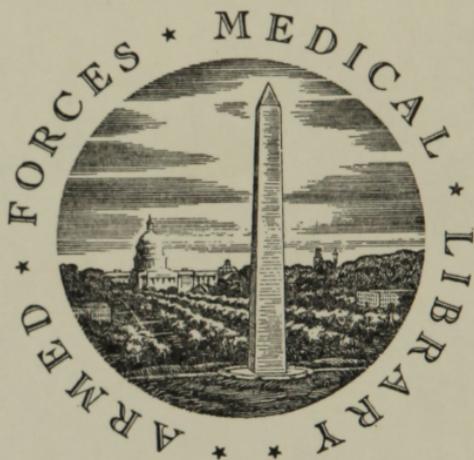




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AN

INAUGURAL DISSERTATION

ON THE DISEASE TERMED

*PETECHIAL, OR SPOTTED FEVER.*

SUBMITTED TO THE EXAMINING COMMITTEE

OF THE

Medical Society of Connecticut,

FOR THE COUNTY OF HARTFORD.

=====  
By *NATHAN STRONG, Jun.*  
OF HARTFORD.

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## PREFACE.

THE laws of the Medical Society of Connecticut require, that every student offering himself for examination, shall exhibit to the examining Committee, a dissertation upon some medical subject. In compliance with the above regulation, the following sheets were written, and submitted to the examining Committee for the county of Hartford. At the request of a number of the writer's medical and other friends, they are now offered to the public through the medium of the press. The writer is fully sensible, that some, from sinister motives, will pronounce him a vain young man, and will not fail to speak of his officiousness, in obtruding his opinions upon the public. That others will honestly think, that it would be more satisfactory, to have the subject, which all must allow to be important, treated by some elder, more able, and experienced physician. To persons of the first description, he makes no apology; with the second he perfectly agrees. It doubtless would be more satisfactory to the public, to get the desired information from a better source. And it certainly would be far more pleasing to the writer, to hear the opinions of others than to publish his own. His wishes, however, have not been gratified. It is now four years, since the disease in question appeared in this country. It is believed to be a new disease, one, with which the physicians of the country were entirely unacquainted; and one, of which no medical writer, either ancient or modern, has given a descrip-

tion. Since its first appearance, which was in the state of Massachusetts, it has, until very lately, been principally confined to the counties of Hartford and Litchfield in the state of Connecticut.\* The great body of American physicians, have had no opportunity to become acquainted with the disease. Their curiosity has been excited by the reports which they have heard. Their fears have been alarmed, lest the enemy should appear within their own limits; while they were yet ignorant of its nature, mode of attack, or the weapons with which it might be most successfully combatted. Where should they look for the information, but to that quarter in which the disease had most prevailed?

To this part of the country then, the eyes of the public in general, and of the medical part of it in particular, have been turned. They have expected, and they surely had a right to expect, that some measures would be taken, either by public bodies, or by individuals, to give the information desired. They have, however, looked in vain. About a year since, a number of medical characters in this neighborhood, conscious that something ought to be done, caused a meeting of physicians to be called at Farmington. A number of gentlemen assembled, from different towns where the disease had prevailed. They were agreed in opinion, with respect to the nature of the disease and the general plan of treatment, best adapted to its cure. A Committee of eight was appointed to prepare a treatise upon the subject, for the public. The greater part of the gentlemen, nominated to this duty, resided in places, where the disease at that time prevailed; and were prevented by their professional avocations from performing the part allotted to them: in consequence of which, the whole design was frustrated. Thus failed the only attempt which has been made, by the physicians of the neighborhood collectively. And those individuals, who have been the most conversant with

\* Since this dissertation was written, the disease has appeared in a malignant form in several towns in the state of New-York, and likewise in the towns of Petersham and Dana, in the state of Massachusetts. In these last mentioned places it now prevails.

the disease and are the best qualified to treat of it, have, probably for want of time neglected to do it. So that, excepting one or two short newspaper essays, nothing has been published upon the subject. When the following dissertation was composed, the writer had not the most remote idea of its ever appearing before the public. Being, however, acquainted with the numerous applications for information, from all parts of the country, especially from those where the disease has lately appeared; having been repeatedly solicited to give copies or extracts from the work, and urged by his friends to commit it to the press, he has at length consented. Trusting that if it does no other good, it will at least awaken his elder and more experienced brethren to a sense of duty, and cause them to produce information upon the subject more worthy of public favor.

*Hartford, March 12th, 1810.*



A  
*DISSERTATION*  
ON THE  
PETECHIAL FEVER.

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*To the Committee of the Medical Society of Connecticut,  
for the County of Hartford:*

GENTLEMEN,

UNDERSTANDING that the subject of the dissertation, which the laws of the Medical Society require to be exhibited to the examining Committee, is left to the option of the writer : it is proposed, to offer some remarks upon the late epidemic, distinguished by the name of the Petechial or Spotted Fever. Trusting to the candour of the Committee, who well know the difficulties, under which a young man who has but just entered the field of medical research, must necessarily labour ; he has no doubt, that they will make every reasonable allowance, for the imperfection of his performance ; and that the chastening rod of criticism, which they will have abundant reason to apply, will be wielded with a gentle hand.

The disease of which we are now to treat, and which has justly excited much alarm in a number of towns in this state, made the first appearance, of which we have any account, in the town of Medfield, state of Massachusetts, in the month of March 1806. A short account of it was given to the public, by Drs. Danielson and Mann. In the same month, of the year 1807, it appeared in the city of Hartford, and soon after in the town of Windsor. From that time to the present, it has made its appearance, at various times, and in various places, in the counties of Hartford and Litchfield : cases have occurred in almost every month of the year ; but it has generally been most prevalent, in the last

winter, and the spring months. We are not sensible of any variation of the seasons, sufficient to have given rise, to this new form of disease. The winters, preceding the springs of 1806—7, when the disease first appeared, had been as usual of late years, open and mild: the winter of 1808—9, was unusually severe. The local situations of the towns, in which the disease has been most prevalent, are various. While some of them are situated upon the borders of rivulets, and intersected by small streams, never known to emit unhealthy vapours: others are placed upon high hills and bleak ridges, and have been ranked among the most healthy in New-England.

The minor symptoms of the disease under consideration, and the manner in which it makes its attack, are no less various, than the times and places, in which it has appeared; I had almost said, than the individuals who have been the subjects of it. Its great and leading features, however, it is believed, are always the same. Wherever it appears, in whatever manner it makes its approach, that **DEBILITY**, which is more to be dreaded than a strong man armed, is its most striking characteristic.—The Pathology, which will now be given, is derived principally, from observations made in the towns of Hartford and Wethersfield, in the years 1808, and 9: of the varieties of the disease, as they may have appeared in other places, the writer is not prepared to treat.

An accurate description, of the first symptoms, is rendered somewhat difficult, by the variety, which has already been mentioned, as characterizing the first attack. Some are taken with violent pain in the head and stomach, generally accompanied with nausea and puking: others, with pain in a finger, a toe, an arm, a foot, or some joint. Some are seized with ague fits, which are often of a peculiar kind, for so great is the insensibility and torpor, which in many cases, even at this early stage, pervade the system, that the patient, while he is shivering, and his teeth chattering, has no sensation of cold, and upon being asked if he is chilly, will answer in the negative. This, however, is

not universally the case, for some complain of chills similar to those which usually indicate the approach of fever ; with this difference, that they are rarely, if ever, followed by increased heat.\* Some are taken with numbness, in one or more of their limbs. In numbers, the last season, the first symptom observed, was a constant rubbing of the nose and face : upon being asked the occasion of it ; they mentioned, a singular sensation of numbness in the face, which they wanted words to describe. In several cases, this singular sensation, continued several hours, before any other symptom occurred. In some, the attack has commenced with dimness : in others, with a total and instantaneous loss of sight. Some are seized while engaged in their ordinary concerns, or while attending upon the sick, with sudden delirium, of all grades, from a mild, playful derangement, to the most awful distraction. Most of these cases of violent delirium, which the writer has seen, have been accompanied with a sharp pain shooting through the temples, which put the unfortunate sufferers in the most extreme agony, and led them to suppose that some one was endeavouring to murder them, by driving spears, spikes, &c. through their heads.

Having taken this concise and imperfect review of the symptoms, which most generally indicate the approach of the disease ; we shall now proceed in a more methodical manner, to notice the effects produced by it, as they are exhibited in the VITAL, the ANIMAL, and the NATURAL FUNCTIONS.

#### VITAL FUNCTIONS,

In which we include the sanguiferous system, the organs of respiration, and the brain, with its nervous appendages.

\* It will be recollected, that this is a description of the symptoms, as they appeared in the years 1808—9. The writer is informed that, in the year 1807, when the disease first appeared in this state, there was in a number of cases, a very considerable increase of heat after the chills. It was however of a very transitory nature, and speedily disappeared, leaving the patient in a state of the lowest debility.

## SANGUIFEROUS SYSTEM.

In all *serious* cases of this disease, the *action of the heart*, is very much impaired. The *PULSE*, commonly *frequent*, always *feeble*, often *irregular*, sometimes *interrupted*. Cases are recollected, where no action was perceptible in the radial arteries, for the space of an hour, and yet the patients have recovered. A *hard, tense* pulse, was rarely, if ever, felt. The pulse was often of a deceptive kind, by which a superficial observer might be led into error; frequently, when upon the first touch it had the appearance of fulness, upon a slight degree of pressure it vanished like mere vapour. This feeble action in the radial, was frequently accompanied by a violent pulsation, in the carotid arteries. This was a much more general symptom of the disease, in the year 1807, than in the succeeding years.

