglected to observe, that it might be caused, though in a different way, even by contact with the diseased. To explain this we must suppose (and several considerations render it very probable), that persons who have had the disease, might for some time after their own bodies had been affected with the miasma, and indeed after their recovery, retain a part of the same effluvia upon their cloaths(o), &c; in which state it may continue active a considerable time: and probably some people were in this way affected, who would otherwise not have had the disease. For it is certain, that every kind of contagion is more powerfully active in the state of *fomes*, than as arising immediately from the human body. In this way it is that the plague, the small-pox, the measles, and

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(o) The substances thus imbued with this contagious matter are called *fomites*.



many other contagious diseases are propagated from one country to another, and appear as epidemics. Hence the necessity of quarantine being duly observed, in all cases where there may be a suspicion of importing contagious diseases. It is probably by the good observance of this conduct, that we have so long escaped from the worst of all contagions, the plague.

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### SECT: 3.

#### *Of the Proximate Cause of the Disease.*

**H**AVING considered debility as laying the foundation of agues, it may appear necessary to explain the manner of its operation in producing that regular concurrence of symptoms, which appear in a paroxysm of the disease. But, as a proper explanation of this kind would require a tedious disquisition, which it is not necessary to enter into, it may be sufficient to shew the operation of debility in common with the other symptoms in a general way. To this purpose we must repeat



repeat the appearances before recorded, and which are in common with those that occur in every intermittent fever. It is therefore the theory of intermittent fevers that is here in some measure to be explained; and I shall attempt to do it in as concise a manner as possible.

It is probable that a debility of the whole system, but particularly of the nervous system, exists in every case, previous to the accessions of paroxysms. This however is not always evident to the patient, and the first symptoms of which he complains are, violent pain in the head and different parts of the body, with a cold shivering; and these are attended with a shrinking of the external parts, and a suppression of all excretions. Dr. Cullen is of opinion, that the latter symptom depends upon “a spasm induced every where on “the extremities of the arteries”; and of this there can be little doubt, as in the cold stage there is always present a general spasmodic constriction of the surface of the body, and probably of the vessels  
of



of the whole system. The cold shivering may be owing to the diminished action of the heart and arteries in propelling the blood into the vessels on the surface.—That a debility however caused the disease, is further evident from its returning after the paroxysms had ceased for several days; of which I had some instances: and the recurrence in all of them was plainly to be attributed, either to the patients' neglect of medicines, or to the fresh application of some debilitating power.

In what particular manner the state of debility brings on the cold stage and the spasm connected with it, is not perfectly understood; though of the fact itself there can be little suspicion. Some illustration of this may arise from considering the effects of debility on other occasions, and in diseases more apparently spasmodic; particularly in the Epilepsy, where a preexistent debility of the nervous power, and consequent mobility, are plainly sometimes to be considered as the principal causes of these affections; and the effects of the



remedies<sup>(p)</sup> employed for their removal, render the matter clear beyond all doubt. Here however, it is only necessary to refer the operation of debility to that "general law of the animal œconomy, whereby it happens, that powers, which have a tendency to hurt and destroy the system, often excite such motions as are suited to obviate the effects of the noxious power". This is what physicians call the "*vifmedicatrix naturæ*", or in other words the reaction of the system; "and it is probable that many of the motions excited in fever are the effects of this power"<sup>(q)</sup>.

After the cold fit has continued some time, the patient complains of heat, great thirst, the skin appears preternaturally hot, and the pulse becomes quick, full and strong. The hot stage now commences, and with it the action of the heart and

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(p) The efficacy of tonic remedies in some instances of the epilepsy, have been almost as successful as the bark in the cure of agues. The medicine I have commonly employed is the *cuprum ammoniacum*, as recommended by Dr. Duncan in his "Medical cases", vol. 1.

(q) See Cullen's Practice; vol. 1. p. 28.



arteries is encreased, till it “has the effect of restoring the energy of the brain, of extending this energy to the extreme vessels, of restoring therefore their action, and thereby especially overcoming the spasm affecting them”(r). For it is to be observed, that the spasm which was more entirely formed during the cold stage, probably subsists for some time, and supports the hot stage ; for with the flowing of the sweat the heat ceases, and “other marks of the relaxation of excretories, take place”(r). This process, or the sweating stage in some patients continues a long time, but it never fails relieving them of many troublesome symptoms. Head-ache, nausea, anxiety, and what they express by a grinding pain in the bones, &c. all disappear upon the breaking out of the sweat. As the perspiration goes off they gradually get better, but only remain so 'till the next accession of paroxysms.

