

**A practical account of a remittent fever, frequently occurring among the troops in this climate / by Thomas Sutton.**

**Contributors**

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A  
PRACTICAL ACCOUNT  
OF A  
REMITTENT FEVER,

FREQUENTLY  
OCCURRING AMONG THE TROOPS

IN THIS  
*CLIMATE.*

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BY THOMAS SUTTON, M. D.  
OF THE ROYAL COLLEGE OF PHYSICIANS, LONDON.

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*CANTERBURY:*

PRINTED BY JAMES SIMMONS; AND SOLD BY  
G. ROBINSON, PATERNOSTER-ROW,  
LONDON.

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1806.



ERRATA.

Page 8, line 9, for *pubis* read *pubes*.

Page 10, line 10, for *houts* read *hours*.

## NOTE.

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*THE* object of this publication, is to give a compressed clinical account of a Remittent Fever, which the author has had repeated opportunities of investigating, while he was employed as Physician to the Forces: and he flatters himself, that he has been enabled to give some useful information on the nature of a disease, of frequent occurrence, among the military in this Climate, during the cold months of the year.



NOTE

A list of distinguished persons is given a  
complete chronological account of a Revolution

Terentius ita uti res est, dicere  
TERENCE.

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A

PRACTICAL ACCOUNT

OF A

REMITTENT FEVER,

&c.

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REASONS FOR THINKING THE DISEASE CONTAGIOUS.

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IT has seldom happened, that officers belonging to regiments, in which this disease has occurred, have been infected; though the medical attendants of the sick, and servants attached to the regimental hospitals, have very rarely wholly escaped, and, in some instances, the whole of them have taken the disease.

While patients, labouring under this fever, were in Deal General Military Hospital (though not over crowded), where ventilation, fumigation, and



cleanliness were much attended to, the medical mates and hospital servants, very rarely, remained long uninfected.

The disease prevails to no considerable extent, except among men in barracks, and in confined and crowded situations.

It has been observed to attack great numbers of one regiment, while another, under the same external circumstances, and within the same barrack wall, has remained, for some time, free from it.

This fever has not been propagated, to any considerable extent, in the neighbourhood of those regiments, which have been attacked by it.

These circumstances prove, that the cause of the disease acts in a very confined sphere, and totally exclude the idea, that it is produced wholly by the qualities of the air, by the season, or any common surrounding source of unhealthiness: but the inductive proofs seem strongly to imply that its exciting cause is contagion.



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HISTORY OF THE DISEASE.

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IT is a fever of the remittent kind, of uncertain duration; mostly with remissions by day, and night exacerbations. Its first attack commences by sensations of coldness and shivering, which are succeeded by an increased heat on the surface, which gradually declines, often without any sensible moisture on the skin, and the symptoms remit. This state of remission either ends in a restoration of health, or degenerates into the first stage of fever, which is often of considerable length, and the whole febrile phenomena are again renewed. The heat of the skin, in the height of the paroxysms, is often intense.

There is always a great pain in the head, which is the symptom uniformly most complained of, and continues more or less through the disease. The intellect is generally very much confused, and patients often give embarrassed accounts of their feelings, and answer interrogatories with a seeming unwillingness, as if irksome to them, and



frequently become delirious during the height of the paroxysm of fever. The eyes appear dull and heavy, and there is often a light scarlet glare upon them, and, sometimes, their vessels are very turgid.

In some cases, there is a great sickness and diarrhœa; but, in the majority, sickness is not complained of, and the bowels are either regular, or with a tendency to costiveness. There are frequently pains in the region of the pubis, sometimes connected with a suppression of urine.

Violent pains frequently occupy the back, limbs, and joints, without swelling, and the lower extremities are generally most liable to be so affected.

The tongue, in a few cases, is moist and natural, though connected with considerable disease; in the majority, it is at first by no means dry, but covered as if with white paint, and its extremity and sides have a rough angry redness: it is sometimes brown, but seldom becomes black, except under circumstances that will hereafter be mentioned.

The pulse, in some cases, is very slow, in others irregular and intermitting; but in the majority, it is from the natural standard to a great



degree of quickness ; and even in cases, in other respects apparently similar, the pulse will be discovered to vary much, being in some full, in others small, in others hard and contracted, and in others soft. This varied state of the pulse occurs in different patients during the remissions, and in the first stage of fever ; but, in the height of the paroxysms, it generally becomes full, hard, or contracted.