*HEMORRHAGIES*, of the free kind, were not a very common attendant upon this disease. *EPISTAXIS*, sometimes occurred. *MENORRHAGIA*, more frequently. These evacuations generally sunk the patient, and several cases occurred, where life appeared to be lost, in consequence of catamenia supervening upon the disease. *BLIND HEMORRHAGIES*, or those, where the blood flowing from the vessels of the skin, is detained beneath the cuticle, forming petechial spots, were more common. So frequent indeed, was this species of hemorrhagie, during the first season in which the disease prevailed, that it was considered as one of its most striking characteristics, and gave rise to the name *PETECHIAL, OR SPOTTED FEVER*, which has been very generally, though very improperly, applied to the disease. These spots commonly appeared on the face, neck, and extremities; frequently, over the whole body. They were generally observed in the early stages of the disease. In size they were various, commonly, the head of a pin and a six cent bit would mark the two extremes. These spots were evidently formed by extravasated blood; they did not rise above the surface and would not recede upon pressure. In colour they varied from a common to a very dark purple, and the darker the shade the more fatal the progno-

sis. These spots which in 1806—7 marked almost every case, in 1808—9 were rarely observed.

The RESPIRATION was various. In some cases, it differed little from a state of health, in others it was difficult, many complained that “the air was all gone,” that “they had nothing to breathe.” In many of the fatal cases, the breathing through a principal part of the disease, was completely stertorous. Except in a very few cases where sphacclation had commenced in the throat, the breath had no offensive smell.

The voice was low and assumed a tone of peculiar melancholy.

A diminution of HEAT, may be considered, as among the most striking symptoms of this disease. A physician upon being first called to his patients, often finds the hands, the feet, the limbs generally, and not unfrequently, the whole surface of the body, below the natural temperature: and in many severe cases, the most powerful applications, either external or internal, are insufficient to restore a genial warmth. In more than a hundred cases, which the writer carefully inspected, he found but few, in which the heat was up to the natural temperature, and rarely any in which it was above.

BRAIN. An affection of the brain was indicated, 1st. by DELIRIUM. It has been before observed, that delirium was among the first symptoms of the disease, and that the derangement was of very different kinds. Some were instantaneously seized, with violent and furious distraction. This distraction was generally accompanied with the most agonizing pain in the head, which commonly appeared to shoot through the temples: and their fury frequently proceeded from the idea, that external violence was applied to their heads. In general, however, the delirium was of a more peaceable kind, and frequently assumed an hysterical form. Several young ladies were supposed by their friends to have nothing more than a common turn of hysteria, until they were found to be sinking into death. In some cases, the delirium assumed the appearance of obstinacy. In others the patients exhibited an uncom-

mon degree of shrewdness and wit. Hardly a case occurred, without a greater or less degree, of delirium ; and in the more violent cases, reason was frequently impaired, through the whole course of the disease. The spirits, in many instances, were greatly depressed. Numbers who had their reason, appeared from the first attack determined to die ; they did not, however, appear alarmed at the idea, and expressed little desire to recover ; but seemed strangely indifferent to the result. These were, generally, very unfavorable symptoms, as they indicated a degree of torpor, from which perhaps few recover.

COMA, was another symptom, which strongly indicated an affection of the brain. It occurred in almost all the extreme cases ; many became comatose, in the first stages of the disease, some within the first hour. This was always an alarming, though not always a fatal symptom ; for many were raised, by a free use of stimulants, from the most profound lethargy. Where they could not be thus raised, the coma was generally soon followed by an apoplectic stertor, which frequently continued for some hours ; the breathing at length grew easier and shorter, until it entirely ceased. This was the mode in which death was most commonly ushered in. In those cases, where coma did not occur, there were often frequent turns of syncope.

The NERVES, as well as the brain, were generally seriously affected. *Subsultus Tendinum*, and *Tremor*, those common attendants upon Typhus, rarely appeared, never to any great degree. Singultus sometimes occurred, especially after much puking. The nerves, in some few cases, had such a morbid degree of sensibility, as rendered the whole surface of the body sore to the touch. But the reverse of this, an extreme, and if we may so speak, a *painful insensibility* was the symptom, by which their derangement was most strikingly exhibited. A singular numbness was frequently the first symptom, and in almost every case, it occurred, to a greater or less degree, during the progress of disease. Sometimes it was confined to one, sometimes to several of the limbs, very frequently it

affected the face, and often pervaded the whole surface of the body. I have known it proceed to a complete paralysis in a limb. It is a very distressing symptom, occasions much anxiety, is frequently described as being more hard of sufferance than severe pain. I have often hear'd persons, while laboring under this symptom, beg their friends to pinch and scratch their flesh, and the drawing of blisters, is to them, a pleasurable sensation.

The PAINS, in this disease, were principally in the head, though by no means confined to this part. The neck, the shoulders, the back, the breast, the stomach, the loins, and every limb of the body, have at one time or another, been afflicted by them. As far as the writer has observed, the bowels are more exempt from pain, than any other portion of the body. He has rarely heard a patient complain of pain in this part. The pains are not often of the dull, heavy kind, but almost always, sharp and shooting, and frequently fly from one part to another.

Having thus concisely noticed the various affections of the vital functions, we now proceed, according to our plan, to consider those of the

#### ANIMAL FUNCTIONS,

In which, we shall comprise the *senses and voluntary motions*.

The prostration of strength, and the debility of the muscles of voluntary motion, which attend this disease, are truly astonishing. These symptoms were exhibited in every stage of the disease. In many of the severe cases, the patient had hardly become sensible, that he was indisposed, when he found that his strength was indeed weakness, the power of raising the body, or even of turning it in bed, was gone; and the hand, which was attempted to be brought to the head, fell useless. But although muscular debility generally accompanied the first approach of the disease, there were some exceptions. In some cases the first attack was attended with a morbid increase of strength; and numbers, while under the influence of a raving delirium, exhibited a degree of strength,

which can hardly be conceived of. This, however, was of short duration ; debility soon ensued, and the person, who a few hours before required five or six to hold him in bed, now needed assistance to change his position. During the two first years, in which the disease prevailed, the extensor muscles of the head and neck, were in almost every case, affected with tonic spasm, by which the head was drawn back, and fixed in that position. This symptom, however, disappeared with the petechial spots, and during the two last years, was rarely observed.

The *organs of sense*, were frequently affected. We have already observed, that the sense of feeling was sometimes, morbidly excited, occasioning soreness to the touch. While speaking of this sense, it may not be improper to notice generally, the affections of the skin. It has been observed, that the skin was commonly preternaturally cool, and we now add, that it was generally dry ; and that its continuing in this state, after the usual means of promoting diaphoresis had been applied, was an unpleasant symptom. Profuse sweats sometimes appeared in the last stages. The skin exhibited various eruptions. Petechia were noticed under the head of hemorrhagies. Efflorescences, similar to erysipelas, were sometimes seen. Carbuncles were common in the convalescent state ; and in a number of cases, pustules, similar to the variolous, appeared in the same stage. In one case, where both carbuncles and a great number of the pustules appeared, the patient died after many days sickness. This person, however, was injured, by a very copious, catamenial evacuation. Buboes are said to have appeared, in several cases in Berlin, in 1809. In many of the cases, which proved speedily fatal, the skin, over the whole surface of the body, soon assumed a livid hue of various grades, from a slight discoloration to an almost inky blackness. Livid blotches commonly appeared on the body soon after death ; and in many, the neck, shoulders, and arms, became almost black. The skin was so insensible in many instances, that blisters made no impression upon it : in some cases,

pins were run through it, powerful caustics, and even the actual cautery applied without the patient's being sensible of it.

The EYES, in some cases, varied little from a natural appearance. In many there was a peculiar redness of the albuginea, which generally indicated much danger. In numbers the pupil was dilated, in some contracted, in others there was an alternate dilatation and contraction. The eyes of some exhibited an uncommon brilliancy, which was, perhaps, only the beginning of that glassy state which frequently followed. No case of a yellow eye is recollected. The sight, as we before observd, was often much impaired, frequently entirely destroyed, in the first attack. This loss of sight did not always last through the disease; in some cases, it was of short continuance.

There was commonly little or no morbid affection of the HEARING, during the violence of the disease. The writer is acquainted with one case, a child of two years old, in which the hearing, subsequent to the disease, was entirely lost, he has heard of two similar cases in neighboring towns. The TASTE, was frequently very much impaired; clear brandy, in a number of cases, was as insipid, as pure water. It is not recollected, that there was any derangement of the olfactory nerves. We shall next consider the

#### NATURAL FUNCTIONS,

*Digestion, secretion and excretion.* In doing which, we shall notice the various affections of the *alimentary canal*. The appearance of the *tongue* was various in some cases, upon the first attack, it differed little from a healthy state. In some, it assumed a whitish appearance, but was free from that raised secretion, which is common in the early stage of inflammatory diseases or the yellow fur, which usually indicates a foul stomach in common typhus.

In the progress of the disease, it frequently changed in some cases to a brown, in others to a black colour. Though in some very mild cases, the tongue continued moist through the disease; it was generally dry at the first attack, or soon became so. It often, in the course

of the disease, became corrugated and shrivelled up, exhibiting a very formidable appearance. In some cases, the tongue, upon the first approach of disease, was of a pallid hue, appearing as if the blood had been drawn from it. This was a fatal symptom, and generally, if not always, indicated a speedy death. This organ was frequently in a very torpid state, so that it was with great difficulty, it could be got out, or returned into the mouth. Ulcerations in the fauces or throat, similar to those of *cynanche maligna*, sometimes appeared, the ulcerations, in several instances, accompanied the first symptoms of disease; these cases were generally fatal.

The *FAUCES* were often covered with *aphthæ*, which frequently extended through the whole alimentary canal; and in the weak state, which the patients generally were, was a very troublesome affection.

