

**Typhus syncopalis, sinking typhus, or the spotted-fever of New-England : as it appeared in the epidemic of 1823, in Middletown, Connecticut / by Thomas Miner.**

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Miner, Thomas, 1777-1841.  
National Library of Medicine (U.S.)

**Publication/Creation**

Middletown, Conn. : [publisher not identified], 1825.

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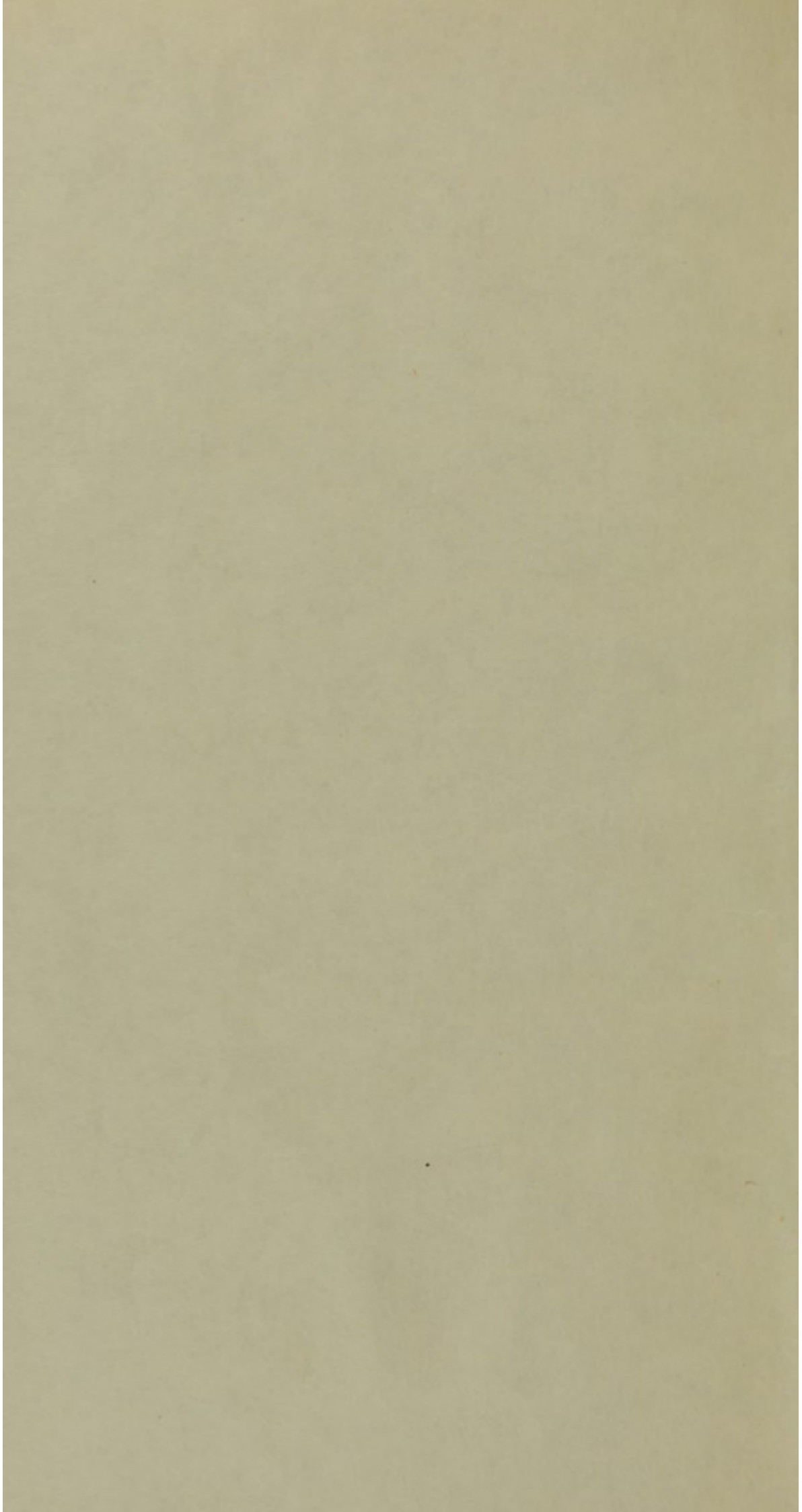
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1825



**TYPHUS SYNCOPALIS,**  
**SINKING TYPHUS,**  
OR THE  
**SPOTTED-FEVER OF NEW-ENGLAND,**  
AS IT  
APPEARED IN THE EPIDEMIC OF 1823,  
IN  
**MIDDLETOWN, CONNECTICUT.**

BY THOMAS MINER, M. D.



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" Our knowledge in many branches of Natural History [and Medicine] would be much less imperfect than it is, if many facts had not been suppressed, either from a fear lest they should be thought incredible, or from that unreasonable incredulity which will not, even from the strongest testimony, give credence to any thing that it cannot explain."

" For my own part, I am contented to write faithfully what I have observed, leaving every body afterwards to follow his own way at his peril."

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*MIDDLETOWN, (CONN.)*

PRINTED FOR THE AUTHOR.

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## PREFACE.

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AS far as respects endemic diseases, Middletown, from its first settlement, has been one of the most salubrious stations in the United States; and of the epidemics which, within the last twenty years, have so extensively visited New-England, it remained long exempt. During the last five years however, it has experienced its full share of sickness, though in comparison of the number and severity of the cases, the degree of mortality has been unusually small; there being about one death in thirty cases, including both the moderate and severe; and about one in fourteen or fifteen, if reference is made to the severe cases only. Except here and there a sporadic case, since 1815 or '16, the fever about to be described is new, and never prevailed in this town as an epidemic, till 1822. That season, our fevers assumed a new form, entirely different from regular Typhus, whether of the nervous or the putrid type, and consequently demanded a peculiar variation of practice, especially in the early treatment. New diseases, without any assignable cause, occasionally have appeared in the most salubrious quarters of the globe, and are no argument against the general healthiness of any particular station.

In the year 1823, the disease which is the subject of the following sketch, in a greater or less degree, prevailed in about a dozen towns in this vicinity. It had a common character in all, though in some unimportant circumstances, there were considerable variations. In one or two places, the proportion of severe cases was much greater than in this town; in others, it was much less. The same was the fact with petecchiæ, eruptions, and perhaps, *stinging* heat. The author witnessed, this season, cases of the epidemic in ten or twelve different towns, and noticed that all the patients agreed in the peculiar affections of the brain and nervous system, and especially in their liability to *gastric sinking*; and that much difficulty existed in all, of employing evacuants to any extent. In some of the adjoining towns, a few of the protracted cases, after they had assumed the form of common typhus, tolerated a moderately free purging, and some of the milder bore it in the beginning; but in general, as late as the second or third week, it was necessary to observe great caution in its employment, or an alarming or fatal sinking, or coma, would follow, or the milder cases were converted into obstinate bilious-fevers.

The fevers of the year 1822, as just observed, partook very much of the same character, and were often attended with alarming paroxysms of *subsidentia*, though in general, they were not so strongly marked, as in 1823. The year 1824, except some pneumonia and catarrh in the spring, was uncommonly healthy, till September; yet the scattered cases were of the same diathesis, and suffered much injury from free purging, being generally by that process converted into factitious bilious-fevers, and liable to extreme sinking at a critical period. The last four months of the year, a number of cases occurred, which were attended with as great deficiency of vital power, from the very access of the disease, as any of the preceding season. The cynanche and catarrh, which at the same time were so generally prevalent among children, in the majority were light diseases, though in many instances, they were obstinate, and attended with severe paroxysms of sinking. The same remarks apply to the epidemic catarrh and pneumonia of the first four months of 1825. Petecchiæ have been more common than usual this present summer.

Opportunities have frequently been presented, for observing this proteiform disease under almost every conceivable circumstance. In former years,

many cases, in which no medication at all had been employed till the patient was actually dying, came under the inspection of the writer. The effect of almost every kind of treatment has also been carefully noticed.

During the prevalence of any malignant epidemic, there will now and then be a case so rapid, that by the time a physician can be obtained, the patient has sunk below the reach of all medication; and occasionally one is so obstinate as not to yield, though every medicine produces its specific or operative effect; but in general, no severe disease admits of more speedy and certain success than the malady under consideration, provided the proper means are only employed early, energetically, and perseveringly.

In common language, this epidemic has been generally called Typhus, though it varies essentially from all the fevers which have received that appellation by foreign authors. This confounding of names has led to much confusion in practice, and it is apprehended, has been the cause of the fatal termination of many cases; the proper treatment being peculiarly different from that of ordinary nervous or putrid fevers. It will be observed however, that the fever under consideration may be blended with almost any other acute disease, and where it prevails, pneumonia, dysentery, or common typhus, or even influenza, will partake very much of the same character. This is exemplified in the unexpected and fatal sinking, which of late years has been so frequent in these diseases, in many parts of our country.

This disease first appeared as an epidemic, in Massachusetts, in 1806, and there has not probably been a year since, in which it has not existed somewhere in New-England. In Connecticut it has never prevailed, to any extent, nearer than twelve or fifteen miles of the sea-shore\*.

It is of much importance in medicine, that the history of such epidemics should be preserved. Hoping that some other pen might be employed, the author has delayed publishing this sketch, though it was compiled more than a year ago. So much time having already elapsed without the appearance of any publication, he was at last suspicious, if he did not communicate to the medical public his remarks, all correct knowledge of the epidemics which have lately prevailed in the central parts of Connecticut, would soon be overlooked or forgotten. Though the author has taken the utmost pains to be precise in his description, and to be minutely exact, and is under much obligation to several of his friends, and more particularly to one of them, for assistance, he is very apprehensive that no correct idea of the nature of this sinking fever, or of the operation of medicine in allaying its symptoms, can be formed by any one, who is not already conversant with the phenomena of malignant diseases. The pernicious effect of free evacuation, and the total inefficiency of ordinary supporting remedies, in ordinary doses, can hardly be realized by any other than an eye-witness.

Unfortunately, the gentleman who has unquestionably practised more in diseases of this description, than any other physician in the State, or probably in the United States, who has witnessed several thousand cases, and is every way pre-eminently qualified for the undertaking, is so entirely occupied in professional and other humane employments, as to allow him no leisure to prepare for the press the results of his extensive observation and experience. He therefore must excuse the dedication of this sketch to him, as of all others, he will be the best judge of the general accuracy of the statement, and of the propriety of the method of treatment.

ELI TODD, M. D. Physician to the Retreat for the Insane, at Hartford, is most respectfully requested to consider this tract as inscribed to him, as an acknowledgment of his very valuable suggestions upon the symptoms and treatment of malignant diseases, and as a sincere, though imperfect testimonial, of his universally acknowledged merits, as a philanthropist, a scholar, and a physician.

*Middletown, (Conn.) July, 1825.*

THOMAS MINER.

\* For the history of its early appearance, the reader is referred to Dr. North on Spotted Fever, to Dr. Strong's Dissertation, and to Dr. Fish's Dissertation.

**SKETCH**  
OF THE  
**HISTORY OF THE EPIDEMIC OF 1823,**  
IN  
**MIDDLETOWN, CONNECTICUT.**

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**B**ETWEEN the last of March, and the last of December 1823, two of the physicians\* had the care of more than a hundred and seventy severe cases of Fever, in Middletown, Connecticut, which went through their course, and required close and vigilant attendance. They also had the charge of more than a hundred and eighty other cases of the same sort, which, either from original mildness, or prompt treatment, proved to be comparatively slight. The latter class of patients however, were so much indisposed, as to be unable to attend to their ordinary business, for a period of one or two weeks; though unlike the former, they were not entirely confined to their beds for any considerable time. Out of these cases, being in the whole about three hundred and sixty, twelve died; viz. six adults, and six children. One half of the mortality happened in November. In the succeeding month, the Epidemic terminated. Persons of all ages, from one year old to seventy, and of both sexes, were the subjects of the disease. It is perhaps needless to remark, that the following statement applies more particularly to the severer cases, unless the more moderate are distinctly mentioned.

There were two varieties of attack, the sudden, and the insidious. The most sudden attacks were the soonest relieved, provided the patients had prompt and appropriate treatment; and under such circumstances, the disease rarely exceeded five or

\* Dr. Edward S. Cone and the author. The patients were principally Dr. Cone's, but were mostly visited by the author in consultation.

seven days. [*See Appendix, Note 1.*] In some of the severest cases, the disease arrived at its height on the third day, and under careful management, the patient appeared subsequently to be free from danger. Not one, this year, that was suddenly attacked, died; the recovery, in most instances, being the evident consequence of the promptness and decision of the treatment, and of the necessity which both patients and attendants felt, of following prescriptions scrupulously.

In the insidious cases, the subjects of the disease were affected with the symptoms about to be described, in a mild degree, for a greater or less length of time, and many seemed to labour under a kind of infatuation concerning the malady and existing danger, and were almost invariably inclined, for several days, to ascribe their indisposition to some other cause, than the prevailing epidemic; and if, at the instigation of friends, a physician was called, they could not be induced, without the greatest difficulty, to follow any regular plan of treatment, till violent symptoms occurred, sometimes as early as the third or fifth day, or more commonly, as late as the seventh. A few insidious cases continued two or three weeks, before there was apparent danger.

The whole number of deaths, this year, happened among the set of insidious cases. One of the adults died on the third day; one, on the fifth; one, on the ninth; one, at the end of the second week; one, at the end of the third week; and one, on the fifth week. Besides, in one of these fatal cases, the disease was complicated, at first, with Dysentery; in one, with Gout; in one, with a chronic hepatic affection; and two had hæmorrhage from the lungs. [*See Appendix, Note 2.*] The other did not substantially vary from the common insidious cases. Some of the children died at the end of a week; the others, at the end of a fortnight.

A few of the cases were complicated with Dysentery; some, with Colic; two or three, with Cholera; some, with Cynanche; some, with cough or Pneumonia; two or three, with Rheumatism; one, with Gout; a few, with severe pain, and passive inflammation of some of the extremities. The great majority, however, had no apparent local affection, except of the brain, and of the parts that more directly sympathise with that organ.

During the prevalence of this epidemic, chronic diseases nearly disappeared, and when they did exist, their acute paroxysms were invariably blended with the prevailing epidemic. For eight or nine months, it was difficult to find a case of acute disease, that

did not partake of the epidemic constitution, under whatever head it might be nosologically classed. Not more than two or three cases were, this season, attended with petecchiæ. In one of these, they were very dark and prominent. A marbled skin, efflorescences, and eruptions, appeared in many instances. [See Appendix, Note 3.]

In nearly every instance, whether severe or moderate, the disease began with more or less pain in the head, especially about the forehead. Vertigo was also a symptom almost universal. In some, a sudden faintness, dizziness, or sense of extreme exhaustion, so that the patient could neither sit nor stand upright, was the first symptom. In others, the attack resembled a severe concussion of the brain, or a sudden stroke of Palsy or Apoplexy. Indeed, every thing seemed to show that the brain and nervous system were the primary seat of the disease.