From the above account of the proximate cause

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(r) ib. p. 39.



of agues, we understand that each paroxysm consists of three stages; viz. (1) a cold stage, (2) a hot stage, and (3) a sweating stage. We consider the cold stage to be caused by a debility prevailing in the system, and particularly in the extreme vessels; that this continuing, a spasm at the same time is formed, and in the same vessels; a reaction of the system, in consequence of this spasm is excited, by which the action of the heart and larger arteries is increased; a hot stage is formed; and this latter continuing 'till the spasm is overcome, is then succeeded by the sweating stage. These are at least the chief of the phenomena of a paroxysm of intermittent fevers, and such as commonly appeared in our epidemic ague.

The above theory, which is but an imperfect abstract from Dr. Cullen's publication, may tend to throw some light on the nature of this disease. And here, I cannot refrain the remark, that if greater attention was paid to the consideration of proximate causes, by practitioners in general, but particu-



particularly by practising apothecaries, who of all others have the greatest opportunities for observation ; real merit and honour would be reflected upon themselves, and the highest advantages be derived to their patients.

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SECT: 4.

*Of the Prevention of the Disease.*

**P**ERHAPS less has been done by medical practitioners, as well as by the people at large, with a view to the prevention of the ague, than of any other epidemic disease whatever. How this has happened may be difficult to explain, for on different occasions it has been considered as contagious ; and when it has raged as an epidemick disease, people have endeavoured to avoid a near contact with the infected, but they have commonly done no more. This in great part has probably been owing to the imperfect and mistaken notions which at all times have been



been propagated, by different writers, on the nature and causes of agues; for on neither of them have authors universally agreed. This difference of opinion has led practitioners to different methods of treating the disease, but they have not commonly considered *prophylactic* remedies as needful. Accordingly, during the continuance of our late ague, no kind of preventive measures were taken by the people; though on the occurrence of other epidemic diseases, as the *scarlatina anginosa*, the *influenza*, &c. which are affections that in their nature and tendency cannot be considered as more dangerous or troublesome, I have often remarked the populace pursuing different methods for their safety. On these occasions, camphor worn at the pit of the stomach, and red wine taken in liberal doses have been favourite remedies; for whether the prevailing disease has been of an inflammatory, or putrid nature, the same prophylactic remedies have generally been advised.

Whatever



Whatever merit may be acquired by the cure of a dangerous disease, not less meritorious is he to be considered, who by the employment of proper remedies, prevents the accession of that disorder, which by his skill he has it in his power to cure. To prevent diseases ought therefore to be considered as a part of the province of every practitioner: and it is probable that much may be done to prevent the spreading of an epidemic ague.

When treating on the remote causes of this disease, we considered debility as laying the foundation of the cold stage, and all the subsequent symptoms; and that people who were not predisposed by debility, or those of very vigorous constitutions were seldom affected; we considered marsh miasma as causing the disease by inducing debility: but observed that in proportion as people were more predisposed by weakness, they were both more readily and more obstinately affected. To correct or obviate the effects



fects of debility, may therefore with good reason be considered as a principal means of preventing agues.—Our preservative indication then, is, to support the tone of the system in general, and of the stomach in particular; thereby preventing the accession of the atony and consequent spasm. That the stomach ought especially to be strengthened, appears evident from the connection which constantly subsists between that organ and the extreme vessels on the surface of the body; for when either the one, or the other are affected, a mutual sympathy commonly takes place: this at least has been very universally observed in the occurrence of febrile disorders(f).