In violent attacks, swallowing was often very difficult; in a number of cases, a complete paralysis of the organs of deglutition, had taken place, in the course of two or three hours from the commencement of disease. In such cases a physician had but little to do; access to the stomach being completely cut off, enemas, and external applications, were his only resource. While life remains, however, there is hope, and those applications, which are still in our power, ought to be vigorously applied. Deglutition was sometimes impeded, by spasmodic affections, which in one instance, appeared similar to those of *hydrophobia*.

The *STOMACH* was always very seriously affected. Nausea and vomiting, were frequently among the first symptoms, and often continued till death closed the scene. The vomiting was frequently excessive, often almost constant. It tended much to sink the patient, and life often evidently depended upon its being controlled. This, however, was frequently very difficult, as every thing taken into the stomach with this view, was immediately thrown off. Nothing tended so much to increase the vomiting, as cold water; all light drinks had a similar effect.

Notwithstanding this constant nausea and puking,

in all *genuine* cases of the disease, the contents of the stomach were found to be in a *natural, healthy* state. No mucus, no bile, no morbid matter of any description, was thrown off, whether the puking was spontaneous or produced by an emetic. This is conceived to be a very important fact; it evinces that the affection of the stomach is principally, if not wholly, of the nervous kind, and will have much influence upon the treatment of the disease.

A severe pain in the stomach was, sometimes, complained of. But the symptom, which was the most distressing, which the patient dreaded more than all others which occurred in the course of the disease; and the very mentioning of which, seemed to impress those who had experienced it, with horror: was an indescribable sensation about the upper orifice of the stomach. Some said, they felt, "as if they were all gone in that place." Some, "as though several pounds of ice were placed there." They called it, "a deadly feeling," "a death-like coldness or faintness," such as they never experienced or had an idea of before, and which no language would enable them to describe to others. The duration of this sensation, and the frequency with which it returned were various. Some had a degree of it constantly, generally, however it occurred in paroxysms a number of times in the course of a day; commonly impressing the mind of the patient, with an idea that he was dying: and frequently from the ghastly look which it occasioned, imposing the same belief upon his friends. A person familiar with the disease, might often discern by the countenance when these turns of distress were approaching, and frequently by a proper application of the medicines, which will be noticed when we consider the treatment of the disease; might prevent, or at least mitigate their violence. Flatulence of stomach was, sometimes, a troublesome complaint. Thirst was rarely complained of, and never to a great degree, and nothing tended so effectually to allay thirst when it did appear, as wine, or some modification of ardent spirit.

The appetite, as might be expected from the state

of the stomach, is impaired. No sooner, however, is the violence of the disease abated, than it generally returns, and the stomach craves, receives, and digests animal food, with great freedom and without any ill effect. Rarely do we see instances of convalescents injured by over-eating, though they indulge themselves freely.

The BOWELS were remarkably free from disease, they were rarely the seat of pain, and their contents exhibited no morbid appearance.

The *Glandular and Lymphatic Systems* suffered no great derangement. The appearance of the *urine* differed little from that of health. This secretion frequently suffered some diminution in quantity, though in some instances, there was a large flow of limpid urine, similar to that of Hysteria. In many cases, a torpid state of the neck of the bladder, rendered the voiding of urine difficult, and it was, sometimes, necessary to have recourse to the catheter, though, in most cases, half a gill of brandy, injected into the rectum, would remove the difficulty, and produce the desired discharge. The glands and vessels of the skin were frequently in a torpid state, which rendered it difficult to obtain a free diaphoresis; when sweat was produced it exhibited no bilious or offensive smell.

We have, according to the plan proposed, given a general description of the symptoms exhibited in the vital the animal, and the natural functions. But one objection, to the method which has been pursued, occurs to the writer. By describing the symptoms, as they were exhibited in the different functions, we have lost sight of the order, in which they occurred. It is proposed, however, before we leave the subject, to make a statement of several cases, by which the progress of the disease, from its commencement, to its termination, either in death, or a restoration of health, the connection of the symptoms one with another, together with the effects produced by medicine, will be exhibited at one view.

In commencing the foregoing pathology, we mentioned, that our description of the disease, would be

principally drawn from the symptoms exhibited in Hartford and Wethersfield, in the years 1808—9. Different varieties, have doubtless appeared in different places and seasons: for even in the same place and the same season, the disease appears in every shape; from the dreadful Plague, which baffles all medical skill, and destroys life in five hours, down to the mild disease, which if properly treated, will confine the patient only a few days. In all real cases of the disease, however, it is confidently believed the leading features will be found among the symptoms above described. The progress of the symptoms was very rapid. The disease generally arrived at its height in a short time, and if the patient survived three or four days, life, with proper attention, might generally be saved. There were 20 deaths of this disease in the city of Hartford, in the months of February and March 1809; of this number, 7 died in less than 24 hours, 5 in less than 48 hours, 3 in less than 72 hours, and the remaining 5 at different periods, from the 3d to the 7th day.

#### DIAGNOSIS.

A few remarks will now be offered concerning the diagnosis which is to be formed.

It is conceived that the only diseases which a prudent practitioner would be in danger of mistaking for the one under consideration, are the common Typhus Fever of our country, and the Cynanche Maligna. With respect to the former of these, we remark, That the violent cases of the late Epidemic, in the suddenness of the attack; the overwhelming prostration of strength and vital energy, which speedily ensue; the rapid progress of the disease, to a fatal termination, unless arrested by a speedy application of powerful medicines; so far surpass any thing of the kind, which has appeared in the ordinary Typhus of this Country, that they cannot easily be mistaken for it. It is only the milder cases of this disease, which can be confounded with ordinary Typhus. In an attack of common Typhus, the tongue and other symptoms, always indicate a foul stomach, oppressed with mucus and other morbid matter, which may be consid-

ered as the cause of disease, and which render it proper and necessary, that the alimentary canal should be thoroughly, though mildly cleansed, before recourse is had to tonics and cordials. In well formed cases of the late Epidemic, as was noticed in describing the symptoms, the stomach, and indeed the whole alimentary canal, are found in a different state; free from any morbid matter which could occasion disease, and not bearing serious evacuations without detriment to the patient. The danger therefore is, that a case of common Typhus being mistaken for the Epidemic, evacuations should be too sparingly used, and too speedy and free a resort be had to stimulants. And on the other hand, that a real case of the disease being mistaken for common Typhus, the patient should be injured by too free a use of evacuants. It is conceived, however, that the prudent practitioner, who is governed in the treatment of his patients by their symptoms, and not by names and prejudices, will find little difficulty on this subject. And whenever the disease in question shall appear;—the sudden prostration of strength, which accompanies it; the depressed pulse, and the cold skin which occur, without previous excitement;—the appearance of the tongue, and the freedom of the stomach from morbid matter, which that appearance indicates;—the numbness of the surface, and the torpor of the whole system; will be sufficient to teach him its nature.

In describing the symptoms of the disease, it was observed, that ulcerations of the fauces and throat, similar to those of Cynanche Maligna, sometimes appeared; where this is the case, there is a great similarity in the two diseases, but as the general indications of cure in both diseases, are so similar, it is probable, no great evil will result from a mistaken diagnosis.

#### CAUSES.

However little, we may know of the causes of a disease, yet, in a methodical treatise, it seems necessary to speak of them, if it is only to acknowledge our ignorance.

The *causes* of disease have generally been divided

into *Remote* and *Proximate*. The former of these has been subdivided into *predisponent*, or such as predispose, or prepare a person for disease, and *exciting*, or such as occasion disease in those who are predisposed. It happens, however, in many diseases, and it is believed to do so in the one under consideration; that the same causes act in both these ways, that is, those causes, or at least the most of them, which prepare the body for the reception of the disease; likewise excite the disease in the subject so prepared.

Among the causes, which act in this double capacity, may be mentioned, intense application of the mind, grief, fear, or any of the depressing passions, cold, excessive labour, watching, or fatigue of any kind, nursing, an immoderate use of stimuli, previous to disease, and generally all those causes which induce debility. That *debility* predisposes to the disease is abundantly evident. The remark which Cullen makes of *Cynanche Maligna*, is applicable to this disease. "It attacks persons of all ages, but more commonly those in a young and infant state. It attacks persons of every constitution, when exposed to the contagion, but most readily the weak and infirm." In those towns, where the disease has spread and become general through the place; persons of every description were the subjects of it. But, in sporadic cases, and in those places where its progress has been limited, it is believed, that the subjects generally were persons naturally of a lax fibre; or who from various causes, were in a state of debility. In Medfield, where it made the first appearance, of which we have any account, every subject was in a state of childhood. At its first appearance in the city of Hartford, there were between 20 and 30 cases, among which there were not more than one or two over the age of 18. In the cases which have since occurred in this neighbourhood, there have been more children and youth, under and about the age of puberty, than adults; more females than males. In adult females, those in a state of pregnancy were the most exempt; those who were nursing the most exposed.

We have mentioned several causes, which by debil-

itating the system, predisposed to the disease. That there exists some cause or causes, still more remote, cannot be doubted; but to determine what they are, is perhaps beyond our power. It was observed in the introduction, that a change of disease could not be accounted for by any sensible change in the seasons. It is, however, an undoubted fact, that the constitution of the atmosphere, in the part of the country where this disease has prevailed, has for several years past been different from that which prevailed in a number of the preceding years; or in other words, it has produced a different species of diseases, from those which were then prevalent. For a number of years succeeding 1790, an *asthenic* diathesis prevailed; hardly a disease appeared, which could be cured without the lancet, and a powerful antiphlogistic course. The use of bark was hardly ever found admissible; and even in cases, apparently similar to those where past experience had warranted its administration, it was found injurious. From some unknown cause, however, a great and striking change has taken place. For several years past, an *asthenic* diathesis has prevailed. Almost every disease has been marked with *debility*. The Inflammatory Rheumatism, the Cynanche Tonsilaris, Poronychias, Inflammatory Tumours and Diseases of all kinds, have almost disappeared; and the lancets of many of our most respectable and judicious practitioners, have almost grown rusty, for want of use. It is believed these assertions will be sanctioned by the testimony of almost every practitioner in this neighborhood.