In almost every case, the skin was preternaturally cool, for several of the first days, and subsequently, in temperature, *it never exceeded the standard of health*, in more than three or four cases. [See Appendix, Note 4.] Even after it had been warmed by internal and external heat, in conjunction with stimulants, it was ever liable to become *partially* cold, as about the thighs, knees, legs, arms, hands and feet. In the course of the disease, more especially in the worst cases, it was almost always so much benumbed, as to be insensible to an ordinary pinch or scratch, and while in this state, incapable of being affected by common sinapisms and blisters. This numbness was sometimes most prominent in one side, or even in one leg or arm. In the latter stage however, there sometimes occurred periods of extreme susceptibility to the impression of rubefacients and epispastics; but as a general rule, external applications, of ordinary strength, would produce very little effect, till something like reaction had been effected. Complete agues or rigors, this year, were very rare in any stage of the disease. Commonly, through the whole course of the disease, the surface, though not dry or husky, was seldom much inclined to spontaneous moisture. [See Appendix, Note 5.] In a few instances however, there was a morbid, drenching perspiration. Sometimes, though rarely, the patient would complain of a general sensation of heat, though, to the feel of the attendants, he would be actually cold. Is not the heat, which has been often said to occur in some epidemics of this disease, either a transient flush, or the *calor mordax*, the stinging sensation merely, and not

the actual augmentation of thermometrical temperature? If increased heat, and increased frequency of the pulse, are a part of the definition of Fever, a great majority of the cases had no fever at all, but were merely an acute Neurosis. At this day however, it is well known that these symptoms are often absent in irregular Pyrexia. [*See Appendix, Note 6.*]

The countenance, in most of the severe cases, had a kind of leaden hue, with marks of anguish. In some, there were patches of a bright flush, intermingled with other patches that were preternaturally pale. In a few cases, the pupils of the eyes were contracted, and in a few, dilated. In some cases, the organs of sight and hearing were irritable in the extreme; in others, they were equally torpid.

There were two prominent varieties of the tongue, the contracted and pointed, and the dilated and flabby. The fur of the tongue assumed every possible deviation from health, and was of every conceivable variety, except that it never had the appearance which is usually found in Synocha. In the course of the disease, red tongue was rather more frequent than any other. Two uncommon varieties of fur sometimes occurred, one of which was a greenish slime, and the other a mucus, varying in appearance, from moist brown sugar, to light coloured melasses. The former was rare; the latter, more common. Most of these varieties of tongue were liable to sudden changes in the same patient. In some of the protracted cases, there were aphthæ. A black tongue seldom appeared, and two or three instances of it only were noticed. On the whole, the state of the tongue was of very little service in diagnosis, or prognosis. In general, there was little or no thirst; but sometimes it was urgent. In such cases, it was generally aggravated by cold water, and palliated or removed by a persevering use of aromatics or alcohol.

The stomach, on the one hand, was usually as torpid and inactive as a leathern bag, so that in many instances, the patient would choose scalding hot liquids; or on the other, it was irritable in the extreme. [*See Appendix, Note 7.*] The change from one to the other of these extremes, was generally sudden, and occasioned by slight causes, or took place without any assignable cause. In the majority of the severe cases of sudden attack, unless the violence of the disease was immediately subdued by very energetic practice, torpor prevailed for the first two days; but for the succeeding three or five, the irritability would be so extreme, that without the nicest and most careful management, vomiting

or retching would be incessant. The matter ejected, generally consisted of little more than the drink, or secreted mucus. In a few instances, it was greenish ; in a very few, dark coloured. Though in some instances this vomiting was very troublesome, yet there was never any bile evacuated, except in two or three patients that had long laboured under a chronic hepatic disease, or except as the consequence of an ill-timed emetic or cathartic. [See Appendix, Note 8.] Indeed, the vomiting or nausea, in this disease, seemed ordinarily to be entirely symptomatic of an affection of the brain, or was obviously the effect of an emetic or cathartic, the sympathies being the reverse of sick-head-ache. This was evinced by its being excited by raising or moving the head, or by placing the patient in an erect posture, and relieved, by a recumbent position ; and especially, by blisters to the forehead, temples, and more particularly, to the vertex. Blisters to the region of the stomach alone, though of some service, produced much less effect in relieving this symptom.

With the exception of the few cases that commenced with Diarrhœa, Cholera, or Dysentery, the bowels were naturally torpid. [See Appendix, Note 9.] Ischury, from mere torpor of the bladder, was much more common, than in other low typhoid diseases. There was a profuse discharge of urine in a few cases. In general, in common with ordinary low Typhus of the *nervous type*, there was nothing peculiar in the appearance of this excretion. Indeed, the excretions were never more offensive, and usually much less so, through the whole course of the disease, than in health ; and the alimentary canal was not disturbed by any thing which it contained *naturally*. The eructations and ejections of air had no peculiar, disagreeable odour, there was no fœtor of the breath, and in all stages, as well at the bed-side of the dying, as at the access of the disease, *there was no febrile smell*. [See Appendix, Note 10.]

The condition of the brain, in this disease, was usually very similar to that state which is produced by exposure to Carbonic-acid-gas, or which is occasioned by excessive doses of some preparations of Lead, or of certain essential oils, or of active and pure narcotics. In many cases it resembled concussion, or apoplexy, or palsy. In all the severe, and in a majority of the mild cases, there was from the very access, before a particle of medicine had been taken, a *peculiar deficiency of vital energy in the brain, and the whole nervous system*, so that raising the patient into an erect posture, would generally produce the same sort of vertigo, anxiety at the stomach,

acceleration and irregularity of the pulse, nausea, and even fainting, which result from a similar position after a great loss of blood. In almost every instance, the patient was much more comfortable when the head was *low*; and much inconvenience, and even danger, was almost invariably occasioned from any other than a horizontal posture. [See *Appendix, Note 11.*]

The mind was more or less affected in every severe case. In the majority of such cases, after the patient was induced to apply for medical advice, there was a morbid fear, entirely independent of any existing urgency or danger of symptoms, and of any information respecting sickness and death in the vicinity. The public were not panic-struck, as the deaths were so few, as to cause very little alarm.\* Fear, therefore, was rarely a predisposing or exciting cause in this town, though it evidently was, in some of the adjoining. In some cases, there was a morbid clearness of intellect, attended with incessant loquacity, or there was too great watchfulness, and extreme restlessness; both of which states were always, sooner or later, followed by delirium or coma. [See *Appendix, Note 12.*] Nearly every case of delirium alternated with coma, but every case of coma was not attended with delirium. In some cases, the delirium resembled intoxication; in many, Hysteria; and in others, it was of the low muttering kind, such as is common in ordinary low fevers. In some few cases, there was no other delirium

\* When it is generally known, that only one in twenty-five or thirty dies, of those who labour under this disease if it is properly managed, it will be divested of most of its terrors. Besides, when it is recollected, that even the majority of these fatal cases fall a sacrifice to their rashly tampering with emetics or cathartics themselves, before a physician is called, the sense of danger will still be vastly lessened. No severe disease is so much under the control of medication, in the great majority of cases, as Typhus-syncope, if it is only taken in season, and managed with judgment and decision. Without the advice of a physician, no medication ought to be attempted in cases of sudden attack, except warming the patient with external heat and stimulating applications, and giving him freely to drink of hot aromatic infusions, such as sage, penny-royal or mint. In the insidious cases, or under predisposition, two tea-spoonfuls of compound tincture of the bark in half a glass of wine, four times a day, is proper treatment, if a physician can not be procured. From the best calculation, when this disease in 1823, prevailed the most, there never was, at one time, more than one person in a hundred, of the population, that was sick; generally, not one person in a hundred and fifty. The largeness of the number was owing to the regular continuance of the disease in some part or other of the town, and to the regular succession of cases for eight or nine months.

than what was manifested by a false estimate of the disease, the patient, when in the greatest danger, instead of showing any signs of fear or apprehension, insisting that he was but slightly sick. In most cases which received early and judicious medication, delirium did not occur to any extent.

Except where there are convulsions, or, in a very few instances, where something like maniacal exertion appears, or when the fever counterfeits Delirium-tremens, the affection of the brain in this disease, (unlike many head-affections in Pneumonia-typhodes, and common Typhus,) rarely produces any increased muscular strength; but on the contrary, it usually occasions great languor, and inability for muscular exertion, which is more especially manifested when the patient is in an erect posture. As has been before observed, this debility was a kind of paralysis, and appeared to arise from a partial extinction of the vital principle, more resembling the effect of excessive doses of the active and pure narcotics, or of a sudden and violent concussion of the brain, than the exhaustion of the latter stages of common fever. The exhaustion or deficiency of *vital energy* in both cases, appears to be the same, and the same proportion of the living principle is extinguished; only, at the end of protracted fevers, there is a great waste of the solids and fluids of the body, which must be repaired before much muscular strength is acquired.

In many of the severe cases, the patient on going to sleep, would fall into a state resembling Incubus, with difficult or partially suspended respiration, which would require his being awaked as often as once every five minutes; and some could not be allowed to sleep longer at one time for several days, without their spontaneously waking in the most excruciating fright and distress, and finding themselves greatly exhausted.

During the progress of the epidemic, every variety of pulse occurred, except the *strong* and *hard*, and this often in the same patient. In many of the mild cases, and in most of the others, till the period of fatal sinking, it was rarely so frequent as in health; but towards the close of life, in several of the fatal cases, it was a hundred and twenty or thirty, and occasionally, a hundred and sixty in a minute. In less than twelve hours, it would sometimes vary in frequency from forty, to a hundred and thirty. In one instance, it was as slow as twenty-seven beats in a minute, and in six or eight hours varied to a hundred and thirty. This patient recovered so rapidly, that he was able to ride out in a week from

his first attack. After the disease was fairly formed, whether it was moderate or severe, an erect or sitting posture would almost uniformly accelerate the pulse forty or fifty beats in a minute, and sometimes double its frequency, besides producing considerable irregularity. In a very few cases, the pulse was a hundred and twenty at the very first attack. The pulse alone, (as is the case with the tongue,) is a very deceptive guide in this fever. At various times in the course of this disease, and even in the dying, it would occasionally give a delusive feel of fulness and force, that often deceived the very best judges respecting the danger, unless attention was particularly directed to other symptoms. [See *Appendix, Note 13.*] In such circumstances, in former epidemics, bleeding has been seriously proposed by a counsellor, while the attending physician knew the patient to be actually *in articulo mortis*. In other epidemics, in which this disease was mistaken for active inflammation of the brain, or for Apoplexy, when the patient has been bled, death has ensued before the ligature could be taken from the arm. [See *Appendix, Note 14.*] In most of the worst cases, the circulation was daily so languid by turns, that the extremities had a livid appearance, and were often nearly pulseless. One patient at least recovered, that was without pulse at the wrist for several hours. Some of the fatal cases were attended with a very distressing palpitation of the heart.

A very prominent symptom, which occurred in some degree in almost every instance, even of the mild cases, and probably without an exception in all the severe, and happened in every stage, sometimes constituting the first access of the disease, consisted of paroxysms of *subsidentia*, or a death-like *sinking* sensation in the epigastrium, that was described, sometimes as extreme distress, sometimes as a painful sense of vacuity and faintness, sometimes as trembling or fluttering, sometimes as real pain and anguish, and at others, was declared to be utterly indescribable. During the existence of these paroxysms, the coolness and numbness of the skin, the lividness of the extremities, the feebleness of the pulse, and the indications of distress in the countenance, were much augmented. Sometimes, these paroxysms of sinking, were attended with palpitation, and often with spasms; though spasms, tremors and subsultus were not uncommon in every stage. In the mild cases, these paroxysms of sinking, occurred *regularly* in the morning; but in the severest, they were not confined to any particular hour of the day. Singultus was extremely rare, as also was indurated, inflated, or tympanitic abdomen. [See *Appendix, Note 15.*]

In many of those cases which were neglected, or treated with evacuants, or in which the early symptoms were not decisively and fully met and subdued by appropriate remedies, a peculiar and somewhat different, and usually irreparable sinking and exhaustion occurred, *after a critical effort*, or in lieu of a crisis, on the third, fifth, or more commonly, on the seventh day. In a few cases, it did not occur till the end of the second or third week. Under such circumstances, in addition to the sinking in common with other cases, the respiration was interrupted and peculiar, and much resembled that of the dying, or rather that of animals (as it is described) after a division of the *Par Vagum*, the inspirations occurring only at intervals of several seconds, and being usually long and full, while the expirations were so short, that the breath was parted with instantaneously. This *critical* sinking, in combination with morbid respiration, was often the first warning of danger to the patients and attendants, in the insidious cases, and it was almost invariably irremediable; for, although every symptom could be met, for a time, to the full extent, and although the most decided operative effects of medicine could be produced, and life often be prolonged for days, yet the weight of the disease could rarely be lessened, and, in one of the succeeding critical efforts, the same symptoms would almost inevitably prove fatal. In other fatal cases, the disease terminated in a deadly coma. Paroxysms of coma were periodical in some instances, as were those of sinking in others. The former description of sinking and anxiety, which was principally referred to the epigastrium, in distinction from the *critical*, may be termed *ordinary* sinking. It was usually relieved when taken in season, and treated with energy. [See *Appendix, Note 16.*]

Hæmorrhages were rare in this disease; but when they did occur, they were mostly fatal. One case of a child which died on the seventh day, was attended with symptoms of Chorea. One or two cases were seen that resembled Delirium-tremens. [See *Appendix, Note 17.*] Many had most of the usual symptoms of Hydrocephalus-internus. Several retained their habitual relish for strong tea, snuff, and tobacco, through the whole course of the disease. Milk-porridge, or broth, was the food that generally sat easiest on the stomach. In a few cases, there was a strong disposition to eat heartily of solid animal food. In those in which this appetite was moderately indulged, it seemed to digest properly; at any rate, it produced no sort of inconvenience.

In opposition to ordinary fevers, in this disease the symptoms were generally much more urgent and severe in the morning, than in the afternoon or evening; that is, the patient was most dangerous during the remission. The reaction of the exacerbation in the afternoon, though it did not reach the standard of health, and could not even be considered as reaction at all in common fevers, made the patient comparatively easy. When there was a resolution of the disease at its outset, a relapse would infallibly supervene suddenly, upon any considerable irregularity of diet, exercise, etc. within the first week; but when the disease had once run its course, there were very few relapses during convalescence. There were several repeated attacks, after the most perfect recovery; and several of the patients had had the disease the preceding year. [*See Appendix, Note 18.*] Critical periods were most prominently observed. When a case was protracted longer than five or seven days, as in the last stage of almost every acute fever, the disease appeared, though still more liable to severe and fatal sinking at the critical periods, not very unlike common low Typhus, in which delirium, tremors, subsultus, coma and sinking occur; and was not easily distinguished from it, especially by counsellors, who could not witness its whole course.