There is, in most cases of this fever, an affection of the chest, which is very seldom complained of by the patient ; is often obscure in the beginning of the disease, attracts very little attention, and, if noticed, is frequently considered as an accidental symptom. A slight cough, in general on the first attack, attends this affection with little or no expectoration, which is seldom copious in any subsequent stage of the disease, but has sometimes been purulent.

There is, in the very beginning of the fever, when in any respect considerable, a great debility and prostration of strength.

The disease becomes, sometimes, intermittent, and, in some cases, degenerates into dysentery.

Death frequently happens, in this fever, within



the first week, and sometimes so early as the third day. In these cases, the patient is seized with great anxiety, oppression of the breast, and laborious respirations; which affections arrive, very suddenly and unexpectedly, at an alarming height. The pulse in some patients, under these circumstances, becomes very quick and fluttering, and then gradually sinks; in others, it is throbbing and full to nearly the last moment. Such as are so affected, exist from six to twelve hours.

When the disease is treated as typhus, and recourse is early had to wine, opium, bark, camphire, and other stimulants, the following appearances generally occur:—In a short time, stupor and delirium come on; the tongue becomes brown and dry; is protruded with difficulty, and remains out of the mouth of the patient with a seeming unconsciousness of the circumstance, or is withdrawn with a sort of trembling involuntary effort. In a few days, the teeth are covered with a black sordes, and the tongue with a black fur, or pellicle; the eyes become muddy and watery; the countenance vacant; the remissions of fever less perceptible; the delirium, or stupor unabated, or increased: the pulse is now quick, but in such



as recover seldom exceeds 120; the skin, in these cases, is hot, and for the most part dry and harsh, though, in some, partial and in others profuse sweats break out without relief. Under such circumstances, patients seldom complain of pain, or uneasy sensations; though during the night exacerbations there is great restlessness, and high delirium. With this treatment, symptoms of amendment seldom appear before the end of the second week, and are often slower in their approach. They are generally introduced by some refreshing sleep; when the skin becomes soft and moist, the tongue puts off its dark appearance, and is for some days covered with a ropy secretion, or appears creased and sodden; the stupor, delirium, and fever gradually recede, and some appetite for food begins to appear. After a sleepiness, for some days, the natural sensations are, in a degree, restored, though the progress to a perfect recovery is slow, and the health of many is never entirely re-established. But when the disease ends fatally under this treatment, except when death happens, as before mentioned, in an early stage of the fever, the affections of the brain increase to a total insensibility; the pulse becomes very quick,



small, and fluttering; the discharges of urine and fæces are involuntary; the eyes sunk and dim; profuse colliquative sweats come on; petechiæ are, sometimes, observed; deglutition becomes difficult, or impracticable, which, with a distressing hiccough, closes the scene. Sometimes, upon convalescence, under this treatment, a troublesome cough comes on, and is accompanied, in some cases, by a purulent expectoration. In this mode of treating the disease, the cough seems to be often much suppressed, until convalescence takes place.

Upon inspecting the bodies of those who have died of the disease, some of the following morbid appearances have invariably been discovered:—

In the Thorax—Inflammation of one or both lungs; inflammation and adhesion of the lungs to the pleura costalis; watery effusions in the cavity of the chest, with separations of coagulable lymph joined to the above mentioned appearances; inflammation of the heart and pericardium, one or both of which have been covered with coagulable lymph, with watery effusions in the pericardium, joined, in general, to inflammation of the lungs; puriform secretions in the bronchia, with inflam-



mations and adhesions of the lungs; very rarely abscesses.

In the Abdomen—Sometimes, inflammation of the bowels only; sometimes, connected with gangrene; in some cases, the inflammation and gangrene were not considerable; in others, they were discovered to be extensive; in the former cases, considerable inflammation in the lungs was combined with them; in the latter, a very slight inflammation in the chest was often discovered. The omentum was frequently found inflamed, though to no considerable degree.

In the Head—The blood vessels of the brain have, sometimes, appeared full, but in no case have the appearances amounted to a decisive inflammation.