At a meeting of 25 physicians from various towns in the counties of Hartford and Litchfield, every individual agreed to these facts. And one gentleman observed, that for twelve months he had rarely seen a case of disease which in his opinion required the opening of a vein. One of the most eminent practitioners of midwifery in this part of the country, whose business is very extensive, has informed me, that for two years past, he has seen but few cases of women in a state of pregnancy, where blood-letting proved beneficial. That

on the contrary, a number of pregnant women, who in former years had always been accustomed to blood-letting under similar circumstances, and borne it to advantage, had within this period of time, suffered evident injury from venesection. Such has been the constitution of the atmosphere, and such the state of the human system, during the seasons in which this formidable disease has prevailed. From what combination of causes, this constitution arose, is left for the determination of those more skilled in the economy of nature than we profess to be. But altho' we pretend not to know the causes; with the effects, we are well acquainted. We know that *debility* formed a considerable part of almost every disease, and that in the one of which we are treating, it governed with powerful and often with uncontrolled sway. We trust the period is not far distant, when another change will take place. Should this be the case, we may have reason to expect that this disease in future will assume a less formidable appearance, than that which it has in times past exhibited and become more manageable in its nature.

*Proximate Cause.* Having acknowledged himself almost entirely ignorant of the *Remote Causes*. The writer now declares himself profoundly so, with respect to the *Proximate Cause*. And while, in treating of common fever, one great man considers lentor in the extreme vessels, as the proximate cause; and another refers it to morbid matter in the system, which it is necessary should be concocted and expelled.—While a Cullen comes forth a champion for the doctrine of spasm; and others for a morbid irritability of the heart and arteries: he will not blush, to acknowledge his ignorance, in the present case.

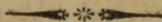
#### PROGNOSIS.

It is always a matter of some consequence to the character of a physician, that he be able, as far as the shortness of human foresight, and the nature of a disease will permit, to form a correct judgment of its probable course and termination.

In the disease under consideration, great caution is often necessary, especially for those who have had but

little experience of its deceitful nature. In some cases, as has been before observed, the first attack has been disguised under the appearance of a mild hysterical affection, until death was near at hand. From the mildness or violence of the attack, however, we may generally form a judgment of the probable result. When the symptoms assume a mild form ;—when the prostration of strength is not uncommonly great ;—when some degree of energy remains in the pulse, and the surface does not become cold ;—if the tongue continues moist, or though dry, is not greatly shrivelled up, or does not assume the bloodless appearance which has been noticed ;—if deglutition is not greatly obstructed, and the stomach retains medicine :—we may confidently hope, by careful attention, to carry the patient safely through. Again, though the symptoms may assume a more severe form ;—though the prostration of strength be great, and the vital energy seems almost destroyed ;—though the pulse trembles at the wrist, and a cold surface presents itself to the touch ;—though the torpid tongue is moved with difficulty, and the stomach throws off its contents :—yet if these symptoms appear to be easily controled by medicine ;—if we succeed in soon restoring a genial warmth and moisture to the surface, and increasing the energy of the pulse ;—if the excessive vomiting is overcome, so that we are able, through the stomach, to invigorate the system :—then also may we confidently hope, by assiduous and unremitting attention, to ward off the shafts of death, from our patient, and restore the smiles of joy to the countenances of his friends. On the other hand—if the stomach obstinately rejects every medicine administered ; or a paralysis of the throat prevents deglutition ;—if we cannot by any means succeed in restoring warmth to the surface, and energy to the arterial system ;—if a torpid insensibility prevails ;—deep coma shuts up the senses, and destroys the power of voluntary motion ;—the respiration becomes difficult, or the melancholy sound of the apoplectic stertor, salutes our ears :—our fears must be great ;—our hopes but few. *Dum spirat sperabimus,*

however, should still be our motto ; and those applications which remain in our power, should be used with as much assiduity as though a brighter prospect was before us. By such persevering, though almost hopeless attention, the writer has seen more than one snatched from the very jaws of death, and restored to their friends, and the world, after the grave seemed open to receive them.



## TREATMENT.

Having described the nature of the disease, and the derangement which it produces in the different functions. Having acknowledged our ignorance of its causes ; described some of the signs by which it is to be distinguished from other diseases, and those from which our judgment of its termination is to be formed. We shall now proceed to point out the mode of treatment best adapted to its cure.

Though we have declared ourselves ignorant of the causes ; yet we consider it evident from the symptoms, that the principal seat of the disease is in the brain and nerves. This, we think, appears from the delirium and coma, which almost always attend ; from the dilatation and contraction of the pupils, the dimness and loss of sight, the depravation of taste ; the frequent nausea and puking, while the contents of the stomach do not appear to be morbidly affected ; from the severe pains in the head ; from the numbness which creeps over the surface, and the torpid insensibility which pervades the whole system. It is likewise evident that *debility and great prostration of vital energy*, are the enemies with which we have to contend.

The first, the great, I had almost said the only, indication of cure, is *to support the powers of life*.

We must endeavour, by all possible means, to raise the patient from the prostrate state in which disease has placed him, and to hold him up while the enemy passes by.

The best mode of answering this intention, it is conceived, is by a nutritious diet, and a proper use of ton-

ic, cordial and stimulating medicines. The writer is very sensible that a difference of opinion exists upon this subject. He is fully aware, of the popular clamour which has been raised in this and some other places, against the kind of medicines which he has mentioned. That to stimulate, and to murder, are by many considered almost as synonymous terms. He is sensible that many very respectable physicians in many parts of the country, who have never had an opportunity to see the disease, or to become acquainted with its nature, have had their fears excited, with respect to the practice, which has been generally adopted in the counties of Hartford and Litchfield. But he likewise believes, that nine tenths of the physicians who have been conversant with the disease, will agree in opinion, that the mode of practice at which he has just hinted, and upon which he will soon enlarge, is the only one which can be depended upon.

The popular prejudices against the practice now in question, to which we have alluded, have arisen from different causes. The fears of some have been excited by the improper and injudicious use, which has doubtless in some cases, been made of stimulants. As however, there are no medicines, which are not liable to abuse; such abuse ought not to lead us to condemn them, when properly administered. The prejudices of a much greater number have arisen from their ignorance of the disease, and the false conceptions which they get from the name. With the idea of fever, mankind almost universally connect the ideas of a hot burning skin, a hard, tense pulse, &c. That a person in this situation, as they falsely suppose those labouring under this disease to be, should be refused cold water, and other cooling drinks, and treated with wine, brandy, &c; strikes them, and not without reason, with peculiar dread. All that is required of persons of this description, who know neither the nature of diseases, nor their proper remedies; and who are under no obligation to know either, is, that they would keep within the bounds of decency in their remarks; that they would refrain from stigmatizing their physicians with the odious

names of manslaughterers and murderers ;—that they would allow a candid hearing to their statements of facts ; and whatever they may think of their medical abilities, give that credence to their characters as men of honesty, veracity and the common feelings of humanity, to which their past conduct in life entitles them.

Soliciting pardon for the above digression, which circumstances seemed to require ; the writer will proceed to a further consideration of the treatment of the disease in question. By painful observation, he knows the nature and symptoms of the disease ; by close attention to the operation of various medicine, he knows their various effects. And while he endeavours to write with that modesty, which becomes a young man, he will do it with that confidence, which naturally inspires the man, who has not only the opinions of the most experienced, but the evidence of his own senses for his authority.

Upon the first appearance of this new and formidable disease, as is common in similar cases, various opinions were entertained respecting it, and various modes of treatment were adopted. Physicians generally, it is believed, had recourse to evacuations, as a part or the whole of the curative process. In some cases emetics, in some cathartics, in others both were administered, unaccompanied by other medicine. In other cases, after the alimentary canal had been emptied, by one or both of these evacuations, wine, bark, and other tonics and stimulants were resorted to. The desired effect, however, did not attend either of these courses. Others had recourse to the lancet, for though the pulse was found feeble and depressed ; it was supposed that this depression might proceed from congestion and over distention of the vessels, that upon a part of their contents being let out, re-action might ensue. Some upon finding that the desired effect did not take place, that the pulse, instead of rising, sunk still lower after a moderate bleeding, laid aside their lancets. Others supposing that although one bleeding appeared to be injurious, yet, as is stated to be sometimes the case in the plague and yellow fever, a

repetition of it might produce a different effect, continued to use them ; and some even carried it so far, that several patients died under the operation. Such were the first modes of practice, and such were the results. Finding that the symptoms indicated a great and uncommon degree of debility ; that no advantage was derived from evacuations, but that, on the contrary, they tended to sink the patient still lower, they were laid aside. And upon a person's being taken with the disease, an immediate resort was had to stimulants, and upon these, the principal dependance was placed to effect a cure ; evacuants being used only as nature seemed to call for them in the course of disease. This mode of practice was found to be more safe and efficacious than any other. It is the one, which we with confidence recommend, as the best yet discovered, and the details of which we now give.

Every person will be sensible that no mode of practice can be governed by fixed and invariable rules ; general rules only can be adopted, which allow of exceptions and variations. The practice in any particular cases must be influenced, by the grade of disease,—by its combinations,—by the particular constitution and habits of the patient, and a variety of other circumstances. But although in all diseases, the difference of cases may require, that there should be a difference in their treatment ; there is likewise in all diseases, one great and leading object to be kept in view ; an object which arises from the nature of the disease. In the disease under consideration, *this object* is, as we have stated in our indication of cure, TO SUPPORT THE VITAL ENERGY, TO RAISE THE PATIENT FROM HIS DEPRESSED STATE, AND TO HOLD HIM UP TILL DISEASE PASSES OFF.