The treatment, as respects *degree*, was almost as various as the number of cases; but it was alike in *kind*, in all; and there was abundant evidence, of the necessity of *avoiding every thing that might waste the vital powers*. This was more especially the fact, with respect to evacuations, which, if copious, *invariably* rendered the mild cases severe, and the severe ones, fatal. Probably more than three-fourths of the fatal cases were the consequence of spontaneous or factitious purging or vomiting. Emetics did not answer at all, as the mildest would almost inevitably produce incessant vomiting, which, if not controlled by very large doses of Opium, or by great quantities of Laudanum by enema, would end in exhaustion and death. [*See Appendix, Note 19.*] More than three quarters of all the cases however, whether severe or moderate, were at first very slightly purged with Calomel, so guarded as not to operate before twelve or eighteen hours. It was necessary to manage laxatives with the greatest caution, and very generally, to conjoin them with Opium. Calomel, accompanied with a diaphoretic regimen, if retained on the stomach twelve hours without operating by the bowels, in the light cases, would lessen, and often remove all the morbid action; yet, much more caution was necessary in this process, to ensure a resolution, than in common Typhus.

Nevertheless, more than two copious dejections never took place, without the most obvious injury. It is as safe to leave a wounded artery to nature, as in this disease, to administer a cathartic, without directing its free operation to be *instantly* checked by Opium. Those patients, who of their own accord attempted, at the outset of the disease, to purge themselves, even with Castor-oil, provided it operated more than once or twice, were commonly found by the physician in little better than a dying state, and always required the most assiduous exertions for their recovery. Several that adopted this plan were seen, who could never be raised, and obviously sunk down and died, in consequence of it. One patient was seen, that sunk irretrievably, by a single operation of an enema.\* In about a fourth of those patients who had the disease in its severest form, a judicious physician would no more think, at first, of vomiting or purging, than of employing those processes to mitigate the struggles of the dying. In several of the *worst* cases, *cathartics could not be made to operate*, while the patient was in the lowest state, and there was not the least inconvenience, from having nothing pass the bowels for a week; and in some of these, when the patient was considerably better, the bowels spontaneously resumed their natural action. The proper time for evacuating the bowels in the lowest cases, was indicated by tenderness of the abdomen, uneasiness, or slight pain, which showed that the torpor of the intestines had ceased. Under these circumstances, the discharges were never indurated, but were always perfectly natural. In many cases, a single enema, or a small quantity of Magnesia, or Rhubarb, or an aloetic pill, was necessary as an eccoprotic, or at farthest, as a laxative once in two or three days. It is to be observed, that the Opium should not be abstracted on account of the laxative or any other article, but only as the other symptoms admit. On the whole, the best way of evacuating the bowels, appeared to be produced, by giving daily about a dram of Magnesia, and if necessary, assisting it every other day by an enema.

The opinion, that in this disease, and more especially in any of the distinctly marked cases, purging would increase the susceptibility to the impression of stimulants, was *utterly unfounded*. The morbid action could not be changed, in the severest cases, by evacuants and alteratives; it could only be controlled by exciting

\* When patients are mentioned *as seen*, it is meant in consultation, and they are not included in the three hundred and sixty cases, the immediate subjects of this sketch.

and supporting the vital powers by stimulants, and such articles as appear to have *an immediate action on the brain and nervous system*.

If by vigorous treatment, the system could be raised in a day or two, to a mercurial, or purging, or vomiting point, the victory might be considered as already gained, and there was very seldom any need of either of the processes of vomiting, purging, or ptyalism afterwards. [See *Appendix, Note 20.*] As a general rule in this epidemic, it might be affirmed of cathartics, with the utmost certainty, *juvant per casum, nocent per se*. In every instance, the mildest forms of the disease were rendered severe and unmanageable, by *free* purging or vomiting. If they did not sink, which was usually the fact, they became *factitious-bilious* fevers, which were obstinate and unmanageable. [See *Appendix, Note 21.*] In a few *bad* cases, in which a slight mercurial action was excited, it was of no sort of service; and in such cases, if irritable, strangury from Cantharides only distressed the patient.

Opium was the most important remedy in the severe form of this disease, and was, in such cases, *regularly* administered from the very first visit. A few cases imperiously required half an ounce of the tincture in an hour, or half a dram in substance, in the course of twelve hours, before the urgent symptoms could be controlled; and even some cases required a dram in the same time. All these patients recovered. In nearly every fatal case of this year, there were circumstances to prevent a free use of medicine. *The whole of those patients, whose symptoms were promptly met with Opium, invariably recovered.* Opium enough, assisted by external applications, would command every peculiar symptom, with as much certainty, as any effect can be promised from medicine, except the extreme sinking, after a critical effort, in a neglected, or ill-managed case; and even in this forlorn state, it always mitigated much of the anxiety and distress, and prolonged life. Many other articles, however, were very useful in the course of the disease.

Alcohol was highly beneficial in some cases, and required to be employed freely in many, but it seemed not to be equally adapted to all, and on the whole, was of much less importance than Opium. Wine seemed totally unfit for the severer cases. [See *Appendix, Note 22.*] Lytta and Capsicum internally, were very serviceable in the torpid cases, but were entirely unmanageable, and greatly increased the irritability of most of those which were previously irritable. Arsenic, (Fowler's Mineral Solution,) was highly serviceable when the head was very much affected, and the stomach at

the same time torpid. In some irritable cases it answered well, but it was necessary to adjust the dose very accurately, in order to have its full effect on the one hand, and not offend the stomach on the other. In these cases however, it agreed better than any thing else, except Opium, or perhaps Alcohol and aromatics. Delirium resembling mania, was occasionally relieved by tincture of Stramonium, combined with tincture of Opium. Camphor and Ammonia answered a good purpose in the more moderate cases, but were worse than nothing in most of the severe. Ether was of no service for permanent support, but was occasionally very useful during the sinking paroxysms. The same was the fact with Peppermint, and other essential oils. Oil of Turpentine was not used internally. [See Appendix, Note 23.] Cinchona, and the other *vegetable bitters and tonics*, did not the least good in the *severe* cases. They were too slow in their action to produce a perceptible effect, till after a crisis, or in the protracted stage of such cases, as assumed the form of common Typhus. After convalescence commenced, they were often useful to assist in retaining the ground which had been gained, and to accelerate recovery. In these instances, if the stomach was irritable, Sulphate of Quinine was preferable to any other preparation of Cinchona. [See Appendix, Note 24.]

In all the varieties of this disease, internal medicines were greatly assisted by external applications, which were adjuvants that could never, with safety, be omitted. When it was practicable, the early use of the *hot-bath* was of great service, and it was much to be regretted, that it could not be oftener employed in the first stage. Warm or tepid bathing, was rather injurious. The water should be so hot, as to make as strong an impression as can be borne, without danger of scalding. When strong, and at the same time quick rubefacients were required, bottles of hot water, heated bricks or wood, hot spirits, Mustard, Liquor of Ammonia, Capsicum, and Oil of Turpentine, were important agents. Epispastics of Cantharides would produce no effect, in many cases, till the skin had been first excited in this way; but as soon as the susceptibility of the patient was raised, by internal and external means, to the blistering point, the freest application and repetition of them, was attended with the most obvious beneficial effects. They were more especially useful to the *shaved vertex*, forehead, temples, spine, epigastrium and extremities. In every case, (the very mildest are not with safety excepted,) the forehead, and in the severe, the vertex should be immediately blistered. Shaving the

head, and blistering it *early*, is more serviceable than any other external application. Torpor of the bladder almost invariably yielded to sinapisms, or more especially, to blisters on the inside of the thighs. So sensible were those patients who had their reason, of the beneficial effect of blisters, that they frequently begged to have them repeated. To one patient, more than twenty blisters, and to another, more than thirty were applied during the course of this disease, and evidently with the greatest advantage. *Oil of Turpentine, warmed, and confined to prevent evaporation, was the speediest epispastic*, and was of much benefit in coma. In a very few cases, there supervened such a peculiar irritation in the latter stage, that blisters required to be repeated with caution, on account of strangury, as this symptom, in irritable cases, sometimes increased the morbid action. It always lessened it, in cases of torpor. In no other disease is it so essential to distinguish counteracting, from coinciding agents. But after all, in the severest forms of the disease, *Opium, Alcohol, Arsenic, aromatics, and external applications*, with no other medication, might be depended upon.

In the mildest cases, after *cautious* purging with Calomel, the prescriptions were almost negative; such as to avoid vegetable acids, cold water, muscular exertion, *an erect position* for any considerable length of time, much purging, and various other hurtful measures. Numbers of cases might be stated, in which the patients, while labouring under an apparently moderate disease, from a false idea that they should gain strength by sitting up, have produced the most dangerous paroxysms of vertigo and sinking, some of which, have been followed by death. Many of the severest cases did not admit of being moved from their beds for several days; since the slightest motion, or change of position, was liable to produce a severe paroxysm of sinking, and increase the exhaustion to such a degree, as to require hours to regain the ordinary strength. Some slight cases might be trusted to aromatic, bitter infusions, alone; others, to Camphor and Ammonia. In several of these, no Calomel, or Opium, or Alcohol, or any active medicine, was needed or employed, provided all hurtful measures were studiously avoided. In many, a blister to the forehead, *Serpentaria*, Camphor and Ammonia, Compound tincture of Cinchona, and Opium in very small quantities, were all that were required.

Profuse sweating from external heat was useless in the mild, and inefficient, or injurious in the worst form of the disease, unless employed at the very access; and in this stage, it could rarely be

used with convenience. By the time a physician is called, it is generally too late for sweating to be of much service; though, when employed very early in cases of *sudden attack*, it is sometimes capable of breaking up the disease, especially in the torpid variety. Under such circumstances, it ought generally to be tried. [See *Appendix, Note 25.*] The duration, severity, and mortality of this disease, depend more than any other, upon the early management.

On the whole, it must be repeated, the epidemic afforded the most decisive evidence, in favour of the efficacy of a free use of Opium, when employed in season, for the removal of coma, and other atonic affections of the brain. When the early treatment was efficient, there was sometimes a resolution in twenty-four hours, or the disease rarely lasted longer than five or seven days; but when the practice was so timid and inert, as only partially to meet the symptoms, if the patient did not immediately sink, it was generally protracted somewhat in the form of common Typhus, fourteen, or twenty-one days, and in some few cases, four or five weeks. [For other particulars concerning principles and practice, see *ESSAYS ON FEVERS*, etc. especially those parts of the work which treat of the *irregular* varieties.]

This epidemic, very obviously, was not common Typhus, as that term is intended to include the nervous and putrid fevers of the older authors. What then was it? It has been questioned whether it was nosologically the same as the Hartford Spotted-Fever of 1809; and by those who did not witness the disease, even whether that epidemic differed essentially from common Typhus, or Nervous-Fever.—The peculiar and extreme deficiency of vital energy in the brain and nervous system, from the very access of the disease, *without any appreciable reaction during the whole course*—the early urgency of the symptoms—the constant liability to coldness of the extremities, and numbness of the skin—its degree of insusceptibility to the action of strong rubefacients and blisters—the peculiar distressing and death-like SINKING in the epigastrium—the craving of hot liquids—the alternation of extreme torpor and excessive irritability of the stomach—the great liability to sudden and irremediable sinking—the respiration resembling that of animals in which the *Par Vagus* has been divided—the immediate exhaustion produced by an erect position—the delirium resembling intoxication, (when neither Alcohol, Opium, nor any other medicine had been used,)—the extreme variableness and ir-

regularity of the pulse, particularly its occasional deceptive fulness and force, when the patient is in the most alarming state of exhaustion—the very rapid progress of the disease—the impunity, at least, with which the most extraordinary doses of Opium were borne, (which must be acknowledged by all, from the unparalleled success of the practice, whatever may be realized of its necessity and advantage by those who did not watch the whole progress of the cases,)—[See *Appendix, Note 26.*] the injurious effects of *free* evacuations, whether spontaneous or factitious—the general inefficacy of all medication to gain a hair's breadth upon the disease, when, from neglect or bad management, the patient had once sunk down at a critical period, though perhaps the same degree of exhaustion might not have been very alarming at the crisis of any other ordinary fever, and though individual symptoms might be capable of material palliation—the absence of febrile smell, and indeed, of any uncommon fœtor of the excretions—all mark the identity of the disease with the Hartford Spotted-Fever of 1809, and evince its diversity from common Typhus or Nervous-fever. From these considerations, it is believed, no one will hesitate to admit that this disease, at least as respects the severest and most sudden cases, was genuine Spotted-fever, and that it was essentially different from common Typhus. Indeed, the two diseases differ so much, especially during several of the first days, that the best treatment of common Nervous-fever, would prove fatal in every severe case of Spotted-Fever. With the utmost confidence it is asserted, that by the experienced, they might be always discriminated, and therefore should never, at this late day, be mistaken, or confounded together. It is true, that in a great majority of the cases of this year, the disease was less violent, and more manageable than the Spotted-Fever of 1809, and indeed, than it was this same season in several adjoining towns. The only difference appears to be, that the mild and insidious cases, were in a much greater proportion, this year, than formerly. The cases of sudden attack, were identically the same as those of 1809, and *all the others* were clearly varieties of the same epidemic. But this is a point of difference which existed to an equal degree between several of the different cases of both epidemics. Why may there not be prominent varieties of Spotted-Fever, as well as of common Typhus, Yellow-fever, Cynanche-maligna, Pneumonia-typhodes, Dysentery, etc.? [See *Appendix, Note 27.*]

This disease, however, was peculiarly distinguished from every

other, by the *early* paroxysms of sinking that attended it, by the entire absence of the *stage* of reaction, which is so essential to ordinary fevers, and by the great effect which Opium had in mitigating all the dangerous symptoms of *every stage*, but more especially, irritability, delirium and coma. In every instance, except after the fatal sinking of a critical period, provided a sufficient quantity could be swallowed, or received and retained by enema, (which latter, in some few cases, was the best way of administering it,) it seemed to be invariably capable of obviating the symptoms in question.

In common Typhus, whether of the nervous or putrid type, even after a critical sinking, we can, in general, not only call the remaining excitability into action, but as is evident, actually produce a new secretion of vital power. But this can rarely be done, after the critical sinking of the *worst* cases of Spotted-fever. If therefore, we have not produced an early change, or begun thoroughly with a much more energetic course, than similar symptoms, in ordinary Typhus would demand, or even justify, our prospect of success is small. It is the sudden attacks of the severest cases, which rouse all our energy, and usually make us even more successful in this disease, than in ordinary fevers. [See *Appendix*, *Note 28.*]

To conclude,—Typhus-syncopalis or the Spotted-fever, when neglected or injudiciously managed, is among the most deadly maladies which a mysterious Providence permits to scourge the human race. When taken in season, and treated with decision and judgment, few diseases yield with so much certainty to a proper course of medication.

## APPENDIX.

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### NOTES.

1. **I**n every malignant epidemic, a few instances are liable to occur, in which the vital principle is so immediately extinguished, that the patient is in a moribund state before the physician can be called. A few such were seen in former years, and one or two in 1824. Such apparently hopeless cases, however, should not be forsaken, as the powers of life sometimes rally, after all hope of life has ceased for hours. If patients have been previously *well* supported, they will usually revive after an apparently deadly coma has continued for a great length of time.

2. Hemorrhage from the lungs, or rather the free discharge of a *frothy matter of a pink-colour*, or of a mucus tinged with blood, without pain, or scarcely any cough, is one of the most fatal symptoms that can occur; yet it may be the first, and only cause of alarm to the bystanders.