As such morbid appearances are discovered upon dissection, which without doubt tend much to cause the fatality of the disease, it becomes highly important to investigate minutely every symptom, which may tend to shew the actual state of the contents of the chest; as they are the parts, which are the most generally connected with the mortality attending the disease. Very little information, it will be found, will be given by



the sick themselves, unless strictly interrogated: it is proper, therefore, to make particular inquiry, if there exists any cough; to direct frequent and full inspirations; to ascertain if, during these exertions, any pain or tightness of the chest be felt.

The affections of the breast are not, however, the only obscure circumstances in this fever; for, in some instances, in which inflammation and gangrene of the intestines have been discovered by dissection, there has been no material pain complained of in the bowels.

An affection of the chest, sometimes, cannot be discovered upon the first attack of the disease; but becomes evident on the second, or third day, and, in some few, in a more protracted period; and in some cases, though not very numerous, no actual inflammatory affection of either the thorax or bowels appeared to exist. The urgent symptoms, in this latter description of patients, were violent pains in the head, trunk, and limbs; and were cases, though highly painful, which uniformly ended fortunately.

Sometimes, an evident inflammatory affection in the chest has appeared to be entirely relieved by pains occupying the lower extremities, and



has again returned upon their abating. The inflammation in the breast has, also, been decidedly relieved by dysenteric symptoms coming on, which seldom take place upon the first attack of the fever, but appear after it has continued for some days. When the disease prevails with a tendency to such symptoms, it is generally more fatal, even in cases in which dysentery does not occur. On the contrary, when it seems disposed to end in an intermittent form, though the symptoms may appear very formidable, it is mostly accompanied with less danger.



## METHOD OF CURE.

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BEFORE entering upon an account of the effects of some of the principal remedies, adopted for the cure of this fever, it may not be improper to introduce a statement of the comparative mortality of the disease under some different plans of treatment.

In one instance of the occurrence of this disease, when treated as Typhus, out of thirty-seven patients received into the hospital eleven died.

In another, where the same treatment was pursued upon a moderated plan (that is to say, without pressing the use of the bark, opium, wine, &c. in the early stage of the disease), out of ninety-two patients eighteen died.

In another, in which the disease was treated as Synochus, where moderate bleeding and evacuants were employed in the beginning of the disease, and the usual remedies for Typhus were afterwards resorted to, the mortality was upon the average of three in twenty.

By the treatment in which venesection has been



relied on as a principal remedy, the greatest average of deaths, in any of the instances, in which that plan of cure has been adopted, does not exceed one in twenty.

In the above cited examples of the comparative fatality of this fever, the disease in each appeared to be in an aggravated form, and, so far as could be perceived, the cases were equal in violence. Under each method of cure, therefore, at many times when this fever occurs, the mortality may be much less considerable. Out of seventy apparently severe cases of the disease received into the hospital\* at the same time, in which the remedies, that will be pointed out as procuring the most effectual relief, were adopted, every patient recovered. And it has been observed, that the disease has sometimes been attended with less fatality, when treated as Typhus, than could possibly be expected, considering its inflammatory nature, which is clearly evinced, by the appearances in the body after death.

Nor ought it to be considered as a matter of little importance, in recommendation of the plan

\* Where hospital, or military hospital, afterwards occur, the General Military Hospital at Deal is to be understood.



of cure by venesection, &c. that, in five cases in six, the patients become convalescent within the first week of the fever, with their strength but rarely impaired, the appetite generally greater than it is prudent to indulge, and their progress to perfect health seldom becomes protracted, by any remaining effects of the previous disease.

Though several symptoms of Typhus may appear to occur in this disease; for instance, a considerable debility and prostration of strength; the confused state of the intellect, with affection of the head; the pulse appearing, at times, quick, feeble, and intermitting, &c. yet, upon a further view of the subject, there are many circumstances, which differ from the last-mentioned disease, in this fever. The pain in the head is more violent and intolerable; a cough and affection of the chest may, in most cases, by a minute investigation, be discovered; the tongue, though not in all, is early, in most of the cases, much coated, and its sides and extremities exhibit a considerable inflammatory redness; the delirium is of a violent kind; the heat of the skin, in the paroxysms, is often intense, the pains in the back



and limbs very great, and the disease mostly comes on with considerable rigors.

With this train of symptoms, Venesection has been found the most effectual means of mitigating the sufferings of the patient, and the most prompt and decisive remedy for arresting the progress of the disease.