To answer the above indication, it is presumed that much may be done by the careful observance of a proper regimen. For this purpose, a more generous diet than ordinary is necessary; and those who have accustomed themselves to the

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(f) See Cullen, Sydenham &c. on fevers.



drinking of wine, should take a glass or two more than usual each day. A very full diet however ought to be avoided, as instead of strengthening the tone of the stomach, it increases its disposition to an atony. Those who use malt-liquors for their ordinary drink, may take more than their usual quantity with advantage; and they should be careful that it be well hopped and not new. For solids, meat of almost any, kind may be allowed, either roasted or boil'd, as may be most agreeable to the person's palate: but meat roasted, for those whose stomachs will bear it, may be considered as more strengthening than when boil'd. Cold water is drank by some people at their meals, in preference to fermented liquors; but as it disposes to a costive habit, and is not useful in assisting digestion, small-beer ought to be preferred on every such occasion. Intemperance should be carefully avoided, as it debilitates the constitution, and thereby renders the person more liable to be affected. Nor should



smoking, or chewing of tobacco be practised; for although they may give a temporary stimulus to the system, yet their narcotic quality, perhaps never fails in the end to produce debilitating effects.

It is probable that some service might also be expected, if with the regimen just mentioned we were to take a small wine-glass, of a mixture composed with equal parts of *Huxham's* tincture of bark, and red wine, every morning an hour or two before dinner. Or the powder of bark might be taken with equal advantage. The operation of these medicines, or at least of the bark, is that of a tonic power; and its action is primarily upon the nerves of the stomach, and from them is communicated to the whole of the nervous system. That this is its mode of operation, appears evident from the good effects that in many instances are observed, before it can possibly be supposed to be conveyed to the mass of blood. There are some other medicines as bitters, or bit-  
ters



ters and aromatics conjoined, which evidently possess a tonic property; and may be employed to fulfil this indication, by those who have an antipathy to the bark. An elegant tincture of this kind may be prepared, by mixing three parts of the bitter tincture with one part of the aromatic tincture.

As to external remedies, they do not appear to be necessary: though some advantage may be expected from carefully avoiding both the night-air, and going out early in the morning: the feet should also be kept dry, and more cloathing than ordinary used in the day.

These are the measures which I would recommend for the prevention of epidemic agues; and, if it be true that the disease depends upon the different remote causes before enumerated, it can hardly be doubted that in most instances they would be found serviceable.



## SECT: 5.

### *Of the Treatment of the Disease.*

**T**HE late epidemic disease, as it appeared in the months of January, February, and the beginning of March, required a very different treatment to that which has been generally found successful in the cure of agues. For in them, tonics, with vomits occasionally administered are the successful remedies; but the anomalous symptoms which occurred in the beginning of this affection, were only to be relieved by purging. This evacuation, however excited, always relieved the symptoms: after a few stools, the fever abated, the thirst diminished, the anxiety lessened, and the patient seemed well of his disease; indeed in some instances this alone proved a cure; and in every case where it failed of that, it always brought on a regular ague, which soon yielded to the application of the bark. The nausea of which they complained, seemed to indicate the propriety of emeticks; but these, whether employed in full or in nauseating doses, only did



did service where they procured evacuation by stool. They hardly ever operated by exciting sweat, nor would the most powerful diaphoreticks, however employed, produce any perspiration on the skin. They evidently did hurt, by increasing the circulation, the anxiety, and the delirium; and therefore were very rarely made use of. Nor was bleeding practised, though as a relaxant and antispasmodic I had some thoughts of it as a remedy, but was prevented by reflecting on the consequential debility, which more or less attends all febrile complaints: and the necessity of such an operation was fully answered by the good effects which followed the purging remedies. The medicine which on this occasion I mostly used, was a mixture(s) of Jalap and syrup of buckthorn, diluted with mint-water, and occasionally quickened with small doses of emetic tartar. Or

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(s) Take of Jalap, finely powdered, one dram; syrup of Buckthorn, one ounce; simple mint-water, 3 ounces.—Two meat spoonfuls to be taken once in three or four hours, till it has sufficiently operated.



a solution of *Sal catharticus amarus* (t) answered equally well.

When the disease appeared in the regular form of agues, medicines of a different kind were necessary: and then the emeticks which had before been given with the effect of aggravating the symptoms, became occasionally of service in the cure. The indications I had now in view, were principally; “1. In the time of intermission, to  
“prevent the recurrence of paroxysms; 2. In the  
“time of paroxysms, to conduct these so as to ob-  
“tain a final solution of the disease; 3. To take  
“off certain circumstances which might prevent  
“the fulfilling of the two first indications”(u). These indeed are the whole of the indications, which (by rational practitioners) have at any time been attended to in the cure of agues; and with

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(t) Take of Glauber's purging salts, one ounce; dissolve it in half a pint of gruel, of which the patient may take 4 or 6 spoonfuls, once in two hours 'till he is purged.