3. The author has seen carbuncles two or three inches in diameter, in the latter stages of this disease, and also has known the carbuncle to be the earliest symptom that was noticed. Swelling of the parotid glands, phlyctænæ, vibices, petecchiæ, ecchymoses, etc. occasionally occur. A few cases began with extreme pain and passive inflammation in the extremities. Pestilential buboes are almost the only conceivable external affection that is not occasionally met with in these epidemics. It is quite unfortunate that a single symptom, (petecchiæ,) and one too, which is wanting in a great majority of the cases, should have been seized upon, to give the odious and deceptive name of Spotted-fever, as that name has been applied by European writers, to a very different kind of fever. Indeed, petecchiæ may appear in diseases of a very different character; and often in porphyra-hæmorrhagica, sea-scurvy, and other chronic complaints which are unattended with fever. Small vesicular eruptions, attended with troublesome itching, have been very common in all our late epidemics.

4. Nothing is more fallacious than the statements of nurses concerning heat. The true standard, is that of a healthy person lying comfortably in bed. Those who are about the sick, and interrupted in their sleep, have often cold hands which are very sensible to the least change, or even to no change of temperature in the patient. The same remarks will often apply to the hands of the physician. In what is called *stinging heat*, the real temperature is perhaps most frequently below the healthy standard. Transient flashes of heat with a flushed countenance, are however, common in some of these epidemics.

5. In 1824, the patients were very frequently inclined to sweating

two or three times every twenty-four hours. Cold sweats during paroxysms of sinking are not a rare occurrence.

6. In some of the most deadly forms of the disease, there is very little apparent derangement of the functions of the skin, tongue, alimentary canal, or pulse, except during the daily paroxysms of *sinking*.

7. The distinction between extreme irritability and extreme torpor, is well illustrated in Cynanche, when in some cases, Capsicum is the best and the most grateful topical application ; in others, it seems to set the throat on fire. Strangury, excited by Cantharides, will occasionally very much increase irritability, though in torpid cases, it is a very valuable counteraction.

8. It is the easiest thing imaginable to convert almost any fever of the nervous type, which is not so low as to sink immediately under evacuations, into a bilious fever, with irritable stomach, tympanitic abdomen, diarrhoea, or hemorrhage, by injudicious emetics and cathartics. Indeed, the bilious-fevers of this region, which are seen at the present day, are almost *universally factitious*, being the obvious result of hyper-emesis or hyper-catharsis, in originally nervous fevers, or in mild spotted-fevers.

9. Within the last two years, three or four cases have been met with, which if they had occurred on the eastern continent, would unquestionably have been considered as genuine specimens of the Spasmodic-Cholera of India. They all recovered under the use of Opium, the hot bath, and external stimulants.

10. In a few cases, there was a slight mercurial fœtor, which, with the effluvia from blisters, sinapisms, etc., might possibly be mistaken for the ordinary febrile smell ; but generally, the air appeared to be completely free from the least unpleasant taint.

11. Exceptions to the danger of an erect posture sometimes occur, though they are very few in this disease ; but in one case, the patient could not lie down, without feeling as if his feet were in the air, and his body hanging from them with the head downwards. He was very speedily relieved by shaving his head and blistering it freely.

12. The symptom of morbid clearness of intellect, is perhaps more dangerous than delirium. It was very common in the fever of 1824, and continued till nearly the last of several fatal cases.

13. It was curious to see how completely strangers were liable to be deceived by the pulse. In many of the worst cases, except during the paroxysms of sinking, or when the patient was dying, and in some instances, in both of these states, judging from this symptom alone, no disease would be inferred to exist. Counsellors, unless *they stay by the patient twenty-four hours*, almost always judge incorrectly of the danger. Though a bad state of the skin, pulse, and tongue, are always unfavourable, yet it cannot be too often enforced, that a state of these functions, nearly natural, often exists in the worst cases of this epidemic.

14. It would be easy to state a number of cases which sunk from bleeding, when the disease first appeared in this State, and was mistaken for active phrenitis. They are facts of universal notoriety. The author has known repeatedly of venesection in the milder forms of these epidemics ; but it not only produced paroxysms of sinking, but rendered the cases obstinate and protracted. In every severe case *free* bleeding, as also *free* vomiting and purging, is almost certain death.

15. The symptoms of tumid abdomen and hemorrhage were more common in 1824. But it must be recollected that free purging was more common, as the cases were not generally so *immediately* sinking in the first stage. Tumid abdomen in fevers, most probably, is always caused by excessive purging, or spontaneous diarrhoea, not seasonably checked.

16. It is necessary to make further comment upon the two kinds of *subsidentia*, or sinking, or *l'abattement*, as it is called by the French, as they are but little understood, and can *never* be realized by those who have not witnessed this disease in its severest form. These sinkings are so common, as to be properly reckoned among the diagnostics of ordinary cases. These symptoms have been the cause of much of the applause, and much of the reproach, that have prevailed, concerning what is usually called *the stimulating practice*. The objections have almost uniformly come from those who have had little or no experience of the disease in its worst and most sinking varieties. In the paroxysms of *ordinary* subsidentia, the patient is sure to find relief by an efficient use of aromatic drinks, essential oils, Alcohol, Ether, or Opium, assisted by external stimulants; and in the more urgent cases, *there is no other mode of relief*. The patient must use them freely, or he sinks for ever. The author is confident, that no instance of recovery from this disease, in the severest form, can be produced under an opposite method of treatment. In the more obstinate paroxysms, the quantities of some of these articles, that are not only borne with impunity, but that are imperatively demanded, are incredible to a stranger to such sinking cases. Every patient feels, and every bystander sees, their salutary effect. It is necessary to *keep up* this effect by the same articles *regularly and frequently administered*, though in much less doses than during the paroxysm, which may prevent its return in any alarming degree. In moderate cases, those fits of sinking when left to themselves, do not at first, destroy life, but each succeeding one reduces the vital powers so much, that a paroxysm of *critical* sinking soon supervenes, that instantly jeopardis life. When this critical sinking does occur, the most decided practice is necessary to prevent instant death; and in defiance of every exertion, in the majority of cases, it is believed, it finally proves fatal. Life may usually be prolonged for hours, and sometimes days and weeks, but the system has received such a shock, that ultimate recovery is rarely to be expected. However, it is always our duty to support the patient as long as possible; and we succeed often enough in producing a new secretion of vital power, to prove, that desperate cases should never be neglected, and at the same time, to demonstrate the salutary effects of medicine in palliating, even when it cannot remove disease. Those who are ignorant of the extreme malignity of the disease, in general attribute death in those cases to the medication. If a physician suffers his patient to die in one of these paroxysms, he loses no reputation; but if with the most exquisite skill and judgment, he prolongs life for days or weeks, and the case finally fails, he is almost sure of being censured for his practice. When sporadic cases of this fever first occur, they are generally mortal, and the patient is usually said to *die of a fit* of apoplexy, of angina-pectoris, of hydro-thorax, of organic affection of the heart, or of some such fatal disease. He does often die, before sufficient reaction is produced to show that he laboured under a febrile disease. No fever requires greater nicety in adapting the treatment to the symptoms of in-

dividual cases than this, as some of them are very slight, and require only moderate practice. The charge of indiscriminate practice is utterly groundless, and the general inference that is attempted to be drawn from *particular* cases, is entirely unwarranted. From a conversation of a few minutes with any intelligent physician, it is easy to ascertain, whether he has ever witnessed the *whole* progress of a very malignant epidemic. If he has not, or has only superficially viewed sporadic cases, or if he has only seen the disease in its mildest form, or in the intervals of the paroxysms of sinking, all his analogies will fail him. How a patient can sink irretrievably, sometimes on the first day of his disease, from a single emetic, cathartic, venesection, or enema, or even a draught of cold water, when at the same time, he might probably have been restored under proper treatment, is utterly incomprehensible, to such as have not repeatedly witnessed their effects. And on the other hand, it is equally mysterious, how doses of medicine, that in ordinary cases might endanger life, may be given with the utmost safety, and the most prominent advantage. It is equally incredible, that some cases may be trusted a week without the bowels being moved, and not only so, but that the slightest eccoprotic, if it could be made to operate, might destroy life. The fact that coma, and other typhoid affections of the brain, are more surely relieved by Opium than any other remedy, is equally incomprehensible. However, no facts in medicine are better known by the truly experienced, or are supported by more substantial testimony.

17. Several cases occurred in 1824, that counterfeited delirium-tremens.

18. In 1824, two women were delivered, one of them of a dead child, during a severe attack of this disease. The mothers, and the living child, ultimately did well. Several gravid women passed through the disease, in both seasons, without its producing abortion. Several infants, of a few weeks old, have had Sinking-typhus, within the last two years.

19. In some few cases under peculiar circumstances, where torpor prevailed, emetics of Zinc and Ipecacuanha, in skilful hands, have successfully roused the system; but then it often requires a dram of each to operate. Small doses are worse than useless. Emetics combined with Calomel, have sometimes a favourable effect in the beginning of mild cases, but they require extreme caution in any case of sinking-fever. The epidemics of different years, vary very much, as respects the safety of emetics, and much depends upon the preponderance of irritability or torpor; and much, whether the attack is insidious or sudden. In sudden and violent cases, emetics and cathartics, at first, are utterly inadmissible.

20. It is very certain that no instance of intoxication took place this year, from the use of Alcohol; but in former seasons, when any thing like it was supposed to occur, it is stated that the patient was free from danger, and that all medicine might be soon abstracted. Of this the writer is merely informed by friends, and is somewhat skeptical; as he never saw intoxication, or had the least reason to suspect it, in a fever, in a single instance. Such cases, therefore, are of very rare occurrence. The coma and delirium, though so often mistaken for intoxication, are symptoms of the disease, and when taken early, almost

infallibly yield to Alcohol and Opium, in *sufficient* quantities. These symptoms are often mistaken by superficial observers, for intoxication, when no Alcohol, Opium, or stimulant of any kind, has been administered.

21. In so many fevers is it necessary to keep the bowels free, and in so many diseases is the weight of morbid action lessened by a strong impression on the alimentary canal, it is no wonder that physicians, inexperienced in sinking diseases, with the greatest difficulty, can realize the inconvenience and hazard of active cathartics in this fever. In sinking cases, the effect is obvious and immediate; but it requires repeated trials, before a physician is ready to allow, that the bilious cases, which usually sink at the end of a week or fortnight, are factitious, and of his own creation. *Comment, en effet, n'a-t-il pas vu que, dans plusieurs cas, non seulement la maladie a été exaspérée, mais même suscitée par les moyens curatifs, et que l'anomalie des symptômes suivit celle du traitement?* The great hazard of free purging in this disease, only shows that it is a powerful agent when it is indicated in others, and is an argument for its use, when properly applied. Agents that are liable to do no harm, seldom do much good in medicine.

22. From being in the habit of *commanding* the urgent symptoms with Opium, to the extent of one, two, or three grains, every hour or half hour, *during the severest paroxysms of sinking*, and afterwards *keeping up* its effects by one grain, every two or three hours, or even a grain or more every hour in extreme cases, the author has generally been able to dispense with the vast quantities of Alcohol, that are requisite upon a different plan; though now and then a case requires it, in as large a quantity as the stomach can retain. It is rare that more than a pound of diluted Alcohol is administered in twenty-four hours, and usually much less. When the stomach is very irritable, hot infusions of Cloves, Cinnamon, or other aromatics, are frequently preferable to Alcohol. In a *few* instances, wine, porter, and bottled cider, are properly substituted for diluted Alcohol. Food regularly administered, such as a spoonful or two of broth or milk porridge, every hour or half hour, is as necessary as medicine, in the lowest cases. Opium by enema is often necessary to check diarrhoea and other symptoms, but is generally a very poor substitute in urgent cases, unless there is uncontrollable vomiting, for the usual method of taking it *in substance* into the stomach. In many cases, *large* quantities of Alcohol, and even of Opium, might be dispensed with, if the patient had not been sunk by emetics, or cathartics, or Calomel, or other preparatory means, which might be highly proper in regular typhus or nervous-fever. The Ipecacuanha and neutral salt in Dover's Powder, are injurious in all severe cases. Antimonials, and the common neutral salts, are out of the question. The truth is, the disease is so urgent in its violent form, that not only is the stage of reaction wanting, but also there is no necessity nor time for preparation. *The exhaustion must be attacked immediately, by such means as will produce a new secretion of vital power.* Some gentlemen, from having only read the author's *ESSAY* upon the *RESOLUTION OF FEVERS*, have made very great mistakes, in attempting to apply the treatment which is proper for *regular* nervous or putrid fevers only, to the disease now under consideration. If they had read the 6th, 10th, 11th, and 14th *Essays* with attention, they would have seen the outlines of the principles and practice, in irregular fevers. To

consider and treat this disease as ordinary nervous-fever, is often a fatal mistake. As the second, or preparatory stage, [see the author's essay on Stage, in *ESSAYS ON FEVERS*,] for practical purposes, is entirely wanting in all malignant fevers of the nervous type, [see Essay on Type,] the preparatory process, so indispensable in most other diseases, is therefore, both unnecessary and pernicious. Except to obviate some peculiar symptom, emetics, in comparison with *slow and moderate purging with Calomel*, are very indifferent practice, even in nervous fever, and since blood-letting has been laid aside, antimonials are the most fatal of all kinds of treatment, which are ever adopted in our late epidemics. They change the whole aspect of the disease, and make it a very different thing from what it would otherwise have been. Active cathartics, (and even any cathartic at all, for several of the first days, in the worst cases,) are scarcely less exceptionable. It must not be forgotten that this disease, very evidently is neither excited nor aggravated, by any thing that is *naturally* found in the alimentary canal in its usual quantity. There is less reason to suspect morbid matter in this, than in any other fever.

23. In some years, Oil of Turpentine internally, has been found serviceable in torpid cases; but it is usually rather unmanageable in those which are irritable. It may be given by enema, in doses of a dram, with a dram or two of laudanum, every four or six hours, in coma. Ether by enema is proper in such cases.

24. Cinchona is peculiarly adapted to putrid-fevers; it is of but little service in the *purely* nervous, if they have not been previously prepared by Calomel; and unless there are aphthæ, or symptoms of the alimentary canal that demand astringents, or unless the fever assumes the form of common Typhus, it is of no service in this disease, till the stage of convalescence. Where the stomach is not irritable, it may be given in immense doses, and suddenly abstracted without any perceptible effect. Sulphate of Quinine will not irritate from its bulk, but this is probably its only convenience. It is apt to produce a sense of constriction in the stomach, when given in large doses. No peculiar benefit from it, in preference to other preparations of Cinchona, except in irritable cases, has been seen in the acute stages of any disease, beside intermittents and remittents. The author is fully convinced, that in these latter diseases, it is nearer a specific than any other medicine. Four or six grains a day, are serviceable in many cases of slow convalescence. But in most other cases except intermittents and remittents, the ordinary preparations of the Bark appear to be preferable, provided the stomach is not too irritable to retain them. It has probably had as repeated and fair trials in this town as any where, and this is the result of the experience here, concerning the Sulphate of Quinine. It would seem to be by no means a complete substitute for Cinchona, in ordinary cases, though from its great concentration, and its being so easily taken in the form of pill, it is a very important article.