The quantity of blood to be taken away, should seldom be less than twelve ounces, nor should often exceed twenty-four, except in very urgent cases; nor should the cure be trusted to one, or two Venesections, but the lancet should be employed once, or twice a day, according to the urgency of the case, until a considerable amelioration of symptoms takes place.

The signs of amendment will be a mitigation of the pains in the head, body and limbs, and a relief of the pectoral symptoms, while the tongue acquires a natural appearance: but if it remains coated and red as described, though the symptoms seem to have given way, it often happens, that they return with considerable violence. For these appearances of the tongue indicate, that the inflammatory tendency in the habit, remains as yet in a considerable degree. It will be often pru-



dent therefore, in such cases, to draw away blood in a moderate quantity, though no other symptom seems to demand it.

It will now be proper to advert to some circumstances occurring in this disease, that may seem to militate against the use of the lancet.

The pulse may be often found in such state, as to seem to dissuade from the use of blood letting; for as the heart, head, and lungs, are frequently violently affected, they seem so to oppress the circulation, as to cause the pulse to be, at times, small, feeble, and intermitting. While, however, in this disease, the pains in the head and limbs are violent, the delirium in the paroxysm considerable, the tongue coated and red, as has been described, and any affection of the breast is perceptible; or while even only some of these symptoms remain urgent, it will be found, that Venesection will more materially relieve the patient than any other plans; and the consideration of the state of the pulse, ought not to obstruct the use of this remedy: and, indeed, it will be discovered, that the pulse, after the loss of blood, in these cases, instead of sinking, as might perhaps be feared, will generally become full and regular.



There seems at times, in some cases of this disease, so great a state of debility and prostration of strength, with a contracted countenance, feeble pulse, and such confusion of intellect, as to cause considerable apprehension, lest death may quickly happen. Patients have sometimes been brought to the hospital in this state, which appears to be, in part caused, by the fatigue they experience, and the cold they are often exposed to, in being conveyed there. A concurrence of symptoms of this kind is observed, occasionally, to accompany the first stage of this fever, without any such causes as above-mentioned co-operating, and is readily relieved by warm diluents, warmth applied to the extremities, &c. which, by promoting re-action, tend to shorten the duration of this state of disease, in a considerable degree. These appearances should not have such weight, as in the future periods of the disease, to dissuade from blood-letting. A patient was brought to the hospital, with such symptoms, to an extreme degree, so that his death was thought to be inevitable, and very rapidly approaching; but, in a short time, a re-action took place, and the patient was discovered to have marked inflammatory



symptoms, was bled in considerable quantities, and recovered perfectly, after an illness of no very great length.

In cases of this fever, in which the symptoms appear to indicate no very considerable affection of the contents of the thorax, it often happens that patients complain of an increased uneasiness in the chest after blood-letting, which, by effecting a more free circulation, permits the system to recover, in some degree, its sensibility. After this evacuation, some patients seem also to be roused from a degree of torpor and apparent want of sensation, to a very high degree of it. This circumstance was strongly exemplified in an orderly man, who, upon being first questioned respecting his feelings, complained of no particular pain, but confessed he had felt a slight uneasiness in his chest, which had left him. Though there were no direct indications, at this time, for blood-letting, except such as arose from a consideration of the general nature of the disease, it was thought right to take away a small quantity of blood, not exceeding *six ounces*, which exhibited no marked signs of inflammation; but in the space of two hours afterwards, the patient



began to experience violent peripneumonic affections, and became one of the severest cases of this fever, with highly inflamed blood. Sometimes also, by a first venesection, the pains of the head are increased to a great degree; generally, however, these pains are mitigated, or at least the pectoral affection appears, after a first blood-letting, to draw more of the patient's attention, for the reason above stated. These increased uneasy sensations upon blood-letting, which have had, and no doubt will have, in some, the effect of dissuading from the use of the lancet, are indications of a violent disease, and require more persevering and copious venesections.