The best mode of answering this intention, we have stated to be, by a proper use of a nutritious diet, and of tonic, cordial, and stimulating medicines. The quantity of these medicines, which is necessary to do this *must* be given, whether it be a mild sinapism, and a glass of peppermint water, or a *most liberal* use of blisters, opium, wine and ardent spirit. In some ca-

ses it requires but a small quantity. In others the capacity of the stomach to retain them, must be our only guide. I have seen a few glasses of tea, made from the mentha pulegium, or of light wine whey, accompanied by a few drops of laudanum, remove the disease. And I have seen a delicate female take more than a quart of French brandy in the course of 8 hours, accompanied by a grain and a half of opium every two hours. At 11 o'clock A. M. when this course was commenced, she lay in a comatose state, cold and senseless, her skin dry, and the action in the radial arteries so feeble that it was difficult to say whether the pulse beat or not. A constant hiccup was supposed by every one to be the harbinger of approaching death. Wine and all the milder stimuli were rejected from her stomach as soon as they were taken; and each turn of puking seemed to bring her still nearer to the grave. Brandy saturated with loaf sugar was now resorted to. It stayed upon the stomach,—removed the hiccup,—brought back the vital heat,—unlocked the senses and increased the energy of the pulse. And at sunset, after having taken the enormous quantity of brandy and opium above mentioned, she exhibited no signs of intoxication, was calm and rational, had a good pulse, and soft moist skin. To keep her in this state, however, a very liberal use of opium and brandy was found necessary, for a number of days, and should we mention the quantity which she actually took, our account would hardly gain credit. It is more than 18 months since her illness; she enjoys good health, and her constitution has been better since her sickness, than it was before. This case is mentioned, not as a specimen of general practice, but as a very extreme case, and one which required extreme practice. The writer spent whole days and whole nights by the side of her bed, and he is fully satisfied, that great as was the quantity of stimuli which she took, she had not too much, and that under any other course of practice, she must inevitably have gone down to the grave.

The kinds of stimuli which we would recommend, may be divided into *External* and *Internal*. The

former are, heat applied by means of hot bricks, or stones, or blocks of wood boiled, bottles or bladders of hot water, hot flannels dry or wrung out of hot water.\* Sinapisms or rubefacients to the feet and limbs, blister to the limbs, stomach and head.

The internal stimuli are hot soup well seasoned, hot teas made from pennyroyal, or other aromatic herbs, with or without the addition of spirit; essence of peppermint, bottled cider, wine whey; clear wine, milk punch, brandy, geneva, and old spirit, the one which the patient likes best, or which sets the best on his stomach, to be given clear or diluted; distilled cordials of any kind, peruvian bark, opium, or laudanum, sub muriate of mercury, in small doses, camphor, ether, musk, arsenite of potash. Any or all of these medicines are to be given as the case may require.

When a person is attacked with the disease, let him be immediately put into a warm bed, let the sinapisms and some of the warm applications mentioned above, be applied externally. Let the hot teas, the peppermint, and either wine or ardent spirit, clear, or in some of their modifications, together with opium, be given in such quantities as the urgency of the case may require. *The body must be got warm, the skin moist, and the energy of the pulse restored; or THE LIFE OF THE PATIENT IS GONE.*

If you can once get a universal warmth and moisture of the surface, hopes may be entertained, that with sufficient care, the patient may be saved. The quantity and the quality of the medicines to be administered, and the time which they are to be continued, must depend altogether upon the mildness or violence of the attack, and upon the yielding or obstinate nature of the symptoms. In the mild cases, the lighter stimuli, as the aromatic teas, peppermint, wine whey, &c. accompanied by external applications, may be sufficient. In more violent cases, more powerful rem-

\* Some direct that aromatic herbs, or branches of hemlock, should be boiled in the water; but it is conceived equal benefit will be derived from simple water.

edies will be required. When the pulse is once raised, and vital energy restored, a sufficient quantity of stimuli must be given to keep them up. If wine answers the purpose, and if it suits the stomach, it is always preferred to ardent spirits, as it contains more nourishment. In many cases, however, it is not strong enough, and in many where it would be sufficiently powerful, the acid which it contains disagrees with the stomach, and occasions puking; on which account, it is very often necessary to have recourse to ardent spirit. Those cases where puking is constant, and the stomach rejects all medicine, are truly alarming. Frequently, however, clear brandy will check the puking, and stay upon the stomach, when every thing else is rejected. Hot wine, spirit, and other liquors will stay, when cold are rejected. The addition of spices, as cinnamon, cloves, mace, &c. will cause them to stay, when they will otherwise be thrown off. If, however, stimulants cannot be kept upon the stomach, by any of these means, or if the patient's throat is paralytic, or if he is in that profound state of coma, which prevents deglutition; though the case is almost desperate, yet it is not absolutely hopeless. We must now place our chief dependance upon external heat, blisters and injections. A blister upon the stomach, sometimes checks puking, a blister upon the head sometimes relieves coma. Let the patient have by injection a tea spoon full of laudanum, in half a gill of soup, once in two hours. I have known more than one life saved in this way. However hopeless the situation of our patient appear, nothing short of death should cause us to relax our attention,

Numbers, lying in a deep coma, which prevented the administration of internal medicine, have been roused for a moment, by thrusting a feather, dipped in the volatile spirits of ammonia, up the nostrils. By taking advantage of this momentary revival, and throwing stimuli into the stomach, their lives have been preserved. Others have been roused by a large dose of the sulphate of zinc, or of copper being introduced into the stomach. Injections of balsam of copaivi, or of

some other stimulating, or acrid substance, thrown up the rectum, have likewise, sometimes, succeeded in interrupting the profoundness of coma, to such a degree that medicine might be introduced into the stomach.

When stimulants are immediately rejected from the stomach, by vomiting, advantage is sometimes derived from changing the kind, from brandy to geneva, or old spirit. In some cases where a free use of wine or ardent spirit appeared absolutely necessary; the patient, after having taken considerable, became averse to them. The taste became odious, and they were thrown back the moment they entered the throat. In such cases it was found useful to let cold water be held in the mouth, immediately before taking the medicine, and to rinse the mouth with it immediately after without permitting the water to be swallowed, for, as was before observed, nothing tended so much to derange the stomach and produce vomiting as water, and other cooling drinks. I have, in several instances, seen a tea spoon full of cold water instantaneously produce the most violent and distressing vomiting, which could not be controuled for several hours, and during which, life became almost extinct. If the patient craves cold water, and it does not distress the stomach, or occasion puking, I would by no means object to his having it in reasonable quantity. In cases of the aversion to medicine, and consequent rejection of it above alluded to, a phial of volatile spirits of hartshorn, camphor, lavender, or any of the essential oils, the odour of which was pleasant to the patient, being applied to the nostrils, at the time of exhibiting the medicine, had sometimes a good effect. Persons laboring under delirium, will at times, obstinately refuse all medicine. In some of these cases, soft persuasion succeeds; in others an authoritative command is obeyed. In many cases, the patient lying in a torpid, half insensible state, will spit the medicine out of the mouth. In such cases, perseverance is necessary, and if the trial is often repeated, and the medicine poured into the throat from a spoon placed over the tongue, it will often be success-

ful. By close attention to these means, and such other expedients as the judgment of the practitioner shall point out; he may frequently succeed in restoring his patient, from a situation which seems to threaten speedy death.

While making a free use of wine, brandy, &c. we should at the same time, if the stomach will by any means receive it, be administering soup, made from chicken, veal, mutton, or beef, and richly seasoned with peppers and the savoury herbs. This is a very important part of the process, and ought by no means to be neglected.

After we have succeeded in raising the excitement; have increased the temperature, restored the pulse, and given new energy to the system, we shall find a continued, but a more moderate use of stimulants, necessary to maintain our ground. We are therefore to diminish the quantity of the diffusible, and to increase that of the more permanent stimuli; to give less wine, brandy, &c. and more soup. In general, the stomach soon begins to crave something more solid than soup; oysters, beef stake, cold ham, or neats tongue are received with peculiar relish. Often have I seen convalescents, when they had hardly strength enough to raise themselves in bed, make a hearty meal of the abovementioned articles, which were received with great satisfaction, sat well upon the stomach, and were well digested and assimilated. Having, as we increased the quantity of nourishment, diminished that of the diffusible stimuli, till it is entirely laid a side; the patient, with the blessing of heaven, will soon be restored to perfect health.

We shall now proceed to notice more particularly, several medicines, which we have hitherto but slightly mentioned.

**OPIUM**, either pure or in the form of laudanum, was found a most excellent stimulant in every stage of this disease. The best manner of exhibiting it, appeared to be in some small doses often repeated, so that the system should be constantly under a gentle influence from it. It tended to relieve pain, increase the excite-

ment, and remove delirium and stupor. The necessary dose varied according to the mildness or violence of the symptoms, from 10 drops of laudanum every four hours, to 30 drops every 2 hours. In those cases of the disease especially, which commenced with sudden and violent delirium, this medicine exceeded all others in its beneficial effects, and tended more certainly to controul the symptoms. In such cases, however, the dose required was often large, but when exhibited with great freedom, it produced the happiest and most striking effects. See case III. When this medicine cannot be introduced into the stomach, or cannot be retained when introduced, very happy effects may be produced by administering it in the form of an enema.