25. Whether there is more irritability, or a greater disposition to diaphoresis, or whether the disease is more frequently insidious in its attack, or from whatever cause, it is certain that sweating is less efficacious now, than it formerly is said to have been. In certain circumstances it is very exhausting, and ought not to be promoted after the patient is thoroughly warmed. Sweating from external heat, and warm aromatic drinks, is all that should ever be attempted to be done, in cases

of sudden attack, before medical aid is obtained. Vomiting or purging should never be hazarded before a physician is called, when such an epidemic prevails, as it usually produces such sinking as to aggravate the disease, and often endangers life.

26. Notwithstanding the extreme *malignity*, (by which *term* is meant, whether the fever is of the nervous or putrid type, a *peculiar deficiency of vital power, and consequent insusceptibility to the curative action of ordinary medicines, in ordinary doses*.) the practice in this disease was attended with a success, scarcely paralleled in the annals of medical history. For seven months, there was a constant succession of cases, nearly one half of which required very energetic treatment, and several of them the strongest practice which is ever admissible; and there were but six deaths among them. The public scarcely knew that there was an epidemic prevailing, the knowledge of it being mostly confined to the families and connexions of the sick; and they could not realize the extent and danger of the malady. There had been nothing very uncommon in the season, during the spring and summer, though it was perhaps rather more variable than usual; but from the eighteenth of September, to the latter part of December, the weather was remarkably cold. The chilly, dark, unpleasant weather of November, in which month six died, though it did not materially increase the number of cases, seemed to aggravate the symptoms, and to add to the severity of the disease. The extreme heat of summer, when the mercury of the thermometer is above 90°, is equally unfavourable. For a general rule, it is evident, that the variations of the barometer, thermometer, and hygrometer, have little or no effect upon our epidemics, except as to the exciting causes of individual cases, and the modification of such cases as already exist. Why the epidemic constitution is more inclined to Pneumonia, or to Cynanche, or to Spotted-Fever, or to common Typhus, in one year than in another, has never yet been ascertained. Meteorological tables, have hitherto thrown no light upon any thing but the exciting causes, except in miasmatic diseases. It is well known, that the same *exciting* cause produces various diseases, according to the epidemic constitution, or prevailing diathesis. It is worth remarking, that every sudden change from warm to cool, invariably proved injurious to the sick, and *vice versa*, during the whole prevalence of this epidemic.

27. All typhoid diseases, at times, have a strong disposition to run into each other, and are often blended together. If therefore, any one is disposed to consider this epidemic as common Typhus, or Nervous-Fever, blended with Spotted-Fever, the author is not inclined to dispute concerning the name, provided it is not allowed to deceive with respect to the practice, and to induce the physician to adopt a treatment, which might be proper for common Typhus. The epidemic constitution, or general diathesis, was decidedly that of Spotted-Fever, and every acute disease was tinged with it, and partook of the same common character. This sinking-fever, is certainly described, as an epidemic, by no systematic writer that is usually read in America. For aught that is known, it was never noticed till it appeared in Massachusetts, in 1806. The nearest approach to Spotted-Fever to be met with in any foreign author, commonly found in our libraries, is in the statement of some cases in Johnson's Journal, No. 12. under the head of Puerperal-Fever.

Some of those cases, *which are said to have affected men as well as women*, were certainly very nearly allied to the Spotted-Fever of New-England, if not identically the same. The Cholera of India is perhaps a variety of this disease, supervening upon some derangement of the hepatic system. The author has elsewhere expressed his opinion, that the local affection of the Spotted-Fever of New-England, is a typhoid inflammation of the brain, *sui generis*; and that it might properly be named *Phrenitis-typhodes*. He sees no reason to change his views. Signs of inflammation, it is true, have not always been detected by dissection; but from the authority of the great Baron Larry, they cannot always be seen, even after the most obvious symptoms of [active] inflammation. Morbid Anatomy is usually very fallacious, in exhibiting the *causes* of disease and death. It only shows their *effects* with certainty. At the present day, every one knows, that in deaths from excessive loss of blood, whether spontaneous or factitious, the same turgescence and distention of the vessels and membranes of the brain exists, that is usually found after the most decided cases of inflammation.

28. It would be a piece of affectation to pass in entire silence, the great excitement which Sinking-Typhus, in common with every other malignant epidemic, has at different times produced in the public mind. The various and clashing opinions upon this subject, among those who are strangers to Sinking-Typhus, *or who have rarely seen a case of it*, are well known; and more obloquy and abuse have been cast upon the physicians, who have extensively and skilfully practised in this disease, than in any other that has appeared in our country, the Yellow-Fever not excepted. This ferment may be traced to several combined causes.

First—Many Physicians are extremely reluctant in acknowledging themselves to be unacquainted with any subject that materially concerns their profession, or in allowing that others have had more extensive experience in any important branch than themselves. They who have not practised extensively in malignant epidemics, can never realize how essentially diseases of the same name and *nosological* character, vary in their malignant, from their milder and more common form, and how the effects of medicines vary in these different circumstances.

Secondly—The most malignant diseases in *kind*, are sometimes so slight in *degree*, (Plague, Yellow-fever, and Cynanche, for instance,) that they are often known to yield under very inert practice, under improper practice, and sometimes to recover spontaneously.

Thirdly—Much confusion arises from names, almost every acute febrile disease at the present day, being usually called Typhus, a term which was formerly restrained to nervous, or putrid fevers. But we now find Cullen's Synochus, (the fevers of the sub-putrid type,) the Spotted-fever of New-England, Pneumonia-typhodes, Cynanche-maligna, nervous-fever, putrid-fever, &c. all frequently mentioned under one name, and considered as a mathematical unity, so that when we hear that a person at a distance is labouring under Typhus, *or the fever*, we have only to guess what is the real disease. No judgment therefore from a given name, can be formed of the propriety of any given method of treatment. Since then Typhus is used as a *generic* name, we ought to inquire, what *species* is meant. Is it nervous-fever, putrid-fever, bilious-fever, sinking-fever, &c. should be the question, if we would expect any thing like a definite answer.

Fourthly—A great difficulty arises from mixing in a desultory manner, and without a fixed plan, various and opposite modes of practice. Discredit is thus brought upon all; for no one has had a fair trial. When a practitioner is called to a sinking case, his first attempt is usually, to rouse the system with external and internal stimulants. After the immediate danger from the sinking is overcome, he next thinks of clearing the stomach and bowels, as he would in many other fevers, by an active emetic or cathartic. If the disease is Typhus-Syncopalis, in its severe form, he will then be sure to sink the patient again. This requires more stimulants, and the patient is alternately stimulated and reduced, till a fatal coma or sinking ends the scene. Excitants have been used beyond all bounds, the patient is lost, and the practice brought into disrepute, and clamour raised against stimulants. The truth is, no one course has been properly followed, and closely adhered to, but the patients have sunk irretrievably, under a vacillating and heterogeneous intermixture of exciting and reducing agents. It must never be forgotten, that this is a new disease, and not described, at least systematically, by any foreign author.

Fifthly—The false notion of the necessity of evacuating the contents of the alimentary canal, whether they are morbid or healthy, or whether there are any specific indications for this process or not, or whatever may be the general condition or diathesis of the patient, or the idea that such evacuations are *always* necessary to increase the susceptibility to stimulants and tonics, and rouse the vital energies of the patient, or the groundless theoretical apprehension that the continued use of stimuli, in *acute* atonic diseases, will occasion dangerous excitement, or will be liable to produce what is called indirect debility, because such might be the effect in health, are generally urged in justification of such a course, by those who have not the most positive experience to the contrary, even in the severest and most threatening cases. Every urgent case, is irretrievably lost under such treatment, however freely excitants and tonics may be employed in the end. When the attack is mild and insidious, the real danger is usually misapprehended, till violent symptoms are produced by an ill-timed emetic or cathartic, or till the final sinking of a critical period; and then, however much a free and decisive use of stimulants may palliate the symptoms, yet the patient is often incapable of being raised; and in this set of cases likewise, death too often is the ultimate result.

Both these sets of cases are therefore adduced by the skeptical, in evidence of the inefficacy of stimulants; and their supposed injurious or noxious effects, are subsequently inferred by the observation of a third set of cases, which commence in nearly the same manner as the second, but which in reality are so moderate, as to recover under a mere *placebo* treatment, or no treatment, or even in defiance of a moderately depleting and evacuating course, without the aid of any kind of stimuli.

It is believed however, that much the greatest difficulty arises, from the theoretical speculations of gentlemen, who have never witnessed any very malignant cases through their whole course. A casual visit in consultation, can afford but a faint idea of the general train of symptoms, or of the powers and effects of a proper course of medication. [See the author's Essay on Experience, in ESSAYS ON FEVERS, AND OTHER MEDICAL SUBJECTS.]

To sum up all in a few words—The public mind is principally agitated, and the dispute is chiefly carried on, *by two descriptions of physicians*; by those practitioners who have not witnessed the disease in its most malignant form, and by those who have never adopted and pursued any regular course of treatment. Hot-Typhus, or the sub-putrid type, [See Essay on Type,] often wears itself out, and the patient recovers occasionally under any practice; but there is not an instance to be found, in the annals of medicine, of a malignant epidemic of the nervous type, being successfully treated by any other plan than that of A REGULAR EXCITING AND SUPPORTING COURSE OF MEDICATION. This is the only treatment which has ever succeeded, and met the approbation of all the able practitioners, from Hippocrates to the present day.

## NOSOLOGICAL MISTAKES.

SPORADIC cases of Typhus-syncopalis are rarely recognized by such as have not met with this fever as an epidemic. They are therefore almost always called by a wrong name, and considered as being some other disease. The list of morbid affections to which Sinking-typhus has been supposed to belong is large ; yet it would be easy to specify cases, in which it has been called by each of the following names.

Affection of head and stomach, Angina-pectoris, Apoplexy, Cholera, Colic, Convulsions, Debility, Delirium-tremens, Gall-stone or Spasmodic-Jaundice, Hydrocephalus-internus, Hydro-thorax, Hypochondrias, Hysteria, Intoxication, Marasmus, Palsy, Palpitation, active Phrenitis, Quick-consumption, Rheumatism, Sick-head-ache, Sun-stroke, Syncope, Tetanus, Typhus, (meaning either bilious-fever, nervous-fever, or putrid-fever,) Uterine-disease, Vertigo, &c. &c. &c.

Notwithstanding these numerous mistakes, the diagnostics of no disease are more precise and definite, than those of Typhus-syncopalis. Though sometimes rather difficult to be traced at a single visit, yet by careful watching through its whole course, (except when the patient fails in the first paroxysm,) there will always be found a certain combination of symptoms, that cannot leave the least doubt in the mind of a physician, who has the slightest talent at discrimination.

ADDENDA.—August 29, 1825.

### MISCELLANEOUS REMARKS.

**TYPHUS-SYNCOPALIS** has continued to be the prevailing disease, and there have not been more than one or two weeks at a time since March, 1823, in which it has not been noticed; though occasionally for months, the number of cases on hand has been so small, that the aggregate of the population was quite healthy. Except in the cold autumn of 1823, and in the excessively hot summer of 1825, when in July the mercury for several days was many hours above 90°, the degree of mortality has been less, than in any other severe disease, to which this section of the country is liable. The cases of sudden and violent attack vary very little, either in their general appearance or appropriate treatment, in different seasons or years; but the insidious cases, in different years, and according to the complaints with which they are frequently blended previous to the accession of *paroxysms of sinking*, often assume a very diversified appearance, and occasionally admit of a considerable diversity of practice.

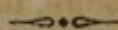
Petecchiæ have been very common the present year. A swelling and soreness of the gums, mouth and throat, sometimes followed by a severe thrush, have been seen where not a particle of mercury had been employed. Among children more especially, a spurious reaction of only a few hours, with *stinging heat*, has occasionally appeared; but generally, the coldness and languor soon returned. Several *torpid* insidious cases have been broken up by *acrid* emetics; and in some others of the same kind, Calomel and Opium have done equally well, and in two or three days have removed the disease. In some neighbouring towns, but not in this, the first attack has been so violent that no medication has made any permanent impression, and some patients have been seen that have died within three days—one, in ten hours. Several of the insidious cases of the present year have been unusually protracted, and have assumed somewhat the appearance of chronic complaints, the paroxysms of *sinking* occurring in a severe degree only once every seven days, though there was generally a moderate and obvious *subsidentia* every morning, or rather, every forenoon. Such cases have been occasionally protracted, especially under inefficient treatment, eight or ten weeks, and some of them have proved fatal. In no disease is it so necessary to meet every symptom instantly; and the paroxysms of *sinking* when periodical, should *always* be anticipated, by such means as will tend to prevent them. In one point of view, Typhus-syncopalis differs from every other fever, and that is in the *degree of severity* of the most distinctly marked cases. As Darwin said of Cynanche, it admits of every gradation, from a flea-bite to the Plague. More than half the cases are usually so mild as to require but very slight medication, provided all injurious measures are avoided.

**TYPHUS-SYNCOPALIS** may be defined, *A Nervous-fever\* in which the*

\* No theory leads to more exceptionable practice than that, which supposes sinking-typhus to be *originally* a gastric disease. This has been the cause of the death of hundreds, and converted hundreds of mild into tedious and protracted cases, and into spurious bilious-fevers. Those physicians who avoid much vomiting or purging, and know how to use Opium efficiently in substance, or by enema, are seldom much troubled with vomiting, and rarely mistake it for a gastric or bilious-fever.

[See Essay on Type, and Essay on Stage, in ESSAYS ON FEVERS.]

stage of reaction is wanting, the torpid or forming stage and the stage of exhaustion being blended together, attended with pain in the head and vertigo, and paroxysms of gastric sinking; and for the most part, with a cool skin and a slow pulse, and an absence of all febrile smell. Petechiæ, eruptions, ecchymoses, general effusion of the capillaries, coma, delirium, palpitation, interrupted respiration, numbness and insusceptibility to the action of ordinary rubefacients and epispastics, and sinking after evacuations, are much more common than in any other febrile disease. By attending to these symptoms, it may be more easily distinguished than any other continued fever. Coma or delirium may sometimes be so severe or so protracted, as to overwhelm or disguise every other symptom; or the attack may be so violent as to destroy life in a few hours; and in these circumstances, in sporadic cases there may be, with the inexperienced, some hesitation as to the nature and name of the complaint; but on the whole, there is less liability to mistake, than in the diagnostics of any other acute fever with which we are in the habit of meeting, in the ordinary course of practice. Dysentery, Cholera, Cynanche, Catarrh, Cough, Pneumonia, Measles, Rheumatism, Gout, and even common Typhus, are often complicated with it; yet there is always some prominent symptom by which it may be determined, when the general affection of the system is that of Typhus-syncopalis.



#### CASE OF MRS. C—— B——, ÆTAT. 25.

This patient, from some cause or other, was habitually costive, seldom having a discharge from the bowels oftener than once a week. Previous to her attack in the present instance, nothing had passed the bowels for five days, during which time, she was engaged in attendance upon a sick sister, whose case proved fatal. Most of this time, she sat up during the night. For the last two days, she was unquestionably in a state of predisposition, as she complained of loss of appetite, languor, indisposition for exertion, vertigo, and various other symptoms usually called hysterical, such as quick transition from laughing to crying, without adequate cause, etc.