Much stress is, by practitioners, placed upon the appearance of the blood, upon a first venesection, which, if it should exhibit an inflammatory crust, seems to confirm them in the propriety of again having recourse to the use of the lancet, should the symptoms not abate, or should they again exacerbate, after having remitted in their violence. This appearance of inflammation on the blood, however, will not be met with on a first, or even sometimes on a second venesection, in many violently inflammatory cases of



this fever ; and ought not, therefore, to be too much relied upon, as a guide for the future use of the lancet. The following case is an instance of this. The first blood drawn from the patient was *twenty ounces*, rather tough ; he was again bled in the same day to *sixteen ounces*, which appeared in every respect natural. On this account, blood-letting was not had recourse to for three days, during which time the symptoms increased, and became very alarming. It was now thought advisable to bleed to *thirty ounces* ; the blood was very buffy. The symptoms from this venesection were mitigated, for a short time, but became very violent in the course of the following day, when the patient was again bled to *thirty ounces*, and from that time rapidly recovered.

When the tongue in fever cases becomes brown, it is by some deemed an act of temerity to draw blood, as this appearance is supposed to indicate a fever, of the typhus kind, or an approach to it. The following cases of the disease will prove, that this appearance should not always dissuade from blood-letting. On the fifth day of the fever, after *four venesections*, *three* to the extent of *twelve ounces* each, and one to *fifteen ounces*, the patient



was in the following state: his tongue rather brown; nausea and vomiting; skin very hot; delirium; breathing short; pulse 120; expressed himself free from pain. In this state, blood was drawn to *thirty ounces*. On the following day, the report was, blood buffy; pulse soft; tongue moist and not so brown; skin cool; vomiting abated. The patient, in five days after this period, was in a state of convalescence.—In another case, pulse contracted; tongue rather brown; delirium. The patient was bled to *fourteen ounces*. On the next day, the blood was tough; the delirium abated; the patient finally recovered.—In another case, on the fifth day of the disease, the tongue appeared brown and dry; the pulse 120, very full; great pain in the head; breathing short; slight cough; the patient felt faint and very debilitated upon rising; blood was directed to be drawn to *thirty ounces*. In the course of a few hours, the report was, blood very buffy; pulse softer, but still full; breathing easier. This patient was afterwards repeatedly bled, and recovered.

Though the inflammation of the chest in this disease is very frequently carried to a considerable



extent, it rarely ends in abscesses, and is seldom materially and rapidly relieved by expectoration. When, therefore, the contents of the thorax seem to be much affected, it will, even in an advanced stage of the disease, be proper to employ venesection. Many cases of this fever have been sent to the hospital after the disease has continued for a fortnight, and in some for three weeks and upwards, in which venesection had not been previously employed, which have soon been perfectly recovered by a moderate loss of blood: and even in those advanced cases of the disease, if the pectoral symptoms should be oppressive, considerable benefit may confidently be expected from copious venesection.

The beneficial effects of local bleeding in this disease, cannot here be spoken of to any extent, as a matter of experience; for patients of this class have generally been admitted into the military hospital, in such numbers, as to prevent the medical mates from being able to employ sufficient time to have frequent recourse to cupping; and leeches could never be had in sufficient quantity to be used in many cases. It cannot, however, be doubted, that much benefit



might be derived from local bleeding; and with this view the temporal artery has been opened, and leeches have been applied to the temples, in cases in which the disease has seemed principally to attack the head. But, as the trials of these means of relieving the sanguiferous system, have not been very numerous, the employment of local bleeding is here introduced to be recommended, more upon the strength of analogy, than of real experience; except, in so far as the effects of spontaneous nasal hæmorrhagy are concerned. The effects of this last means of lowering the inflammatory state of the system, and of relieving the most oppressive symptoms of the disease, have been observed to be so conspicuously beneficial, as to have caused a general rule in the hospital, not to use any means to repress this evacuation: and the contrary practice has seemed to be attended with so many bad consequences, by apparently aggravating the symptoms of the disease, as to leave no inducement whatever to pursue it. This spontaneous discharge of blood has often taken place, after considerable evacuations by the lancet, with material benefit. The patient had been ill a week with the disease before blood-letting;



from that to the eleventh day, he had, at various times, lost *forty-eight ounces* of blood. At this time the symptoms were aggravated; he had a violent pain over the os frontis; delirium; pulse 110, full; the pain in the chest, which had hitherto been considerable, was not complained of; at this time he was bled to *thirty ounces*. The next day's report was, the blood buffy; the patient bled considerably from the nose during the night; is very rational; and feels no pain. From this time he rapidly recovered, and took no other medicine than a mucilaginous mixture, for a day or two. The patient, whose case is next introduced, was an orderly man in the hospital. Upon the first attack, and during the progress of the disease, very little blood was drawn. His case appeared, in some respects, doubtful, and he was treated, in a degree, as labouring under typhus, and among other medicines for this disease, was occasionally allowed wine; he became convalescent at the end of three weeks. He relapsed in five days, and the nature of his disease then appearing evident, it was judged proper to employ venesection. He was bled first to *twenty-four ounces*, and on the following day to *forty*, and from this attack recovered in six days.