(u) Vid. Cullen's practice of Physick, 2d. edit. p. 170. vol. 1.



one exception they perfectly accord with my method of treatment. In the time of paroxysms, the remedies were never administered with a view to the "final solution of the disease," but merely to obviate the effects of the spasm. By this method the whole of the paroxysm was shortened, and a longer intermission obtained. The tonic remedies were then given with greater success. Whether the emeticks might have been repeated at the occurrence of every paroxysm, so as to completely fulfill the 2d. indication I am not certain; but if we consider that the operation of repeated vomiting is a debilitating power, it is very probable that they would not. Of Opium given in the hot stage, as extolled by some authors, I had no experience; and some considerations lead me to determine very decidedly against its use.—But an enumeration of the different remedies employed, with some remarks upon them, will best illustrate the method of cure.

PERUVIAN BARK.—This is one of the most  
cele-



celebrated of our tonic remedies; and I before (v) attempted to explain its mode of operation. In the cure of our epidemic ague, it failed in no instance (w). In ordinary cases it was the only remedy employed: and in the most obstinate, with an emetick, and a full generous diet in the intermissions of the fever, it was always successful. In no case where this medicine was used were paroxysms protracted longer than three times; and many had no paroxysm after taking a few doses only, especially in those cases where a vomit had been premised at the accession of the cold stage. For though the bark would effectually remove the ague in general, without any other remedy what-

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(v) See p. 28.

(w) It is to be observed, that I speak only of my own practice. The bark did fail curing in some cases, but which evidently were owing to the mismanagement of the practitioner, or of the patient. I had occasion to see some cases of this kind, wherein amazing quantities of the bark had been used, and that with the effect of aggravating the complaint, of turning tertians into quoditans, which it will never fail to do if improperly administered! But even in these cases, a few doses of the same medicine judiciously given, with a proper regimen, soon put an end to the disease.

ever;



ever; yet I think experience confirms me in the opinion, that it was sooner cured where emeticks had been administred, and that therefore these latter are useful auxiliaries in the cure of agues.

With respect to the manner in which the bark was administred, I usually gave it in the form of a mixture(x), made by triturating the powder with water; and sometimes adding to it a small portion of any agreeable fyrup. On these occasions the *red* bark was sometimes used; but it did not appear, from attentive observation, that it(y) had any preference to the ordinary sort. Very large doses were also at times employed, as four scruples, or two drachms; and in no instance were less than half a drachm, or two scruples admini-

(x) Take of Peruvian bark, finely powdered, one ounce; Syrup of orange-peel, one ounce; Water, twelve ounces: mix them together. Of this mixture an adult patient may take two, or three large spoonfuls at a dose.

(y) These experiments, however, only prove the mildness of the disease, and show what small powers were sufficient for its removal. On other occasions, I have satisfied myself with much pleasure in observing the superior tonic property of the red bark.



flred to an adult; and these doses repeated every two, three, or four hours, according to the different type of the disease. The smaller<sup>(z)</sup> doses however, in every case wherein they were employed, appeared to be full as effectual as the larger quantity; which latter was always a disagreeable medicine to the patient. To suit the palate and convenience of some people, the bark was occasionally exhibited in the form of a decoction<sup>(1)</sup>

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(z) It may here be observed that there are agues now and then occurring (though they did not appear in this epidemic disease), which cannot be cured by the ordinary doses of the bark. And perhaps it may be an improvement in practice to know that, in such cases *very large* doses have been found of singular efficacy. Dr. Moseley of Ludlow, in a late conversation, told me, he had cured some obstinate agues in this way, that had resisted the bark in small doses, and continued thro' the whole intermissions, to the quantity of a pound and half, or two pounds. His practice is to give 3 or 4 drams at a dose, beginning a few hours before the expected accession, and repeating it every hour, or as often as the stomach will bear it. By this method the paroxysm is prevented from coming on at its usual period, and by continuing the medicine a day or two the disease is entirely cured.—Of this practice I have also had some experience, and with success.