July 6th, 1825. About 8 o'clock, A. M. while collecting vegetables in the garden, she was suddenly seized with extreme vertigo, complete blindness and deafness, with great distress and faintness referred to the epigastric region, upon which she immediately fell to the ground, in a state very near to perfect insensibility. On being carried into the house, the surface was observed to be very cold and pale, and there were the strongest marks of distress in the countenance. The bystanders immediately applied tincture of Camphor to the face, and smart friction was made, both with the hand and flannel, to the back and extremities. Under this treatment she soon recovered from her insensibility, but was at the same time, seized with a most excruciating pain in the loins, and the lower part of the abdomen. This was so extreme, that she incessantly cried out for Opium; and when some of the tincture was obtained, she would not wait for it to be dropped or measured, but insisted upon taking instantly, and unmixed, a quantity, which to the judgment of the attendants, must have been about half a fluid ounce. Her customary physician being absent, and some miles distant with other patients, she waited, without medical aid, about an hour after taking this dose, but as it made no sensible impression, and

there was no relief, but indeed rather a gradual augmentation of the pain and distress, she requested that another practitioner should be called in. On his arrival, he directed an enema of nearly four fluid drams of tincture of Opium, in a little warm water, together with the application of strong sinapisms to the bowels, and Horse-radish leaves dipped in hot water to the extremities. After waiting another hour without any perceptible mitigation of the pain, and the physician who had already visited her being engaged professionally elsewhere, another was now called. This gentleman supposed all the symptoms which had thus far occurred, were the mere result of a sudden *Erolopus ateri*, and under this notion, he very strongly disapproved of the measures that had been taken, and on the score of the Opium particularly, he excited considerable agitation and anxiety, both of the patient, and the bystanders. According to his views (as subsequently stated) the introduction of a pessary was to be the most important means of relief. Notwithstanding this opinion however, he prescribed twelve drops of tincture of Opium, every four hours, and twenty of Spirit of Ammonia every two hours, and departed. In another hour, the customary family physician arrived. At this time, according to the statements of the patient and attendants, there was still very little mitigation of the pain. The pulse was quick, and gaseous, (or in other words, soft and weak, with considerable apparent fulness,) and as infrequent as fifty-five in a minute. The temperature, though declared not to be near so low as it had been, still fell considerably short of the natural standard. The countenance was motley, being principally very pale, but with a few livid patches; the lips were livid; the tongue was much contracted and pointed, and its surface was shrivelled, and somewhat redder than natural. There was no thirst, though the patient lay with the mouth open. The respiration was hurried and laborious, and resembled that of a person who had just been making violent bodily exertion. Another enema of half a fluid ounce of Tincture of Opium in a little warm water, was immediately administered, and three grains of Opium, in conjunction with half a fluid ounce of Spirit, and the same quantity of hot water, were taken into the stomach. As the external applications had produced no apparent effect, the Mustard was removed from the abdomen, and a plaster of the cerate of Lytta (of the P. U. S. A.) of at least forty-eight inches surface, was applied in its stead, and Horse-radish leaves dipped in hot water, were renewedly applied to the whole extremities. Two grains of Opium in pill were directed to be taken every two hours subsequently, and a hot mixture of one part Spirit and two parts water, was advised *ad libitum*. About 3 o'clock P. M. the patient had become much easier, but still was not entirely free from pain. The frequency of the pulse was a little increased, but still it was preternaturally slow, being about sixty in a minute; the temperature was restored to near the natural standard, and the whole surface was thickly sprinkled over, with dark-coloured petecchiæ; the respiration was less laborious, but was still unnatural. There was no change in the tongue, but the patient had once vomited a small quantity of a transparent liquid, of a light grass-green colour. A slight degree of talkative delirium had taken place, and on inquiry, a considerable sense of faintness and distress was complained of, at the stomach. An epispastic was now applied to the forehead, and another large one, between the shoulders; and in addition to what the patient was already taking internally, a mixture of ten minims of the liquor of the Arsenite of Potassa, and forty of the tincture of Opium, was directed at every inter-

mediate hour between the pills. The Horse-radish leaves were again renewed to the extremities. The epispastic upon the abdomen had not yet produced any perceptible effect. During the evening, rubefacient effects began to be produced, by all the external applications; but with the exception of a considerable itching of the surface, there was no appreciable change of symptoms. The medication heretofore specified, was directed to be continued through the night.

*July 7th.* This morning the patient was found free from pain, and perfectly rational. The pulse remained stationary, the surface was of a natural temperature, the petecchiæ of a florid colour, the tongue was dilated and flabby, with the upper surface covered with a loose, slimy, dirty fur, and the edges and under surface livid; there was no thirst, and no irritability of the stomach, but still a great sense of distress and sinking was complained of in the epigastric region, which was uniformly aggravated by the slightest motion of the head.

At this time, both sides of the head were shaved, and large epispastics were applied, and likewise another epispastic, over the stomach. The same internal medication, that was directed the night previous, was continued, with the variation only of assigning a regular period for the administration of the Spirit, of which a table spoonful of a mixture one part Spirit, and two parts of bread-water, was directed to be given every intermediate fifteen minutes, between the doses of the other medicines. During this day, and the succeeding night, the symptoms were kept pretty well at bay by this course, except that the patient vomited twice toward morning.

*July 8th.* The patient tolerably comfortable. An epispastic was applied to each wrist. Both the day and the night passed in a pretty uniform state.

*July 9th.* This morning, the symptoms still pretty much at a stand. The patient and her friends were now solicitous to have a discharge from the bowels, and though the abdomen was perfectly soft, and equally free, both from distension and uneasiness, yet the physician yielded to their solicitations, and permitted a laxative enema of decoction of Tansey with common salt and Melasses, to be employed. In about an hour this came away, but with only a slight discharge of fecal matter. Epispastics were at this time applied to the ancles, but in other respects, the same medication as heretofore was continued.

*July 10th.* This day the symptoms continued stationary, till the latter part of the night; and consequently, the medication was unchanged.

*July 11th.* The fifth day of the disease. This morning the pulse was found much more frequent, being a little upwards of a hundred in a minute. The skin was again considerably cooler, and the fur of the tongue was loose. There was distressing singultus, and rejection of every liquid taken into the stomach.

At this time, as this change was considered as a critical effort, all medicine was discontinued, except a pill consisting of two grains of Opium, every two hours. Common tea, and simple chicken broth, very hot, were allowed often, in tea-spoonful doses, and the patient was enjoined to refrain as far as possible from all talking, and all motion, particularly of the head, as moving this part had hitherto invariably occasioned faintness, sickness, and sinking at the stomach. Under this course, a considerable improvement of all the symptoms was found at 7 o'clock P. M. the pulse was less frequent and more full, the skin was warmer, the tongue was clear from fur, though quite red, the singultus and vomiting

were gone, and the patient had had some quiet and refreshing sleep. The night passed tolerably well under the same course.

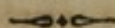
*July 12th.* To all appearance, the patient was now pretty free from disease. The interval between the pills was protracted to three hours; and two fluid drams of the compound tincture of Cinchona, were directed every two hours. Improvement continued through the day and night. Toward morning, there was some manifestation of returning appetite, and food sat well. Milk-porridge was allowed, with Crackers soaked in Tea, Coffee, or Brandy and Water, and likewise a little Cod-fish, soaked soft and picked fine.

*July 18th.* Symptoms nearly stationary. A laxative enema, prepared as the previous one had been, was now employed. This soon operated twice pretty freely, and occasioned considerable faintness, and increased weakness. On this account, an extra pill of two grains of Opium was given. The regular pills and tincture were continued as the day before. This day and night, on the whole, passed tolerably well.

*July 14th.* The interval between the pills, was this day lengthened to four hours. The tincture was continued as usual. The patient was now able to take sufficient food, and to sit up in bed. Passed the whole twenty-four hours well.

*July 15th.* Still improving. Took only four of the pills, this day.

*July 16th.* The patient now able to walk about her room. Discontinued both the Opium and the compound tincture of Cinchona, and in their place substituted a tea-spoonful of an aromatic tincture of Gentian, in a glass of wine, every four hours. During convalescence, a great number of minute Carbuncles made their appearance, which did not disappear entirely, under about a fortnight.\*



#### CASE OF MISS L—— S——, ÆTAT. 16.

This patient was in a state of predisposition, for about a week, during which time she complained of languor, indisposition for exertion, headache, pain of the limbs, nausea, occasional vomiting, and diarrhœa. For the last twenty-four hours of this period, both the body and the limbs were thickly covered with distinct, but dark-purple petecchiæ. In the course of this time, the patient, of her own accord, had taken one cathartic of Aloes with Canella, which operated but moderately; and the day previous to the attack of her disease, another of Sulphate of Soda, which operated freely.

*July 8th, 1825.* About one o'clock, P. M. after drinking freely of Lemon-punch, which contained only a very small quantity of Spirit, she was suddenly seized with great distress, and sense of faintness and sinking in the epigastrium, followed immediately by the most extreme pain in the lower part of the abdomen, much resembling that of parturition, but far more severe. Upon the occurrence of these symptoms, the whole body and limbs quickly became cold, and insensible to the most powerful irritants and rubefacients, the countenance pale, sunken, and ghastly, the lips livid, the tongue contracted and pointed, but without fur, the respiration interrupted, and resembling that of a person just beginning to recover from asphyxia. There was likewise violent deli-

\* This patient had an attack of the same disease, in March 1825, equally severe, which yielded to similar treatment.

rium, and complete inability to swallow, but notwithstanding this general condition, the pulse was perfectly natural in all respects.

On account of the inability to swallow, no internal remedy could be employed. An enema, consisting of half a fluid ounce of tincture of Opium, diluted with a little hot Brandy and water, was immediately administered; frictions were thoroughly and perseveringly employed; and after their discontinuance, the whole body and extremities were covered with Horse-radish leaves, previously dipped in hot water.

In the course of two or three hours, there was an obvious mitigation of all the symptoms, though no individual of them had disappeared. Deglutition, though difficult, was now no longer impossible, but yet the muscles concerned in this process, seemed to be partially paralytic, and when any effort was made to swallow, they acted irregularly and convulsively.

Strong epispastics were now applied to the forehead, between the shoulders, and to the epigastric region; and the rubefacients to several parts of the body, were renewed. Forty minims of tincture of Opium, and ten of the liquor of the Arsenite of Potassa, were directed every two hours, and at every intermediate hour, two fluid drams of officinal Alcohol, in some hot liquid. In addition, Ginger mixed with hot Spirit and water, and tincture of Camphor diluted with hot water, were administered in considerable quantities, as they could be got down.

Through the remainder of the day, there was a moderate, but gradual and regular alleviation of symptoms, till about 10 o'clock, P. M. when a very irritable state of the stomach suddenly took place, accompanied with extreme epigastric sinking and distress, greatly hurried and panting respiration, very weak, soft, and small pulse, as frequent as a hundred and forty beats in a minute, together with a cool, moist, and flabby skin.

The tincture of Camphor, the officinal Alcohol, and the Spirit, were now omitted, and two grains of Opium in pill, were given at every intermediate hour, between the regular doses of tincture of Opium and liquor of the Arsenite of Potassa. Epispastics were applied in addition, to the ancles. Under this course, all vomiting soon ceased; there was quiet and refreshing sleep, consisting of short naps, from which the patient was easily roused, and the night passed comfortably.

*July 9th.* This morning, there was considerable mitigation of all the symptoms; the temperature was nearly as high as natural, the countenance was brighter, the epigastric distress and sinking were gone, the mind was tolerably steady, the pulse slower and fuller, the tongue covered with a light brown fur in the middle, and red at the edges, and the petechiæ were beginning to disappear, (as often happens under such a course of treatment,) but there was such torpor of the bladder, as to occasion a total inability to void urine.

For the last mentioned symptom, strong epispastics were applied to the inside of the thighs; but in other respects, the same medication that was employed the night before, was continued. The day passed comfortably, and with some further mitigation of all the symptoms; but as the torpor of the bladder still continued, an enema of decoction of Tansy and Ginger, to which was added common salt, was administered in the evening. This came away during the night, but without any fecal discharge of any consequence from the bowels, though with a free evacuation of urine.

*July 10th.* This morning there was no material change in the symp-

toms. The patient, however, was full as well as the day before. The sleep had been quiet and refreshing, and the patient was easily roused by the slightest means. One or two additional epispastics were now applied, but no change was made in the internal remedies. As during this day and night, the symptoms continued at bay, no change was made in the medication, except the addition of two small epispastics to the arms.

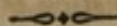
*July 11th.* This day and night, no change of any consequence in the symptoms, and of course the same medication continued.

*July 12th.* Till the evening of this day, there was no material change either in the symptoms of the case, or the medication. During the evening, it being the early part of the fifth day of the disease, great irritability of the stomach suddenly took place, and all liquid medicines were rejected. The surface immediately became considerably cooler, the pulse as frequent as a hundred and twenty in a minute, the respiration hurried, and a profuse sweat took place. At this time, two grains of Opium in pill, were directed every hour, and every thing else was interdicted, till the stomach should become composed, which happened in the course of the night. After this, the pill was given only every two hours, and at the intermediate hour, a small quantity of Spirit and water was allowed, and a little common Tea made very strong.

*July 13th.* This morning, the patient was much better, the skin was nearly of the natural temperature and softness, the pulse was less frequent, the stomach perfectly settled, and the tongue fast losing its fur. At this time, the interval between the pills was lengthened to three hours, and half way between, two fluid drams of compound tincture of Cinchona, were directed. During this day and night, there was considerable improvement.

*July 14th.* The patient still improving. The pills were now given only every four hours, and the compound tincture of Cinchona, half way between. Food was taken with considerable relish, and in considerable quantity.

*July 15th.* This day took only four pills, and then discontinued them entirely. No further medication, except a little of the tincture necessary. Convalescence was subsequently rapid.



#### CASE OF MR. R—— F——, ÆTAT. 23.

This patient, for several days previous to the attack of his disease, had complained of languor and weakness, and had been pretty much destitute of appetite. During this period of predisposition, he took two cathartics, one of which was Sulphate of Soda. This operated freely, only the day before he was seized. The night immediately previous to his attack, he spent in watching with a patient, sick of the prevailing epidemic.

*July 10th, 1825.* While walking in the street, between 12 and 1 o'clock, P. M. he suddenly observed to a companion, that he felt as if intoxicated, and almost instantly fell to the ground. He was immediately carried into a house, and medical aid was called. On the arrival of the physicians, which was about 1 o'clock, P. M. the patient was still in a state of entire insensibility; and his condition, to the eye of a bystander, resembled a person labouring under a serious Apoplexy; or more exactly, one recovering from a state of Asphyxia from drowning. The surface was pale and cold, and covered with a clammy sweat; the eyes

were fixed; respiration was slow and interrupted, and seemed as if carried on entirely by mere voluntary exertion; pulsation at the wrist was barely perceptible. and there was total inability to swallow.

After wiping, and thoroughly rubbing the skin, epispastics were immediately applied to the forehead, sides of the head, and between the shoulders; and nearly the whole of the body and extremities, were covered with sinapisms. As no tincture of Opium was at hand, an enema, consisting of a fluid ounce of Oil of Turpentine, mixed with the same quantity of Oil of Olives, was immediately administered.