He continued well again for five days, when he had a second relapse. At the end of the second day he was bled to *twenty-four ounces*; the venesection was repeated, on the following day, to the same quantity. On the seventh day he bled *considerably* from the nose, during the night; on the tenth, it was ascertained that he lost *sixteen ounces* of blood in the same way; on the eleventh, some of the symptoms remaining still urgent, he was bled to *fourteen ounces*, and in a few days became convalescent, and had no further return of his disease.

There are, however, certain cases of this fever, which seem not to be equally benefited by venesection; these are, when the affection of the breast is attended by a kind of wheezing noise in respiration, as if the patient was asthmatic; when the cough and expectoration has the appearance of catarrh, and the matter spit up is thin and frothy; and after the disease has taken a dysenteric form. This latter form of the disease has been observed to be the most fatal and untractable.

The application of Blisters in this disease seems to be an useful auxiliary to blood-letting. A blister may be immediately applied, after a first venesection, in moderate cases, but where it may be



found necessary to repeat the venesection soon, it is better to apply it after this second evacuation ; as the utility of blistering seems to be more adapted to a moderate state of inflammation. In some slight cases of this kind, with evident affection of the chest, a blister applied to the part affected has seemed entirely to remove the disease ; and under this view, in such cases, it may be right to trust, in some measure, to the effects of blistering. But, if the symptoms should not be materially relieved after the blister has risen, it will be imprudent to rely further on this operation, to remove the local affection ; but recourse ought then to be had to the lancet.

Blisters will be of use too in this disease, when applied to the nape of the neck, or temples, and behind the ears, or about the head, in cases of violent affection of the brain ; and on some occasions they seem to benefit, by being applied to the lower extremities, to produce a revulsion, and as general stimulants. In long, or violent cases, they should be frequently applied, in preference to keeping them open, which in general causes more pain than their frequent application.

An Emetic appears, in the milder form of this



fever, to possess considerable efficacy in arresting the progress of the disease ; which may probably be attributed to its effects in promoting a more free circulation. But in the violent cases, it is not evident that emetics can be administered without a risque of aggravating the congestions then formed ; at least they seem, under such circumstances, not to possess sufficient efficacy either to mitigate, or shorten the disease. In many cases of relapse, in the military hospital, emetics were given without producing any good effect. They are not therefore recommended in the beginning of the disease ; except in cases of very inconsiderable affection, or when the patient is troubled with nausea and vomiting.

Brisk Purgatives exhibited in the beginning of this fever, with a view of shortening its course, have been observed to produce no beneficial effect ; but, on the contrary, to have induced great apparent debility, and in some cases to have manifestly brought on dangerous symptoms.

In the beginning of the disease, it is proper to open the bowels, and a bolus, composed of *five grains of Calomel, with three of Pulv. Antimonialis,* was for this purpose generally exhibited, and *two*



*drams of Natron Vitriol*, dissolved in an *Infusion of Senna*, to be repeated every half hour till the desired effect was produced, was often taken to quicken the operation of the bolus. If, after repeated doses of this last medicine, the bowels remained inactive, which sometimes happened, recourse was then had to moderately *purging Clysters*. The above bolus was generally given at night, and if it happened not to have operated by the morning, then the auxiliary means have been employed. In the future stages of this disease, one moderate evacuation, in the twenty-four hours, was generally thought sufficient, and was, if necessary, procured by clyster; or if an opening medicine was given, *moderate doses of Castor Oil* were preferred. This was the general method pursued, provided the bowels were not particularly affected. But in cases of pains in the bowels, with costiveness, it was judged necessary to procure more motions, which were in general sufficiently excited by the repeated use of the bolus, &c.

Though brisk purgatives are not recommended in this disease, it is proper to state, that a spontaneous diarrhœa has sometimes produced unquestionable good. This, when it arose, was



carefully watched, and while it remained within reasonable bounds, was permitted, for a short time, to take its course; and it was restrained from becoming excessive only.