(1) Take of peruvian bark, coarsely powdered, six drams; boil it in a pint and half of water, 'till one half of the water is consumed. To ten ounces of this decoction, add two ounces of the simple tincture of bark, and one ounce of li-

combined



combined with a small portion of the tincture; and this preparation which was given to many patients, was found a sufficiently powerful remedy. Here too the red bark was now and then used, but I could not distinguish its preference in point of effect. In one case, that of my own servant, by way of experiment I administered the extract<sup>(2)</sup> in the form of pills; it cured the disease, but required a longer time, and the patient had a relapse, which afterwards yielded to the decoction with tincture. The tincture however, by itself or combined with aromatics and bitters, was found ineffectual in many instances.

EMETICKS.—These were particularly useful in some cases, in assisting the operation of the bark. They were given in the time of paroxysms, or at the accession of the cold stage. The

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moniated sugar. Dose, 3 or 4 large spoonfuls for an adult.

(2) Take of the soft extract of Peruvian bark, two drams; powder of bark a sufficient quantity; make it into middling sized pills, of which an adult patient may take 3 or 4 at a dose.

effects



effects they produced were an evacuation of the contents of the stomach, and a relaxation of the spasm on the surface of the body ; by which the paroxysm was shortened, and the sweating stage brought on. It is probable, that independent of their effects in evacuating the stomach and relaxing the spasm, they were also serviceable in restoring excitement to the nervous system in general. They were commonly given in full<sup>(3)</sup> doses, unless the patient was disposed to costiveness ; and in that case they were given in nauseating<sup>(4)</sup> quantities, 'till some vomiting was excited, and in this way they seldom failed in operating by stool. These remedies were never re-

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(3) Either of the following draughts are full doses for an adult :

Take of the powder of Ipecacoanha, one scruple ; mix it with half an ounce of water, and a little syrup.— Or

Take of emetic tartar 2 grains ; water, half an ounce.—

(4) The nauseating mixture may be thus made: Take of emetic tartar 3 grains ; dissolve it in 3 ounces and half of water, with half an ounce of syrup.—A large spoonful to be taken every half hour, 'till sickness and some vomiting are excited.

peated



peated in the same patient, nor did an instance occur in which a repetition was necessary.

ASTRINGENTS AND AROMATICKS CONJOINED.—

Various combinations of these were administered, but without any perceptible advantage in removing the ague. They were however, often recommended after the removal of paroxysms; and had evident good effects in creating appetite, and confirming the strength of the patient. The medicine was generally given in the form of a tincture(5).

MINDERERUS'S SPIRIT, AND EMETIC TARTAR.—

A Mixture(6) of this kind appeared to be service-

(5) The following is a preparation that was much used.

Take of Huxham's Tincture of Bark, 2 ounces; aromatic tincture, bitter tincture, of each one ounce.—Dose, a table spoonful for an adult, two or three times a day, in a little cold water.

(6) The following proportions are such as may be given to most patients of an adult age: Take of diaphoretic antimony, unwashed, two scruples; emetic tartar, crystallized, two grains; rub them together in a glass mortar, and add simple mint-water, one ounce and half; Mindererus's spirit, exactly neutralized, three ounces; syrup of saffron, half an ounce —A large spoonful to be taken once in two or three hours.

able



able in some obstinate cases, which occurred from improper management; particularly in the quotidian ague. It was given at the beginning, and thro' the whole course of the paroxysm; by which the fit was much shortened, and a longer intermission obtained: when the bark perfected the cure. This medicine commonly operated both by vomiting and purging; and generally shortened the cold stage at its first exhibition: it had also effect in relaxing the spasm, and thus produced a perspiration on the surface.