PERUVIAN BARK was exhibited in every stage of the disease, in the form of tincture, decoction and in substance. In the first stages it is doubtful, whether much benefit was derived from it, owing perhaps to the difficulty of making it stay upon the stomach in sufficient quantity. In the latter and convalescing stages, it was found a very useful medicine. A decoction with spices was the most pleasant and agreeable way of administering it.

BLISTERS were very useful, they were applied with great freedom to the limbs, and almost every part of the body. As a local remedy, they tended to stimulate and excite the parts to which they were applied. As a general remedy, they were, likewise, very beneficial. As we before observed, when applied to the stomach, they often tended to alleviate and stay the vomiting, which was one of the most distressing and dangerous symptoms.

When applied across the head, they sometimes tended to diminish coma and stupor. They never produced stranguary, although the surface was nearly covered with them. They were rarely troublesome, frequently very agreeable to the patient. In some of the very violent cases we were deprived of the benefit of them; for such was the torpidity of the patients that a plaster strongly impregnated with cantharides would have no

more effect than a piece of clean paper. Such cases commonly terminated in death.

CAMPHOR, united with opium, in some instances, appeared to have a good effect.

SUB MURIATE OF MERCURY with opium, or given by itself, in such doses as to act as a stimulant without moving the bowels, was very useful.

With respect to ETHER and MUSK, the writer can say but little. The latter he has never seen exhibited in a case of the disease. From the former, he has never seen any very striking effect. The greater part of the cases, however, in which he has seen it exhibited, were of the most formidable kind and the patient in a dying state.

ARSENITE OF POTASH, or Fowler's mineral solution. This medicine was first exhibited in this disease by Drs. Danielson and Mann, of Medfield, in Massachusetts. Their account of its effects I beg leave to repeat in their own words. After stating the appearance and symptoms of the disease, which agree with the foregoing account, except as it respects the heat of the skin, which with them was much increased in the first stages of the disease, they state, that "at first, it was thought adviseable to evacuate the stomach and bowels, and to exhibit bark and wine as speedily and freely as possible. This mode was followed in the three first cases that received medical advice. In all which it was found ineffectual; the patient seemed invariably to sink faster after each evacuation, and the stimulating powers of the bark and wine, were found to be either too feeble or too slow in action to produce any good effect.

"In case 5th, the attack was more gradual, and the symptoms more mild, than any which preceded or followed it. Convinced not only of the inefficacy but of the absolute injury of evacuations, in those cases which had gone before, it was determined to lose no time in exhibiting évacuants, but to commence the stimulating process immediately: accordingly the child (aged 3 years) was directed to get cal. 3 grs. gum opii. 1-2 gr. mixed, once every three hours; bark

and wine in as large quantities as the stomach would bear. This method was followed for several days, until she had taken an hundred grains of calomel. Notwithstanding the liberality with which the medicine was introduced, the mouth was not affected, nor any purging produced. The extremities were blistered largely : and the child was frequently immersed in a warm decoction of white oak bark, for ten or fifteen minutes. The length of time which this child continued, gave us some hope of recovery, as her life was prolonged eleven days from the attack, when she failed in the same manner as the others had done. Whether it was owing to the mildness of the attack, the peculiarity of the constitution, or the peculiar treatment employed in this case, which prolonged her existence, we cannot determine ; this, however, is certain, that the 6th case, a child of two years old, of a robust and healthy constitution, failed in twenty six hours, under the same mode of treatment.

“ In the 7th case, affusion of cold water was added to the above treatment, with a like want of success, as the child lived only twenty seven hours from the accession of the disease. In the two following, it was thought adviseable to assist the natural efforts to puke, with an infusion of camomile flowers, and to discharge the contents of the rectum by a clyster ; after which turp. min. æth. ammon musk, blistering the whole head, embrocating the extremities with spt. terelinth. spt. sal. am. tinc. canthar. mixed, were tried, and found alike unavailing.

“ In the last case, a child of 15 months old, on account of the *very violent pulsation* discovered at the fontanel, about an ounce of blood was taken from the jugular vein : the effect was unfortunate ; the child seemed to fail faster, even from this small depletion, and died within twelve hours from the attack.

“ Two days after this last fatal case, we were called to visit a female child, aged 3 years and four months, which case was so distinctly marked that scarcely a ray of hope existed that the issue would be favorable ; and all who have witnessed the effects of this terrific

malady, viewed this child, as it were, in the article of death, her symptoms being almost as violent as any, and more so than some of the preceding cases. As the means which we had hitherto used had uniformly failed us, we thought ourselves justified in leaving them and trusting wholly to Fowler's mineral solution and wine; accordingly the child got, in about three fourths of an hour after the commencement of the disease, *two drops* of the solution in a table spoon full of wine, and in half an hour she ceased complaining of pain, became more lively, and in fact the only remaining symptoms of disease were a very small, quick, and irregular pulse, accompanied with a dull heavy appearance of the eyes. After the exhibition of the medicine, she was directed to get one drop every two hours, and to take wine freely. This course was continued for 18 hours succeeding the attack, during which time the child seemed free from pain, and got a tolerable nights rest. The second day—child evidently better, and had some appetite; pulse still remarkably small, and had been, after a small evacuation from the bowels, quite imperceptible at the wrist; eyes still dull; some medicine, gradually diminishing in quantity, was continued for five days, at which time, and not before, had the pulse regained a healthy standard, the eyes their usual vivacity, and the patient was considered out of danger, if not entirely well. Since this we have had three or four other cases, in all of which we have placed our whole reliance on the *solution* and are happy to have it in our power to say, that from a similar exhibition of this heroic medicine, all our patients have recovered."

Soon after the disease appeared in Hartford, some of our physicians having gone through similar courses of practice with the gentlemen of Medfield, with similar success, like them, resorted to the arsenite. From that time to the present, its use has been continued; and though it has not been sufficient in all cases, to conquer the King of Terrors, still it has appeared to be a safe, and very useful medicine, and in many cases, the most happy effects have evidently been produced

by it. See cases I. and II. It must be given in small doses. Though at the first exhibition of the medicine, in a case of great depression, it may be necessary to give several drops. Yet as a general rule, it is conceived that doses of one or at most two drops, given once in 2 hours, or if the case seems to require it once an hour, is the best mode of exhibiting it. This medicine tends to increase the excitement, it often in the course of a few minutes produces a very pleasant sensation of warmth through the whole system; and tends more than any other medicine to remove the cold and singular sensation at the stomach, which has been mentioned as being so peculiarly distressing.

We have been more particular in noticing this medicine, on account of the popular clamour which has been raised against it. This article having been but little used in Connecticut, for any other purpose than that of destroying animal life; prejudices very naturally rose against it, when applied for the purpose of saving it. We are very sensible that arsenic, in an over-dose, is a poisonous drug. But are we, on this account, to give up a valuable medicine? If this be the case, we may at once bid adieu to opium, antimony, mercury, and a great variety of the best and most useful drugs; for these articles, given in too large quantities, are likewise poisonous. We shall take no further notice of this idle clamour, as all who have any acquaintance with the history of medicine, well know, that though arsenic has been little used as a medicine, in the state of Connecticut; yet in many of our sister states, and through a great part of Europe, it is an important assistant to the healing art, and in the hands of a judicious physician, is as safe an article as any in the *materia medica*.

While speaking of particular medicines, it may not be improper to notice the *Gases*. The *Nitrous Oxyd Gas*, is the only one, which, to the knowledge of the writer, has been exhibited in this disease. From the singularly, animating and stimulating effect which this wonderful agent has upon the human system, without any consequent debility, it was hoped it might prove a

useful medicine in this disease. It was accordingly tried in two cases in this city. In the first case, two or three bags were exhibited at different times; it appeared for a moment, to increase the force of the pulse but had no permanent good effect. The 2d case was one of those reported at the end of this treatise, No. 5. The patient was in a state of profound coma. A bag was applied to the mouth and the nostrils being closed, she was obliged to inhale it. The effect was discouraging, for a few moments she seemed to be sinking into death, but soon returned to the same state which she had been in before it was exhibited. No further trial was made. Is it not probable, that oxygen gas might have a more beneficial effect? We are inclined to answer in the affirmative and are determined, should opportunity present, to make the experiment.

#### EVACUATIONS.

Having noticed those medicines upon which dependance is placed to effect a cure, we shall proceed to offer some remarks upon those, which in the course of every disease, must become necessary to a greater or less degree. These are such as evacuate the alimentary canal.

In the course of this treatise we have several times hinted at this subject, and objected to the use of evacuations, as a part of the cure of the disease under consideration.

We shall now proceed to give our opinion more explicitly upon this subject. We pretend not to say that there are no cases partaking of the nature of this disease in which evacuations may be used to advantage. A physician in prescribing for his patient, ought always to be guided, by the symptoms of his disease. Whenever we find a patient, let his disease be called by whatever name it may, whose symptoms indicate an accumulation of bile, or other morbid matter in his stomach or bowels, let an emetic or cathartic, be administered, provided, that, according to our best judgment, he has strength enough to endure the operation.

It is a well known fact that whenever a disease becomes epidemical in a place, all other diseases appear

ing, at the same time and place, generally partake, more or less of the nature of the epidemic. And we do not dispute that when the disease in question prevails, there may be many cases partaking of the nature, and exhibiting some of the symptoms, where evacuations may be useful and absolutely necessary. Such combinations, such, if we may so call them, spurious cases of the disease, are to be treated according to their peculiar symptoms, but they are not to determine the mode of practice in cases which differ essentially from themselves.

We would by no means say that a foul stomach, or disordered bowels, may not accompany or be combined with this disease. But we *do say*, and that with the *greatest confidence*, that they are not the cause of it, that they have no particular connection with it, and that in serious well marked cases of the disease, they are rarely found. Whenever they do occur they are to be considered as accidental circumstances, arising from proximate causes different from those which originate the disease. They are, therefore, to have their due influence in regulating our treatment, of the particular cases in which they occur; but they are to have no influence in forming our indications for the cure of the general disease.