Moderately brisk purgatives are advantageously prescribed, in the convalescent state of such cases, as have been of short duration, as they tend to prevent relapses, to which such convalescents are very liable.

In a great majority of cases, Opium, in any of its forms, does not seem suited to this disease; and when exhibited, it produces such effects as may often tend to excite a wrong impression, respecting the true nature of the fever; for among the common effects of opium, whenever employed, may almost invariably be reckoned its tendency to render the tongue dry, and brown; and in this disease, as the coat upon the tongue is generally very considerable, these effects are to a great degree conspicuous, which, it is apprehended, often lead to a conclusion, that the disease is typhus.

Opium may, however, sometimes, be advantageously employed, in quieting the nausea and vomiting, which, in some cases of this disease,



becomes extremely distressing; and it is a medicine of the greatest efficacy, in restraining immoderate diarrhœa, which sometimes happens in this fever, and must necessarily be resorted to, in such cases of the disease, as put on dysenteric symptoms, according to the general mode of treatment for the cure of dysentery. When, also, the inflammation of the chest has decidedly decreased by a copious expectoration, which, as was before remarked, does not very frequently happen, a moderate opiate, at bed time, will produce some good effect; but it will be of disservice, while a disposition remains to active inflammation.

Though Port Wine has often been exhibited in this fever, little, it is apprehended, need be said to shew the impropriety of its use in a large majority of such patients. It has the same tendency as opium, to produce appearances like a disease of the typhus kind. When administered, therefore, that circumstance ought not to be forgotten. There however occur, sometimes, degrees of temporary debility, and langour, in which wine may be exhibited, in small quantities, but should be continued with great reserve and circumspection.



Peruvian Bark, though often employed in the disease, appears to be an improper medicine, during the whole course of this fever, and seems not to promote any useful purpose, even in the convalescent state. It was, for some time, given under the latter circumstances, at Deal military hospital, without manifesting any effects which could recommend a perseverance in its use.

Even in the intermittent form of the disease, the bark had not its usual good effects: indeed, most such cases were attended with more, or less of pectoral affection. Several patients under these intermittents, were sent into the hospital after the disease had continued for some considerable time. In these cases, there was a cessation of febrile heat, and other symptoms attending such attacks, during the intermissions, except that the tongue did not, in many of them, become naturally moist, and free from fur, and the patients in general, complained of some uneasiness in the chest, more especially in the paroxysms. Some of these cases were cured, by the sole use of the lancet; others, by this evacuation, and the anti-phlogistic regimen; and in others, it was found proper to be tardy and cautious in the use of the



bark, after the inflammatory affection of the chest had abated. Some of these latter cases were very obstinate, and the pectoral affections frequently returned.

The Warm Bath, and the application of heat combined with moisture, is of singular service in mitigating the symptoms of this fever. The deliriums, which occur, are much relieved by the warm pediluvium, or by flannels wrung from hot water applied to the feet, and frequently renewed, for the space of half an hour, or upwards. These last means of applying heat and moisture, seem also to relieve, in some measure, the affections of the chest, and may, in all stages of the disease, be employed, where a revulsion from the superior parts of the body should appear desirable. The pains and tormina in the bowels, which generally arise from a state of inflammation of the contents of the abdomen, are much mitigated by the warm bath, and by warm fomentations to the parts affected. The violent pains in the limbs, back and joints, are also often much relieved by the warm bath. Suppressions of urine are often removed by it, and by the application of the warm fomentation to the region of the



pubes. The warm bath is also advantageously applied in relieving internal congestions, and in promoting perspiration. In short, whether generally, or locally applied, it mostly produces some temporary good, and ought to be resorted to often, as no disadvantage has ever been discovered to arise from its use.

It has not been observed, that Sudorifics, when they have produced the intended effect, have been of any material advantage, by shortening the disease, or relieving, in any considerable degree, the urgent symptoms. On the contrary, the symptoms have sometimes appeared to return with more violence after sweating. On which account, the object, by means of medicines of this class, was to excite, and, as far as could be attained, to preserve a moderate moisture and softness on the skin. With this intention, the warm bath, warm pediluvium or warm fomentation to the feet, have been employed, and often with the desired effect. —The *Pulvis Antimonialis* has frequently been given with the same view, in doses of two or three grains; and the *Vinum Antimonii* has been generally exhibited, in small doses, either in a saline, or mucilaginous medicine, to promote this effect,



and to excite a mild intestinal discharge. It must, nevertheless, be confessed, that the disease has appeared to be very effectually relieved by spontaneous perspiration, but it cannot be stated, under what peculiar circumstances such an event is likely to happen. The perspirations, which sometimes succeed the employment of venesection, have been particularly observed to have been followed by good effects.