In about two hours, the skin was raised nearly to its natural temperature and softness, and the pulse acquired so much force, that its beats were easily ascertained to be about fifty in a minute. There was now no stupor, but considerable delirium had taken its place. The eyes had a fixed and vacant stare, but when the patient was spoken to, he immediately raised himself with a frightful expression of countenance, somewhat resembling that of a rabid person. There was, at the same time, considerable deafness.

A mixture of thirty minims of tincture of Opium, thirty of strong tincture of Lytta, and three of the liquor of the Arsenite of Potassa, was now directed to be given every two hours, and at the intermediate hours, a pill consisting of a grain and a half of Opium, with two grains of Calomel. Spirit and water were prescribed for drink. During most of the remainder of the day, and the subsequent night, there was violent delirium, but,

*July 11th*, at 8 o'clock, A. M. the patient was found free from this symptom, though in its stead, there was a great sense of distress and sinking in the epigastrium. The pulse was now very soft, weak, and frequent, the skin cool, and both the body and extremities covered with petechiæ, of rather a florid colour. The countenance was at the same time pale and sunken, the tongue was pale, and of a bloodless appearance, and coated with a thick but slimy and dirty fur.

At this time, an epispastic was applied to each wrist, an occasional use of Camphor, and a free use of Spirit was directed, and the Opium, both in substance and tincture, with the liquor of the Arsenite of Potassa, as heretofore specified, was continued. The tincture of Lytta, and the Calomel, were however abstracted, the former on account of a copious and exhausting diuresis, which it had evidently produced; and the latter, because it was now deemed injudicious, and believed never to have been indicated. Neither of these articles appears to have been proper in this case. At 8 o'clock, P. M. the patient was again delirious, and much inclined to coma, but the epigastric sinking and distress, seemed to be somewhat less. The pulse was very weak and soft, and the tongue as last specified.

The Spirit, and the Opium in substance, were continued as heretofore, but the dose of the tincture of Opium, was increased to forty minims, and that of the liquor of the Arsenite of Potassa, to ten minims; and an epispastic was applied to each ankle.

*July 12th.* This morning, no material change perceived in the symptoms. Additional, but small epispastics, were applied to the legs and arms, but in other respects, the same medication was continued. In the course of the day, considerable strangury took place.

*July 13th.* This morning, the symptoms still stationary. New epispastics were applied to the inside of the thighs and arms, but the same medication, in other respects, was continued. At evening, there was pain in the bowels, which was soon followed by an urgent diarrhœa, ten or twelve discharges happening in the course of the night, though four ex-

tra pills of Opium, of two grains each, and three enemata of four grains of Opium in powder, were given during this time. This quantity of Opium kept the patient from sinking under these profuse evacuations. Judging from the effects of Calomel in other cases, it is believed that the diarrhœa was to be ascribed to that article, which, it will be recollected, was used at the commencement of this case. Through this night, the patient was generally wakeful, but when he did sleep, he sweat profusely; in consequence of which, the skin became considerably cooler than it was before, though the tongue became clean, and the delirium disappeared.

*July 14th.* This morning, the patient was found in an extremely languid and weak state, but at the same time free from most of the uneasiness, which had hitherto attended his disease. The diarrhœa had abated, but was not entirely gone. The same internal medicines were directed that had been regularly employed the day previous, and an enema of four grains of Opium in powder, was directed after every discharge from the bowels that might take place. Two only were needed before evening. During this day, the skin became nearly of the natural warmth, the tongue became clean, but was very red; and the pulse was about 80, in a minute. The night was passed comfortably, under the same course. No opiate enema was needed.

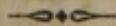
*July 15th.* This morning there was considerable improvement in the general condition of the patient, and he was considered so free from disease, that the tincture of Opium, and the liquor of the Arsenite of Potassa, were omitted, and half a fluid ounce of the compound tincture of Cinchona, was directed in their stead. The same medication in other respects was continued, and the day and night passed well.

*July 16th.* The patient still improving. The intervals between the doses of Opium, were now protracted to three hours, and the same was done with respect to the doses of the compound tincture of Cinchona.

*July 17th.* Still improving. The same medicines continued, but at intervals of four hours.

*July 18th.* Still better. The same medication, but at intervals of six hours.

*July 19th.* Still better. All the medicines hitherto employed, were now abstracted, and the patient was put upon a mixture of one dram of Cinchona in powder, with a glass of wine, four times a day. The petecchiæ are not yet entirely gone, though they are now fast disappearing. The patient now has a good appetite, walks out, and is rapidly recovering his wonted strength. Discharged.



#### CASE OF MISS A—— C——, ÆTAT. 30.

This patient had for a long time laboured under Ayer's Dyspeptic or Hepatic Marasmus; and for several days previous to the attack of her disease, had been more or less in attendance, both night and day, upon sick friends, beside labouring unusually hard the day immediately preceding, in washing. On that day, she took (without advice) a common cathartic dose of the tincture of Aloes and Myrrh, but it produced no operation upon the bowels.

*July 15th, 1825,* in the morning, she was suddenly attacked with pain in the *heel*, which by paroxysms, was extremely violent. During the remission of this pain, she had hysterical delirium, with incessant loquacity, and alternate laughing and crying, without adequate cause. There was no medication at all till 5 o'clock, P. M. when her physician arriv-

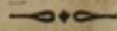
ed. At this time, her cheeks were of a deep livid colour, while the rest of her face was preternaturally pale; the skin was preternaturally cool, and rather dry; the tongue was covered with a slight thin fur, and was contracted and pointed; the respiration was like that of a person who had been making violent bodily exertion; the pulse was weak and soft, and about fifty beats in a minute. Strong epispastics were immediately applied to the forehead, between the shoulders, and on each wrist, Horse-radish leaves dipped in hot water, were applied to the feet and legs, and forty minims of tincture of Opium, five of the liquor of the Arsenite of Potassa, and five of strong Spirit of Pepper-Mint, were given every two hours. Hot Spirit and water, and hot tincture of Camphor and water, were given *ad libitum*. In this way, about half a pint of Spirit was taken in the course of twenty-four hours. Under this medication, the patient became much more comfortable, and continued so for the remainder of the day and night. The sleep was moderate and easy, the temperature of the skin rose nearly to its natural warmth; the pulse, though still weak, was as frequent as seventy-five in a minute; all pain was gone, the delirium was much less, the tongue remained as the day before, but there was so great torpor of the bladder, that the patient was entirely unable to void urine by voluntary effort.

*July 16th.* This morning, the symptoms were found much as they had been during the evening and night. Epispastics were applied to the inside of the thighs, for the relief of the torpor of the bladder; but in other respects, the same medication was continued. During the day, the symptoms continued pretty much at bay, and before evening, the torpor of the bladder was relieved. During the night, there was considerable restlessness, and more delirium.

*July 17th.* This morning, the tongue was dark red, much dilated and flabby, and destitute of fur, the skin was considerably cooler, there was a profuse and exhausting sweat, the pulse was soft and weak, and about a hundred and twenty in a minute. Epispastics were now applied to each ankle, and two fluid drams of officinal Alcohol, diluted with a little hot water, were directed to be taken every hour, in addition to the previous course. Through the day, the symptoms remained nearly stationary. In the evening, there was considerable epigastric sinking. At this time, an extra dose of two grains of Opium in pill, was administered. During the night, there was but little epigastric sinking. The other symptoms remained stationary.

*July 18th.* This morning, no new symptoms, and the previous ones, were much at bay. The same medication was continued. Till twelve o'clock, M. the patient remained comfortable, and without change of symptoms. At this time, there was a severe paroxysm, of epigastric sinking, but without any material change in the condition of the pulse, tongue, or skin. A large epispastic was now applied to the epigastrium, and an enema of three fluid drams of tincture of Opium mixed with a little hot water, was administered. The same medication, in other respects, was continued. The afternoon passed more comfortably. About 9 o'clock, P. M. there was an increase of the delirium, with incessant loquacity, which lasted about an hour and a half. Between 10 and 11 o'clock, P. M. she suddenly sunk into a deep coma, which was mistaken by the attendants for fainting. At this time, the skin was cold, and drenched with sweat, the lips were purple, the respiration was interrupted, and resembled that which is entirely voluntary; there was effusion into the bronchiæ, throbbing or palpitation of the carotids, and other large arteries, but the pulse, though seemingly full on a superficial examination, was extremely weak and soft. An immediate appli-

cation of Mustard was made to the thorax, frictions were vigorously employed, and Horse-radish leaves dipped in hot water, were applied to the extremities, but all with little or no effect. Life continued till about 1 o'clock, A. M. Just before death, there were two or three slight convulsions, which lasted a few seconds only.\*



#### CASE OF MARK MORTIMER LEAVENWORTH, ÆTAT. 25.

This patient was naturally a person of slender constitution and rather feeble health. Having an early taste for literature and science, he was originally designed for an academical education, which however, he was prevented from obtaining by a disease of the eyes, a semi-paralysis of the optic nerve, which was brought on by close application to study. He had been engaged for about three years in the study of medicine, and was only waiting for the expiration of the legal time, in order to be admitted to the degree of M. D. Immediately previous to the time of his sickness he was the pupil of Samuel B. Woodward, M. D. of Wethersfield, Connecticut, in whose practice he had witnessed several cases of the disease with which he was so soon to be seized.

On the 8th of July, he made a visit to Middletown, Connecticut, and was invited to remain a short time, as an assistant to one of the physicians of that place, who had more cases of the epidemic under his care, than he could well do justice to alone.

*Tuesday, July 12th, 1825.* After about three days attendance upon the sick in this place, he complained about 9 o'clock A. M. of pain in the bowels, which was soon followed by a free liquid discharge, that produced great languor and sense of weakness. Two fluid drams of camphorated tincture of Opium, obviated these symptoms, and prevented any further evacuations from the alvine canal. About 12 o'clock M. while visiting a patient, he was suddenly seized with great vertigo, accompanied with faintness or sinking at the stomach, which were speedily relieved by three or four fluid drams of compound tincture of Cinchona. Upon this, he immediately rode home, and soon after ate with much relish, a full dinner. The vertigo, and faintness or sinking at the stomach, occurred at intervals through the afternoon, and confined him to the house, but not to his bed. The paroxysms, however, were readily relieved by a little Brandy and water. During the whole of this time, the pulse, tongue, countenance, and skin, exhibited no appreciable deviation, from their customary, healthy state. Towards evening he walked out a few rods, but was seized with faintness, which caused him to return and take to his bed, from which it is believed, he never arose without assistance. In the evening he took a cup of tea, a little Brandy and water, and a single grain of Opium, which greatly relieved the vertigo, and epigastric faintness or sinking, the only symptoms of which, at this time, he complained. During the night, he took moderately of Brandy and water, or of compound tincture of Cinchona, as often as these symptoms occurred, and invariably, with material relief. There was but little sleep, and that much interrupted.

*Wednesday, July 13th.* In the course of this morning, there was double vision, the vertigo and epigastric faintness or sinking became much

\* In each of the preceding cases, much injury was invariably produced by moving or raising the head, while the patient was in the lowest state. Epigastric sinking was the certain consequence. In general, the head was not shaved and blistered sufficiently early. As this process is attended with trouble, it is usually deferred so long as not to produce its full effect. In the worst cases, all the most efficient means should be employed, with the least possible delay.

worse, and there was total inability to raise, or even move the head, without great aggravation of these symptoms. The pulse was still natural, as respects frequency and force, but had become quick; the skin was also natural, both as respects temperature and moisture; but the tongue had become flabby and pale, and was covered with a thin, light coloured fur; and the respiration was like that of a person who had just been making considerable bodily exertion.

It was now judged necessary to enter upon a regular course of medication, and the patient was accordingly put upon one grain of Opium every two hours, with three fluid drams of compound tincture of Cinchona, and about the same quantity of Brandy suitably diluted, every hour. A little wine was occasionally taken at the pleasure of the patient.

During this day, the symptoms were much less perfectly controlled, than they had been the night previous. Towards evening, and through the night, there was considerable disposition to vomit, with occasional retching, for which about four extra pills of Opium, each consisting of two grains, were taken at irregular intervals, and uniformly with great relief. During the night there was but little sleep, and that imperfect and unrefreshing.

*Thursday, July 14th.* Double vision, vertigo, and epigastric faintness still continue, but with some abatement, especially of the last. The pulse, skin, and tongue, are much as the day before, but the respiration is nearly natural. During the regular morning aggravation of symptoms, epispastics were applied to the forehead, and the sides of the head. The same quantities of Opium and Alcohol, that were used the day before, were continued. In the afternoon, without any appreciable change in the external symptoms, the patient felt more comfortable, but on account of a slight uneasiness in the bowels, a casual medical visitor advised a laxative enema. Instead of this, one of a dram or two of laudanum was given, which instantly relieved. Although there was neither fulness nor hardness of the abdomen, even in the slightest degree, but on the contrary, a perfectly soft, and rather lank state, yet some hours afterwards, this advice, at the wish of the patient, was complied with, and a decoction of Tansy and Ginger, to which was added a little common salt and lard, was administered. About this time, from the suggestion of a counsellor of much experience, and good judgment in such cases, an aromatic infusion of Gentian, was substituted for water, for the purpose of diluting the compound tincture of Cinchona, and instead of the Brandy and water, a table spoonful of a mixture of equal parts, Brandy, Lime-water, and boiled milk was employed. As after some hours, the same uneasiness in the bowels returning, and no evacuation having taken place, another enema, prepared in the same manner as the first, but with the substitution of a fluid ounce of Castor Oil for the lard, was administered. About half an hour from this time, there were two moderate evacuations, which were immediately followed by a considerable increase of vertigo, and epigastric faintness, troublesome palpitation of the heart, aorta-descendens, and carotids, great restlessness, and slight delirium, together with a difficulty of retaining any thing upon the stomach. On the occurrence of these symptoms, an enema of two fluid drams of tincture of Opium diluted with a little tepid water, was immediately administered, an epispastic was applied to the region of the stomach, and the regular dose of Opium was increased from one grain, to a grain and a half. On account of the irritability of the stomach, it was necessary to omit the compound tincture of Cinchona, and the aromatic bitter infusion, and to get down the mixture of Brandy, Lime-water, and boiled milk.

as the stomach would receive it, but without any regularity. During the night, several extra pills of Opium, of two grains each, were given at irregular intervals, as the urgency of symptoms required. Under this course, there was a considerable abatement of the immediate urgency of the symptoms, and upon the whole the patient slept considerably more, than for any night previous, though the naps were short, and the patient was easily roused.

*Friday, July 15th.* This morning the patient was better than the evening preceding, but not so well as the morning previous. The vertigo was still considerable, and there was total inability to move the head, without great augmentation of it. There were, however, only occasional paroxysms of epigastric faintness, and these very moderate. Troublesome palpitation of the heart, aorta-descendens, and carotids, occurred occasionally, always accompanied with considerable restlessness. The skin was cool, and very sweaty, and the pulse was soft and feeble, and as respects frequency, it fluctuated between 80 and 110.