PURGING.—It is evident that costiveness, or other abdominal congestions would prevent the fulfilling of either of the two first indications(7): and that therefore purging remedies in the occurrence of these symptoms were absolutely necessary. I believe if the matter were properly enquired into, it would be found that the failure of the bark in the hands of some people, has been more owing to their inattention of these circum-

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(7) See page 32.



stances, than to any other cause whatever. Considering this remedy as a specifick in the cure of agues, it has indiscriminately been given in all cases: and no symptoms, however urging, have been thought sufficiently important to contraindicate its use. But with as much propriety, and perhaps with as good effect, may the bark be given to relieve a pneumonic inflammation, as to cure an ague, when the latter is attended with a phlogistic diathesis, or congestions in the abdominal viscera. Yet, it is certain that it has been given in these very circumstances, and by people who ought to have known better: by which the disease has been violently aggravated, and the medicine brought into disrepute. I have said that the bark never failed with me; but it should be understood, that I had always attention to any symptoms which occurred to prevent the fulfilling of the indication I had in view: and if these circumstances were generally attended to, I believe the bark would be found equal to the  
cure



cure of any ague whatever.—When purging remedies were indicated, any of the eccoproticks before mentioned were fully sufficient.

The above are the remedies I employed in the cure of this ague. With respect to the whole, it may be observed, that occasions occurred in which each of them were useful; but that the bark and emeticks were the principal medicines which I depended upon: and I may again repeat that they failed in no instance. Relapses however sometimes occurred, especially in very weakened people, but they were so seldom that not more than one in thirty had the disease twice; and in most of these instances it was evidently owing to the remedies having been discontinued too soon. For it is a material error in many people who have this disease, that they leave off their medicines as soon as ever the recurrence of paroxysms is once stopped; thereby leaving themselves liable to relapses, which with such conduct seldom fail to happen. In all cases, I  
would



would recommend the continuing of the bark, or some tonic remedy for several days after the ague has ceased; by which management the recurrence of the disease is certainly to be prevented, and the strength and appetite more effectually restored.

I have now only to mention the method which was employed in the cure of this disease, when conjoined with *different affections*.—In some of these complications, as the ague with catarrh, no difference in the treatment was needful: and in the *anasarca*, when confined to the lower extremities only, gentle friction with the hand softened with sweet oil, was the only additional remedy that was used. In those cases however where the anasarca was more general, diureticks were given with the bark; the chief of which was diuretic salt, with sometimes a small portion of the dulcified spirit of nitre: and these always succeeded in removing the anasarcaous symptoms. The same remedies were also given



in one case of *ascites*, where there was an evident fluctuation, and with success; though I think the cure in this instance was in some degree expedited by rubbing the abdomen with oil, which the patient used daily with his own hands. In the *tertiana pleuritica*, the free use of the lancet was required; so much so, that bleedings having been cautiously employed in the first days of the disease, it was found necessary, even in the advanced stage of the complaint (though blistering had been freely used), to have recourse again to venæsection; by which the cough and pain were most effectually relieved, and the ague was afterwards cured by the ordinary method. In the *tertiana verminosa*, or those instances of the disease which were complicated with worms in the bowels, much benefit was obtained by giving the patient at bed-time a small dose of calomel with emetic tartar(8); which procured an evacuation or

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(8) The following proportions are generally a sufficient dose for a child of 4 years: Take of prepared calomel, of crab's claws prepared, of each 2 grains; emetic tartar



two by stool the next morning, and commonly brought away several worms. This medicine was repeated once in two or three nights, and the bark-medicine given in the day-time.

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crystallized, one eighth of a grain: mix them together in a glass-mortar.



*Some observations on a Dysentery.*

**I**N the months of June, July and August 1784, at the same time that the epidemic ague prevailed, several people were affected with that most violent, loathsome, and painful disease, the *Dysenteria* or Dysentery of medical authors.

The first instance of the affection in this part of the country, was in a pauper, a male patient, aged about 40 years. He had been removed with the disease, from Birmingham (in which place the dysentery had long raged) to the workhouse at Worfield<sup>(9)</sup>; where I saw him for the first time on the 23d. of May. He was then delirious, with an acute fever and a suppression of stools, which originated from an emetick that he had taken the preceding day. But these symptoms were soon removed by purging remedies and bleeding.—This man had been ill with the dysentery for several months; and had been some time in the hospital at Birmingham, but without any relief.

After this patient had been here about ten days, two other men were seized with similar symptoms. One of them lived in the workhouse, and was evidently affected from having been occasionally in contact with the putrid ef-

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(9) Worfield is a small village, about 3 miles eastward of Bridgnorth.



fluvia of the dysenteric patient. The other man lived in an adjoining house, and it is probable was also affected from the same contagion. The disease having this disposition to spread, the patients in the workhouse were both removed, the former of them 3 miles in distance from Worfield, where he lingered of the disease a long time, and at length died of a *Paraplegia*. The mother of this patient, who was his nurse and an infirm old woman, also caught the infection by attending him; and, from her neglecting to have remedies administered in proper time, she died of the dysentery. But the disease did not spread any farther amongst the poor in Worfield; though notwithstanding every precaution, many people living within the distance of two or three miles were affected.