Of the class of Febrifuges, which directly tend to diminish the febrile heat, the *common saline mixture*, either made with *lemon juice*, or *vinegar*, was often employed; *Nitre* was administered with the same intention; and *saline draughts* in the act of *neutralization*, either with *vinegar* or *lemon juice*, were exhibited with the best effect, when the febrile heat was very considerable. But, in cases of nausea and vomiting, this medicine should be made with lemon juice, and with the addition of a few drops of *Tincture of Opium*, it was found to be of signal service.

As expectoration does not seem to be of such essential service in this disease, as, in an inflammation of the lungs, might naturally be expected; nor to be the precise way, in which nature seems



to labour for the solution of the affections of the thorax, which occur in this fever, expectorant Medicines were not often relied upon, nor always very early exhibited. The whole, that was generally thought necessary, in this view, was to direct some *oily*, or *mucilaginous mixture*, which might lubricate the internal fauces, and which, in that way, seemed to impart a soothing effect to the bronchia, thereby producing in them an abatement of irritation. For this purpose, the most commodious for public use appeared to be a mixture of the *mucilage of Gum Arabic* sufficiently diluted, with the addition of a little common syrup and lemon juice; and with the same intent *Linseed Tea* was employed, which indeed possesses all the common advantages of such medicines.

Although the Temperature of the air in the rooms of some description of fever patients, may with advantage be kept at a low degree, no material benefit appears to be obtained by such means, to those labouring under this disease. There can be no hesitation in admitting, that a low temperature of the air may be of some use in the height of the paroxysms of this fever; but this mode of



applying cold requires the immediate superintendance of a medical man: this state of the paroxysm seldom exceeds a few hours, and during the remainder of the twenty-four the febrile heat is in general moderate. In the wards of hospitals, however, where there may be patients under different circumstances of the disease, the endeavour to preserve a low temperature, in such rooms, is inadmissible; as, although it may be of some advantage to a few, there may be, and almost always are, others, whose disease will be increased by it. A change of temperature, even of the external air to a much lower degree, as is often the case in spring, has never happened without being visibly detrimental to some of the patients in the military hospital under this disease; and cold connected with moisture appeared most materially to have effected them. For under such circumstances, the air in those large wards must be considerably lowered, where a solitary fire, in each of them, remains the only means of supplying warmth. On individual patients the effect of this change of temperature might remain doubtful, but when it is seen more, or less, repeatedly to affect whole wards, its pernicious influence must necessarily



be acknowledged. Those who were approaching to convalescence, and the convalescents themselves, were particularly, and repeatedly, observed to be much affected by such a change. Unconnected with these facts, such effect might reasonably be supposed to be likely to be produced by cold, as it appears to be the chief predisposing cause of this disease, which, through its whole course, has a manifest tendency to internal congestions, that must be promoted by diminishing, in any material degree, the circulation on the surface. There can, therefore, be no doubt upon the whole, that a moderate and equable temperature is the best in which persons, under this disease, can be kept.

Immediately connected with this subject, is the business of Clothing. When the patients are fit to sit up, they ought to be very warmly clad, and during the recent state of convalescence, they should be attentively guarded against the effects of cold and moisture. On the same account, they ought, if possible, to remain in comfortable convalescent rooms for some time, otherwise there will inevitably follow many relapses caused by cold alone.



On the subject of Food in the febrile state, there is no necessity to dwell, as the plan of diet must be very evident from the preceding remarks; but it will not be irrelevant here to observe, that the early use of solid animal food has appeared to be very detrimental to such convalescents, by encouraging relapses. It was therefore, at last, determined in the hospital, not to accede to this indulgence, till after several days of convalescence, and even then a full diet was allowed to be very guardedly and gradually entered upon.





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very beneficial to such convalescents, in cases  
of dyspepsia. It was therefore at last given  
in the hospital, not to exceed to this in  
abundance, till after several days of convalescence,  
and even then a full diet was allowed to be very  
gradually and gradually restored upon.



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