A grain and a half of Opium was now given, every two hours; and every fifteen minutes, a table-spoonful of the mixture of Brandy, Lime-water, and boiled-milk. Nourishment hitherto, though taken with considerable freedom, had been given rather irregularly. Chicken broth had been tried, but milk-porridge was preferred. A table-spoonful of the latter was now directed to be invariably taken after each dose of the Brandy mixture, and frequently a table-spoonful of Coffee, was allowed in addition. During this day, in consequence of special exacerbations of the vertigo, palpitation, and restlessness, three enemata, each consisting of two fluid drams of tincture of Opium, and two extra pills of Opium of two grains each, were necessarily administered, each of which produced the most obvious relief of the symptoms for which they were employed, for the space of two hours. This day there was so great torpor of the bladder, as to prevent a voluntary discharge of urine, but when the catheter was employed, this excretion was found to be natural, both in appearance and quantity. As extra doses of Opium were so often necessary, in order to meet urgent symptoms, it was this evening judged expedient to increase the regular dose (which was given every two hours,) to two grains; and on account of a disrelish for the taste of Brandy, old Spirit was substituted, and a mixture was made, of two parts Spirit, one part Lime-water, and one part boiled milk, which was likewise given in doses of a table-spoonful, and followed by the same quantity of milk-porridge, and occasionally the same of Coffee. The night passed much more comfortably than any previous one, since the commencement of the disease. The sleep during the whole twenty-four hours, was less than natural, but more quiet and refreshing than it had ever been before. It was still necessary, however, to keep the head low, and motionless. During the day and night of the 15th, the patient vomited but twice.

*Saturday, July 16th.* This morning, the symptoms were more at bay, and the patient more comfortable, than any morning since the attack. During the customary apyrexial aggravation of the forenoon, beside restlessness and palpitation, there was some delirium. An enema of two fluid drams of tincture of Opium, was immediately administered, the whole top of the head was shaved, and a strong epispastic was applied. The enema not proving sufficient, two extra pills of Opium, of two grains each, were given, before the restlessness and palpitation were obviated. When the epispastic began to produce its effect upon the surface, the delirium speedily disappeared. In the afternoon, there was a very obvious mitigation of all the symptoms, and the patient was still more comfortable, than in the morning. For the first time since

the attack, the patient was now carefully lifted to another bed. This produced a considerable aggravation of the vertigo, and a recurrence of the epigastric distress and palpitation, for which, there was given with speedy relief, an extra pill of two grains of Opium, and an enema of two fluid drams of the tincture.

*Sunday, July 17th.* This morning, the symptoms in general were alleviated still further, than on the morning previous, though there was still inability to move the head without troublesome vertigo. The regular forenoon deterioration required this day, for its relief, two extra pills of Opium, of two grains each. At this time, it was judged expedient to enter upon the use of the Liquor of the Arsenite of Potassa, as a supportive and invigorating agent, and accordingly two minims were given with every regular dose of Opium. Otherwise the course, both as respects medicine and nourishment, which had been pursued for the two days previous, was continued. The night passed as comfortably as any one since the attack, if not more so.

*Monday, July 18th.* This morning, as for three mornings preceding, there was a mitigation of the symptoms, in comparison with most of the day previous. The forenoon aggravation however, required two extra pills of Opium, of two grains each. During the day, some uneasiness in the bowels was complained of. On examination, the abdomen was found to be still free from hardness, fullness or tenderness, but on the contrary, it was actually soft and lank. An enema of two fluid drams of Opium, entirely obviated all complaint. This day passed comfortably, as there was less vertigo, palpitation, and restlessness, than usual. Toward evening, the patient was again removed to another bed, which, as usual, occasioned a recurrence of troublesome symptoms, viz. vertigo, palpitation and restlessness, and rendered another enema of two fluid drams of tincture of Opium, and an extra pill of two grains, necessary, before the patient could be rendered as comfortable as before. In the course of the afternoon vomiting happened once, and that not long after a dose of the Liquor of the Arsenite of Potassa. As the patient confidently ascribed this effect to that medicine, though probably without reason, it was judged expedient to discontinue it. The night passed comfortably, and without any extra doses of medicine. The regular course was continued unchanged.

*Tuesday, July 19th.* This morning the patient was much as on the preceding. For the purpose of anticipating and preventing the usual forenoon aggravation, an enema of two fluid drams of tincture of Opium, was given early, and with the desired effect. No extra pills were found necessary. About noon, the patient was visited for the first time during his sickness by his father who lived at a distance. The agitation produced by this meeting, rendered another enema of two fluid drams of tincture of Opium necessary, in order to allay the increased vertigo, palpitation and restlessness. The regular medication was continued unchanged. This night, for the first time, was bad attendance. The witcher slept, and of course was irregular, and repeatedly neglectful, in administering both food and medicine, and finally left the house where the patient was, before either the nurse or the family were up.

*Wednesday, July 20th.* The patient was worse this morning, than on any morning since the fifteenth. From that time to the present, the pulse had varied in frequency, from eighty, to a hundred and twenty, in a minute, and had been soft and weak. The skin had been somewhat cooler than natural, and rather more sweaty than was desirable. The quantity of sleep for the twenty-four hours together, on the whole, had been less than in health, but it consisted of short, quiet, and apparently

refreshing naps, from which the patient was easily roused. If suffered, however, to continue more than about ten minutes, they became laborious, and seemed to produce fatigue and exhaustion. During this period, the tongue had gradually assumed a thin, but close, sordid, and brown fur, which, however, was uniformly moist. No special thirst had been complained of. The aggravation of symptoms at the present time, consisted in increased vertigo, palpitation, and restlessness; in reduced temperature of the skin; and in an increase of the frequency of the pulse, to about a hundred and thirty in a minute. An extra pill of three grains of Opium, and an enema of three fluid drams of the tincture, were given in the course of the forenoon, with the effect of restoring the patient, very nearly if not entirely, to the situation in which he was, the day previous. During the day, it was judged expedient to take some measures towards moving the bowels, not because there were any further indications for this step from the condition of the bowels themselves, but merely from the length of time they had remained unmoved. In reference to this point, simple water was substituted for the Lime-water in the Spirit mixture, and about a scruple of the Carbonate of Magnesia was given at a dose, three times, at nearly equal intervals, during the day. As however, the patient complained in each instance, after taking it, of considerable uneasiness in the stomach, and as there was an increase of the vertigo, languor, and restlessness, during the afternoon, contrary to the usual course of the disease, and as the tongue was gradually becoming more flabby, and as the edges from which the fur was now beginning to be removed, were more pale than at any time previous, it was on the whole judged expedient, to relinquish the Carbonate of Magnesia, before it should produce any evacuation, and to add ten minims of strong Spirit of Pepper-Mint, to each dose of the Spirit mixture, and likewise to administer an enema of two fluid drams of tincture of Opium. The latter part of the day, the patient was as comfortable as usual, till just at evening another aggravation of symptoms was produced, by changing the shirt. This rendered another extra pill, of two grains of Opium, necessary, and another enema of two fluid drams of the tincture. About 11 o'clock, P. M. the patient was consigned to the care of the attendant for the night, in as favourable a condition as had been usual, at that time, for several days. About 1 o'clock, A. M. a physician, who slept in an adjoining chamber, was called, on account of a slight discharge of blood from the urethra, in consequence of the introduction of the catheter, which had still continued to be necessary, though it had always been performed by the patient himself. This symptom being explained to the satisfaction of the attendant, the general condition of the patient was examined. Unexpectedly, the pulse was now found to be very small, weak, and soft, and as frequent as a hundred and sixty in a minute, the beat being peculiarly short and quick. The temperature was soon considerably reduced, the countenance became sunken, there was increased vertigo, and a confusion of mind, almost amounting to delirium. An extra pill of Opium, of two grains, was immediately given; and the regular dose was increased to three grains. The Spirit and nourishment, were continued as heretofore.

*Thursday, July 21st.* This morning, the patient was in a very low state; but in comparison with the latter part of the night, somewhat improved. Two grains of Opium, were now given every two hours; and at every intermediate hour, forty minims of the tincture, in conjunction with five minims of spirit of Cinnamon. Two additional epispastics, were applied to the sides of the head. Through the day, the symptoms remained nearly stationary. At evening, the patient was in a very low

state. During the night, he vomited several times; after which, for a few moments, there would be furious delirium. During the whole time, there was great restlessness and jactitation. Toward morning, there was a kind of epileptic tremor; after which, and about sunrise, Friday, 22d July, dissolution took place.

#### REMARKS.

In connexion with the statement of the preceding case, it ought to be remarked, that from the fact that Mr. L. had a physician constantly by him, his symptoms were barely met and obviated as they occurred, but were rarely or never anticipated and prevented, which is always necessary to insure a favourable crisis in the bad cases. At any rate, the treatment was always a little behind the progress of the case. It is not however very probable, that he could by any means have been saved, considering the slenderness of his previous health, the feebleness of his constitution, and the severity of his disease. Notwithstanding these circumstances, so powerfully were the symptoms met, between the third day and the ninth, that strong hopes were entertained of his recovery. Indeed, most of the time from the attack to the final sinking on the ninth day, a physician not conversant with the disease, on a call of ten minutes, would have been liable to form a very erroneous judgment of the real danger of the case, on account of the promptness with which the symptoms were met, and the degree with which they were capable of being controlled. On close inspection, a considerable number of petecchiæ, were visible on the face and neck, but they were not so prominent as in many other cases. This case, as well as the preceding, occurred in the hottest season ever known in this climate. In spite of every effort to preserve a comfortable temperature, in the rooms of the sick, the mercury of the thermometer stood from 90° to 94°, several hours every day, for a great part of the month of July, 1825.

It may be proper further to remark, that in so much of the preceding cases, as occurred from the 8th to the 12th of July, 1825, great assistance was received, in making out this report, from the very accurate minutes made on the spot by our deceased friend, who for that short time, proved to be a very valuable assistant to the attending physician.

Since the prevalence of the present epidemic in this and the adjoining towns, it has proved very fatal to the medical profession. Dr. Warner at Haddam, Mr. Leavenworth in this City, Dr. Catlin, at Durham, and Dr. Ward, at Berlin, have all fallen victims.

Previous to printing the *addenda*, the following letter was received from that veteran practitioner and author, the venerable James Thatcher, M.D.A.A.S. of Plymouth, Mass. the friend and medical associate of Brooks and Eustis, under Washington, and author of the American Dispensatory, and of the American Modern Practice, &c. &c. &c.

Thomas Miner, M.D. Middletown, Connecticut.

Plymouth, August 18th, 1825.

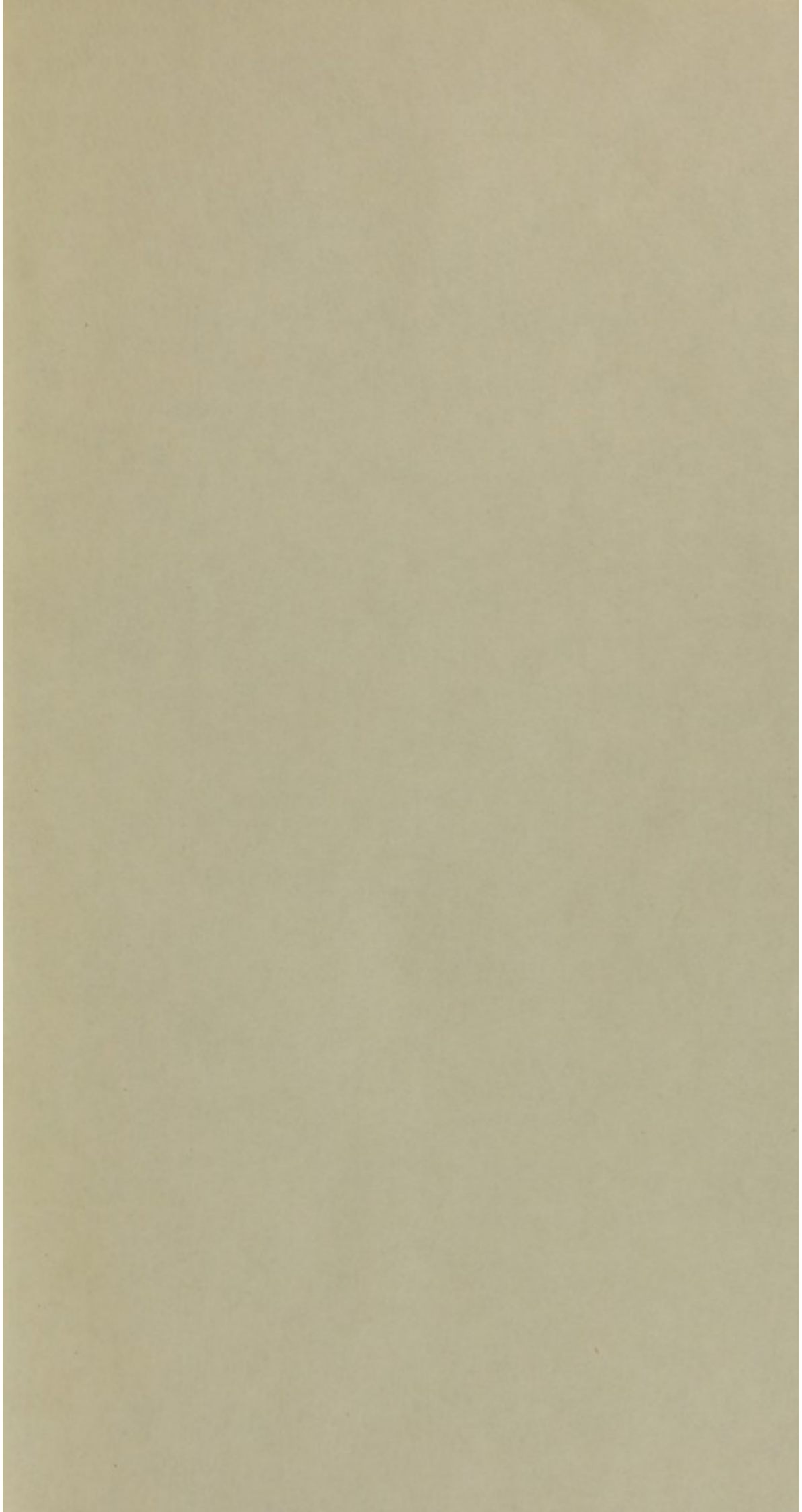
Dear Sir,

Through your politeness, I have been favoured with your ingenious pamphlet on *Typhus-Syncopalis*, for which I beg leave to proffer my respectful acknowledgments. Not having been fully satisfied with any treatise on that formidable disease, I commenced the perusal of yours with peculiar interest and solicitude. From a knowledge of the medical character of the author, my expectations were such as to excite a particular attention to every sentence, and permit me to indulge my feelings, by expressing my unqualified praise and approbation. Your just description of the disease in its various forms, and judicious mode of treatment, afford me a peculiar satisfaction, and I hope the book will be extensively circulated, both on account of the author, and the instruction which it cannot fail to impart to the young and inexperienced practitioner. I shall take pleasure in putting it into the hands of my neighbouring physicians, and presume it will escape the hand of criticism so unjustly bestowed on a former occasion.

I am with much respect,

Your obedient servant,

JAMES THATCHER.



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