At the commencement of this head we observed, That in the course of all diseases, evacuations, to a greater or less degree, become necessary. We now apply this remark, to the particular disease, which we are considering; and proceed to point out, at what time, and under what circumstances, they are to be administered. And first we observe, that in all pure, unmixed, severe attacks of the disease, evacuations of no kind are admissible, until the energy of the system has been in some degree restored;—until the patient has been in some measure raised from that state of deep depression, to which he is generally brought. Until this is done, the symptoms do not demand evacuations, and fatal experience has proved not only their inutility, but their hurtful tendency.

The action of the heart is diminished, the blood

flows too feebly in its channels ; and even in cases where there was more energy in the pulse than is usual in this disease, after a small quantity of the precious fluid had been taken away, the remainder has soon ceased to flow. The contents of the stomach and bowels are in a natural, healthy state ; and more cases than one can be pointed out where death has taken place in consequence of their being too rudely emptied.

But although in the cases of which we are now speaking, evacuations in the early stages, are thus useless and dangerous, yet unless the patient is taken off by speedy death, the time must and will come, when they become necessary. We have already pointed out the means by which we are to endeavour to raise our patient from his low estate. This being accomplished ; nature being in some degree relieved from the debility under which she laboured, again endeavours to pursue her natural functions, and calls for our assistance to open the alvine passages ; and her call must be obeyed. The time when we may safely proceed to move the bowels, will be various in different cases. In some, it may be done on the second day, generally as early as the third, in some, however, not till the fourth, the fifth, and even the sixth. This must be determined by the judgment of the practitioner. But whenever he does proceed, let him do it with the greatest caution. Let him remember that the reed is bruised ; that the flax but just begins to smoke. Let him remember that though nature requires assistance, she likewise requires, that it be administered with a gentle hand, perhaps an enema, may be all the aid she wants, or should a cathartic be thought adviseable, let him avoid all drastic drugs, and administer a mild and gentle laxative. Having administered the medicine, let him carefully watch its operation, and should he find it going too far, let it be immediately stayed by an anodyne injection, and let the patient's strength be supported by a more free use of such cordial invigorating medicines, as have previously been found suitable to his case. We are thus particular upon this subject, on account of the *great, and uncommon depression*, which frequently

succeeds evacuations in this disease. By proceeding too hastily, or too harshly to their use, we are often in danger of losing all the ground we have previously gained, and jeopardizing the life of our patient.

We proceed to observe 2dly, That in lighter cases of the disease, where the powers of life are not so suddenly or so greatly prostrated, less danger is to be apprehended from evacuations ; still, however, we should be upon our guard, for even in these cases, by administering them with a heedless hand, we may increase the power of disease, or render the powers of nature less able to resist it.

In those mild cases of disease where there is no great depression, an emetic may be prescribed in the first place, to be followed by stimulants, of such kind and in such quantity, as the case may require. For though there be no morbid matter in the stomach, still an emetic, if the patient has vigour enough to bear it without sinking too low, may, by exciting the coats of the stomach, have a stimulating and beneficial effect upon the whole system, and it is often a good mean of promoting a diaphoresis.

We have already observed, that in those cases, where the usual symptoms of this disease are accompanied by those of morbid matter in the alimentary canal, or when any other combination of diseases exist, variations in the treatment may become necessary. What these variations are, the particular symptoms will point out to the judicious practitioner. We now observe further, that whenever the disease has prevailed in this part of the country, it has generally at first raged with violence, afterwards degenerated into a milder disease, and assumed something of a bilious type. This alteration has generally taken place, as warm weather commenced. When the disease takes this form, evacuations, especially emetics, become more safe and more necessary, and though stimulants are still required, they are to be used in less quantity.

## CASES.

We shall now proceed to give a statement of several cases, by which the variations of the symptoms, and the treatment will be exhibited.

Case 1.—A delicate slender female aged 18, subject to nervous head ache, of which she had frequently severe turns, was taken on the 15th of February 1809, with a very violent and excruciating pain in the head, it was supposed by her friends to be one of her usual turns, though much more severe than common. In the latter part of the day, she took a small portion of mild laxative physic. The morning of the 16th, bro't no relief from her pains, her disease still supposed to be the nervous head-ach. At 11 o'clock, A. M.—her physic, not having operated, was assisted by an injection, which produced an evacuation, in every respect natural and healthy. Immediately upon the operation, her strength failed, and she had repeated turns of fainting. The nature of her disease now became apparent, her pulse very feeble, her arms and feet cold, she complained much of a cold, faint, deadly feeling about the upper orifice of her stomach, one hand and one foot became numb. The hand which was numb, assumed a livid hue and a severe pain attacked the wrist, the pain soon extended up the arm and was followed by the numbness, and in the course of half an hour her whole arm was paralytic, and in this state it remained, without feeling and without the power of motion, for six or seven days. Her tongue at this time, was in a very torpid state, so that it was with great difficulty she could get it out of the mouth, or return it when out. Immediately after her first turn of fainting, which succeeded the operation of the physic, her mother, having no camphor, or volatile spirit in the house, proposed to her to take some brandy. The young lady having never been accustomed to the use of spirits, objected, saying it would both strangle her, and get her drunk; upon being urged, she drank half a glass. After taking it, she told her mother she had mistaken the bottle, it had no strength, and tasted as pleasantly as wine. At one o'clock P. M. a regular course of medicine was

commenced, sinapisms were applied to her feet, and she got 20 drops of laudanum in a glass of wine, in 15 minutes after a second glass of wine, and in 15 minutes more, half a glass of brandy. These medicines, as she expressed it, "seemed to go to the spot," in some measure, removed the deadly feeling from her stomach, produced some degree of warmth in her limbs and raised her pulse. At the expiration of two hours, 20 drops more of laudanum were administered in half a glass of brandy, with very good effect. The laudanum and the brandy, diluted with an equal quantity of hot water, were repeated twice in the course of the evening, and a blister applied to the affected arm. The same medicines were repeated several times in the course of the night.

17th. Her pulse was better than the day before, and a universal warmth pervaded the surface, and it was determined to keep them so, by a steady, but mild course of stimuli. She was accordingly put upon a stated use of laudanum, 20 drops once in four hours, occasionally increasing it when her pains were violent. Blisters were applied to both her arms, and lower limbs. Whenever her pulse flagged, and she had turns of faintness and distress at stomach, (generally 7 or 8 times in the course of twenty four hours) hot brandy sling was administered; and if one glass did not give relief, two generally would. Wine was entirely layed aside, as it had no effect in mitigating her symptoms, but on the contrary, added to her distress. Cold water, or any light drink, distressed her much. When her turns of faintness and distress, were coming on, she would beg for hot brandy and water, and drink it with the greatest eagerness. Her nourishment was coffee and soup, and these she would not take, unless they were made so hot, that they could not be taken by a person in health.

18th. Symptoms much the same as yesterday, tongue assuming a yellow colour; same practice pursued.

19th. Not quite so well; turns of faintness and distress more frequent, pulse more frequent and feeble;

tongue becoming brown ; a great degree of numbness over the whole surface ; great nausea and reaching to puke. Warm water was given her, but nothing of consequence was thrown off : laudanum and brandy continued as usual ; arsenite of potash, one drop each hour ; a blister to the stomach and additional ones to the limbs. She would beg her friends to pinch and scratch her flesh, and declared the places where blisters were drawing, to feel the best of any part of her body. The arsenite of potash had a very happy effect, and tended greatly to relieve and prevent her distress. She emphatically called it the balsam of life.

20th. Symptoms better, pulse fuller and slower, pain and faintness less ; quantity of brandy diminished, arsenite continued ; decoction of bark administered, but not suiting the stomach, was laid aside.

21st. Symptoms generally continue better, wine this day suits the stomach better than brandy and is given in lieu of it ; bowels moved by repeated small doses of calomel, the evacuation perfectly natural.

22d. Symptoms much as yesterday, wine, &c. continued.

23d. Had a fright last night concerning her mother, who is now sick in another room, in consequence of which, she is not so well. Her reason somewhat impaired through the day, turns of distress greater and more frequent. Wine does not answer the purpose and recourse is again had to brandy.

24th. All the symptoms better. Wine again suits the stomach, and brandy is laid aside ; had a natural healthy evacuation without the assistance of physic.

25th. Continues better, tongue cleaning off, animal food begins to relish, carbuncles and pustules, are appearing in different parts.

For several days after this, she drank her quart of Madeira a day, eat freely of animal food, and convalesced rapidly. The wine was gradually changed for porter and bottled cider, and in a very short time, she returned to her usual diet.

Twelve months have elapsed since her sickness. She enjoys good health, her constitution is much better

than before her sickness, and the turns of nervous head-ach, to which she was subject, have entirely left her.

Case II.—A lad aged 7 years, was taken on the 5th of February 1809, at 3 o'clock in the morning. His first symptoms were pain in the head, accompanied with an ague, which was soon followed by nausea and puking; pulse frequent, and extremely feeble; extremities cold, and the whole surface of the body below the natural temperature. The body was wrapped in warm flannel, and other warm applications were made. Wine whey and laudanum were administered, but immediately rejected from the stomach. Wine, porter, brandy, gin and old spirit, in their various modifications were tried with no better success, each of them was rejected, as soon as taken. Anodyne injections were given, and blisters applied to the stomach and limbs. At 12 o'clock at noon, things remained in this discouraging situation, nothing could be made to stay upon the stomach, the child continued to sink, and it appeared as if the feeble remains of life would soon become extinct. At this time recourse was had to the arsenite of potash, two drops were given and stayed upon the stomach; in half an hour, the same dose was repeated, and evidently produced the most beneficial effects;—composed the stomach,—raised the temperature of the body—increased the action of the pulse, and invigorated the whole system. All other medicines, except anodyne injections, were laid aside, and the arsenite regularly administered, 2 drops each half hour, through the afternoon. The same medicine was continued through the night in doses of one drop each hour. In the course of the night, the stomach also received and retained a small quantity of brandy strongly spiced with cloves.