In this complaint, the symptoms were peculiarly distressing and painful; and in one or two instances the disease was so contagious as to pass through large families, affecting almost every individual. It appeared both in those who had before been affected with the ague, as well as in those who had not: but the two complaints were never conjoined in the same patient. In many instances it proved fatal. The evacuations were so frequent, that some patients had 3 or 4 stools every hour; and they were commonly attended with violent *tormina* or gripings. Most of them had a troublesome *tenesmus* at the beginning of the symptoms, and this commonly continued through



through the whole disease. The matter discharged was always in small quantity at a time ; thin, mucous, and generally streaked with blood. In the more obstinate cases, and those which had continued a long time, the dejections often consisted of pure blood only. Hardly an instance occurred in which any natural fæces were discharged : and I think never but in those cases where powerful purgatives had been given. After these the fæces would sometimes appear in a liquid form, mixed with the mucous matter, with here and there a hardened feculent substance, of a smooth or polished surface, of various size, but never much larger than a nutmeg. A *pyrexia* attended in most cases ; tho' in some instances it could hardly be discovered that the patient had any fever. An excessive langour was always present from the very beginning of the symptoms, and got worse as the disease continued ; insomuch that in cases where the patients had been ill but a few days the debility was so great that they could hardly support their own weight, and had almost lost every power of motion. Some of the patients were thirsty, with a hot skin and a dryness of the mouth and *fauces* ; tho' in others none of these symptoms appeared in any stage of the complaint. In most cases there was more or less of *nausea*, but without vomiting ; and all of them had an aversion to every kind of food.

In the treatment of the disease, much judgment and great attention were requisite, particularly in those



those cases which had existed several days without remedies. A smart dose of Rhubarb given at the *beginning of the symptoms*, and repeated daily for two or three times, could commonly be relied upon as an effectual medicine; and in any case, or any stage of the complaint, Purging was the principal remedy that could be administered with any hopes of success. In those cases attended with much *pyrexia*, a decoction with manna, tamarinds and emetic tartar was frequently used, and in general proved an effectual purgative. Emollients, whether given by themselves, or conjoined with ipecacoanha did not appear to be serviceable: nor could hardly any patient at any stage of the complaint bear the smallest quantity of an astringent medicine. Even Opium, when combined with cinnamon-water as recommended by Sydenham<sup>(10)</sup>, never failed to encrease both the purging and the tormina; though when given in simple water only it was found very useful in moderating the evacuations and the pain, and in some chronic cases was continued for several weeks together with the most beneficial effects. Fomentations were sometimes employed, but they were not serviceable: and in 3 or 4 very dangerous instances of the disease large blistering plaisters were applied to the abdomen, with the effect of relieving both the pain and the fever. Vomit-

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(10) See Swan's edition of Sydenham's works 4th edit. 8vo. p. 161.



ing was excited in some cases, but did no service unless the medicine happened to operate by stool. Where much thirst prevailed, a decoction with pearl barley and cream of tartar was recommended, and found to be a very useful and agreeable drink.

When medicines succeeded, the ordinary evacuation of natural *æces* was restored, and the pain and fever removed.

A violent *pyrexia* was generally dangerous: and of those cases where the dejections were very frequent and chiefly consisted of blood, very few recovered. Also, where the disease with less violent symptoms had continued long without any medical help, the patient was often unable to bear the necessary evacuations, and consequently fell a victim to the complaint. In two fatal instances of the disease, a suppression of urine occurred for several days before death took place.

## F I N I S.

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The Reader is requested to correct the following  
E R R A T A.

- Pag. 10. l. 12. r. for the most part thick,  
 11. l. 14. r. thunder-forms  
 20. l. 9. r. *vis medicatrix naturæ*  
 27. l. 15. r. preference  
 32. l. 1. for *amarus* r. *Glauberi*  
 note l. 1. for salts, r. salt  
 40. l. 13. r. would