6th. Child still very low, pulse through the day quite feeble, at times extremely so, heat of the surface below the natural temperature, extremities at times quite cold, pain in the head severe, reason much impaired, at times inclined to a comatose state. An anodyne injection was given, warm external applications continued, and additional blisters applied to the limbs; one drop

of the arsenite, and half a glass of spiced brandy, were administered each hour, together with as much well seasoned chicken soup, as the stomach would receive. These medicines had a good effect, and relieved the violence of the symptoms. In the evening, pulse better, surface warmer and moist, pain and distress in the same degree abated, reason restored, and no comatose symptoms : the brandy was now changed for old Madeira, a glass of which, and one drop of the arsenite were given every other hour alternately.

7th. Symptoms much as last evening. Wine, arsenite and soup continued, and the bowels appearing somewhat distended, a mild laxative dose of senna, rhubarb and manna was administered. The physic not having operated, was in the evening assisted by an injection, which produced an evacuation perfectly natural in its appearance. Immediately upon the operation, child sunk much, for several minutes the pulse was not perceptible at the wrists, and for several hours was very feeble. An anodyne injection was immediately given, and the quantity of wine increased.

8th. Pulse and temperature restored to the pitch which they were before the evacuation, but still considerably below that of health : same treatment as yesterday, excepting the physic and injection.

9th. Same symptoms and same practice. In the evening, the bowels being again distended, an operative injection was given, which produced another healthy evacuation. Patient sunk some after it, but not so much as after the first.

10th. Continues feeble and low ; wine administered freely, the arsenite continued, but in less quantity, laudanum in small doses introduced into the stomach.\*

11th. State of the patient much the same ; practice likewise the same, with the addition of the simple tincture of bark and local applications, for the aphthæ which appeared in the fauces.

\* Laudanum, not agreeing with the stomach, had hitherto been administered only by injection.

From this time the child continued to convalesce slowly, and the diffusible were gradually changed for more permanent stimuli, till he was restored to perfect health.

Case III.—A young mechanic aged 19, of firm constitution and in perfect health, while engaged in playing a game of morris, was instantly struck blind. The blindness was immediately succeeded by nausea, which caused him to puke three or four times; he then complained of a sharp pain shooting through his temples and stomach, and in five minutes from his first attack was completely distracted. This was about 9 o'clock in the evening; a messenger was immediately dispatched for medical assistance, but none was procured until 12 o'clock, at which time he was lying upon the floor, and it required 4 or 5 stout men to hold him in that situation. He had been in this condition from the first moment of his derangement, and had taken no medicine of any kind. The scene was truly an awful one; his clothes were torn from his body, and the men who held him, bore marks of his violence. His distraction was of a kind which exceeds description, and can be conceived of only by those who were eye witnesses of it. He appeared to be in the most excruciating agony, and was constantly endeavoring, either to get away from, or to kill the murderers, who were driving augurs and spikes through his head. His tongue was dry but otherwise natural, his pulse feeble, and so frequent that it appeared to be one continued stream. The case was considered as one, which required powerful remedies, and it was determined to place the principal dependance upon laudanum. He accordingly got 60 drops the first dose, at the expiration of one hour, no alteration appearing, 60 drops more were administered. The same medicine was administered, at intervals, till 4 o'clock, at which time he had taken 280 drops, together with a small quantity of diluted spirit. His pulse was now somewhat slower and not quite so feeble, the violence of his pain appeared to have abated, and his delirium had changed from the raving, to a humourous, playful kind: at times, how-

ever, the pain would shoot through his temples, and for a moment he would be raving. He was now left to the care of his friends, with orders that 30 drops of laudanum should be administered once in 2 hours, unless he became quiet and his symptoms altered. A little after sunrise, he was again visited, when it appeared that the orders had been exceeded, and he had taken from 4 o'clock till that time 200 drops; making in the whole from 12 o'clock till 8, 480 drops of laudanum, the whole of which had been retained upon the stomach. He now lay in his bed, free from pain excepting occasionally, a very light one in his head; he had the perfect exercise of his reason, his tongue was moist, his pulse regular, and in every respect good, excepting that it was yet too feeble. He had no sleepiness, or any other apparent effect of opium, and complained of no indisposition, except a universal soreness, occasioned by the bruises he had given himself the night before, and a great loss of strength. He was ordered a moderate use of wine and laudanum, through the day. The next night, his distraction returned with violence, a physician was sent for but not obtained; in this situation, the lady at whose house he lived, who had seen the effect of laudanum the precedeing night, resorted to the same medicine. She gave him 50 drops, and repeated the dose without effect; she then gave an hundred, and a second hundred, and by this bold practice succeeded, in alleviating the violence of the symptoms, removed his pain and restored him to reason. He was found in the morning by his physician much as he had been the day before. He continued for a number of days feeble and low, with occasional turns of light delirium; but by a stated use of laudanum, wine, or diluted ardent spirit, was at length restored to perfect health.

Case IV.—A young lady aged 15, of delicate constitution, on Friday the 27th of January 1809, a very cold day, rode 30 miles in a sleigh. On Saturday the 28th, complained of having a bad cold, but kept about the house as usual. About 8 o'clock in the evening, after giving directions to a servant to prepare her clothes,

for attending public worship the next day, she retired for the night. As she was going to her chamber, she complained of having a severe pain in her little finger, after she had been in bed a short time, the pain progressed up her arm, and soon reached the head, at which time, she was taken with puking. She being accustomed to turns of the sick head-ach, her servant supposed this to be one of them, and said nothing to the family, but attended upon her through the night, and encouraged her puking, by administering such light diluent drinks as she was accustomed to take in those turns. In the morning the family were alarmed and sent for a physician. He found her in a very low depressed state, the whole surface cold and her pulse hardly perceptible. She spoke but once after he entered the room and sunk immediately into the most profound coma. Warm applications were immediately made to the body, an anodyne injection administered, blisters applied to the head, and other parts, and an attempt made to introduce wine and brandy into the stomach; this however, was found extremely difficult, and but a small quantity was got down. These applications had some effect in increasing the heat, and the energy of the pulse; this effect, however, was only of a temporary nature, and no means which could be applied were sufficient to rouse her from the comatose state; her breathing soon became stertorious and she expired in 27 hours from the first attack. The hand and the arm, in which the pain commenced, were of a black colour, within five minutes from the time she breathed her last.

Case V.—A blooming Miss aged 11 years, was, on account of the sickness of her mother, called home from a neighbouring town, where she had been for a visit of a few weeks. She arrived, on the 20th of February 1809, about 4 o'clock in the afternoon, and continued in perfect health, till 1 o'clock the next day, at which time she dined as usual with the family. Immediately after dinner, she was going up to her mother's chamber; on the stairs she was taken with a severe ague, her teeth began to chatter, and her whole body

appeared in a tremor. She complained of an awful sensation of faintness and coldness at the pit of the stomach, and a peculiarly distressing numbness in one foot and leg. Her eyes looked wild and uncommonly brilliant, her mind was in a flighty state, her extremities cold, her pulse feeble. Fifteen drops of laudanum were given her, in half a glass of brandy, in about half an hour she drank part of another glass of brandy, soon after part of a glass of wine was given her. The wine occasioned immediate puking, which threw off all that she had previously taken, together with her dinner; after this, nothing could be made to stay upon her stomach a moment. In two hours from her first attack, she was comatose and her throat paralytic. Access to her stomach being cut off, those means which were left, by injections and external applications, were most faithfully and assiduously applied, but all in vain. The surface never became warm, the energy of the pulse was never restored, and after 15 hours from the first attack, 13 of which she was in a state of profound coma, she expired, just 5 hours after her mother, who died after 52 hours sickness of the same fatal disease.

The cases which we have noticed, exhibit several different grades of the disease. The first case is considered as a hard one, but one which at the same time was manageable, and the symptoms of which were easily controuled by medicine. In case 2d, the attack was a formidable one, and until arrested by a free use of the arsenite, appeared to be regularly progressing to a speedy, fatal close. Case 3d, exhibited a more distressing spectacle to the spectators, than is often seen. But in most cases, which have come within the observation of the writer, where the symptoms were similar to this, they have yielded more readily to medicine, than some others where the attack appeared less formidable. They have generally, however, required a very free and liberal use of opium. The 4th and 5th cases were of the most malignant kind, and it is believed, were in their very nature fatal. The greater part of the cases, which proved mortal in this city, the last

winter, were of this description. The unhappy victims appeared to be struck with death in the first instance, and when it was discovered that they were seriously indisposed, were beyond the reach of medicine. When such cases occur, they will probably continue to defy the art of man ; but when the disease appears in a less malignant form, it is perhaps as manageable as any other disease of a serious nature.

The writer means not by any thing which he has advanced in this treatise, to justify the extravagances of any mode of practice. While he comes forth with firmness, as an advocate for a free use of cordials and stimulants, in the disease under consideration, he does not pretend but what these medicines may be injudiciously administered ; that in some cases recourse may be had to them too hastily, that in others, they may be administered too long or in too great quantities. While he strenuously insists that evacuants should be used with the greatest caution, he does not deny, that they may be delayed too long. But as we have before observed, so we now repeat, that the abuse of any mode of practice, is not the criterion, by which its merits are to be judged.





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