

THE  
BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. XXXVII. WEDNESDAY, SEPTEMBER 1, 1847.

No. 5.

THE CASES OF FEVER LATELY OBSERVED IN CUMBERLAND, R. I.  
—THEIR SYMPTOMS, NATURE, TREATMENT, &c.

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[Communicated by the Committee of Publication of the Rhode Island Medical Society.]\*

I CONSIDER the disease to be continued fever, a disease of *typhoid type*, characterized by adynamy, local inflammations and congestions—the inflammatory stage being brief, debility and nervous depression coming on at an early period.

During this epidemic, I have seen some very mild cases, presenting the phenomena of the synochus of the British authors. I have witnessed others where typhus was the predominant feature, which answered well to the typhus gravior, or putrid and malignant fever of authors, which has sometimes been called camp fever, jail fever, and by us now ship fever, because it has occurred in camps and jails, and because we think it had its origin in persons who have contracted it on board ships, or conveyed it to us from beyond the Atlantic.

The cases that have fallen under my notice have been attended with the usual precursors of continued fever, such as loathing of food, chills, pains in the head and limbs, weariness, depression, vertigo, frequent pulse and a loose state of the bowels, in the majority of instances.

When the disease is fully established, the pulse rises, the breathing becomes laborious, the tongue is dry (in no case has it been black), the urine high colored, the surface of the body very hot, and in the severer cases there is delirium. If there is no amendment, as soon as the ninth day, in the milder form of the fever, the above symptoms are vastly aggravated; the pulse is from 100 to 120 a minute, the strength fails rapidly, the lips and teeth are glued over with a tenacious sordes, there are frequent dark stools, urine copious and pale. In a day or two this class of patients begin to improve, the fur cleans from the lips and tongue, the bowels retain their contents, the patient becomes conscious, and though the tongue and skin remain dry for some days, the violence of the fever subsides, and general improvement takes place. But in the

\* This communication was addressed, as a private letter, to the Recording Secretary of the Society. It was thought by him sufficiently valuable to be read before the Society at its annual meeting; and has since been, with the writer's consent, placed at the disposal of the Committee of Publication, those slight alterations being made which were necessary to prepare it for the public eye.

more extreme cases all the bad symptoms are aggravated, petechiæ appear, the pulse is from 120 to 140, sometimes it intermits, the diarrhœa is worse, the breath is offensive, subsultus tendinum, picking of the bed-clothes, strabismus, sighing, muttering, insensible evacuations, oppressed breathing and cold extremities, follow in train, and the patient sinks insensibly. In very bad cases, I think, if there is a continual aggravation of the symptoms from the onset to the seventh day, the system has become so exhausted that there is little hope under any circumstances. If there is no amelioration by the ninth or tenth day, the prospect is very dubious, for the disease has made such inroads, and the prostration is so great, that the chance of recovery is almost entirely cut off. The fatal cases generally die during the first nine or ten days. When I speak of the number of days, I refer to the period which has elapsed since the fever has been fixed, which does not include the premonitory stage.

The mode of attack is variable, and its progress irregular, sometimes coming on suddenly, and attaining its height in a short time; or it may be more insidious in its nature, slower in its march, and less violent in its character. We are to be governed, in making out the *prognosis* (in some degree) by the manner of the first invasion. So far as my observation goes, the most severe cases are ushered in by violent and serious symptoms; and, *vice versa*, the milder cases are introduced with signs less violent and alarming. The strongly-marked character of this fever renders our *diagnosis* comparatively easy, especially in the severer forms of the disease; but in those of an opposite type we shall often be somewhat perplexed in determining the precise nature of it, and more so when it is complicated, as it may be, with phrenitis, pneumonia, gastritis, &c.

When I say this disease is continued fever, of typhoid type, I am well aware that I am taking ground adverse to very respectable authority, for very many term it *typhus* fever. A late journal states that the medical faculty of Maryland, at a recent meeting, appointed a special committee to take into consideration the nature of this fever. The results of their deliberations are that the nature and character of the fever are identical with the typhus fever of the British islands, and that it is unlike the disorder which prevails in the United States and in Continental Europe, generally styled *typhoid* fever.

Now I must doubt even the high authority of the faculty of any State, when they come to such direct conclusions in so *short* a time, particularly in giving these opinions on such a "new" subject (for they say that the disease has been hitherto unknown in America, that it is new here, &c.); and these opinions, or their "report," clashing as they do with the extensive researches of Bancroft, Louis, Chomel, and those whose elaborate investigations in pathology entitle them to great credit, are not to be too hastily received.

The *typhus of camps* is termed typhoid fever by MM. Louis and Chomel. They consider them one and the same disease. The *pathological changes of character*, the *nature* and progress of the fever, are the same, and only vary with the intensity of the fever, as they have shown. "The

term *typhoid* fever is preferred by both these authors, as being most applicable to the Protean shapes of the disease, and as reconciling the conflicting names under which it has hitherto been described."

Another reason why we may doubt these crude opinions, is that there do occur in this State fevers so closely resembling those I have seen at the Alms-house, in their external appearance, that they would be considered the same if found in the same establishment. But these cases are not ship fever. I have treated such cases. Last March I was called to see Mrs. S., aged about 30. She had been suddenly seized with fever about twelve hours previous to my first visit. She complained of general pain, rigors and intense headache. Prescribed an emetic of ipecac., cold to the head, and sinapisms to the feet. The next morning I found her suffering from extreme prostration, lying almost insensible, pulse 120. Prescribed stimulants, renewed the sinapisms, applied the same to the ankles, recommended sponging the body with cold water, to cut the hair and keep the head cool. She gradually grew worse; about the ninth day diarrhoea set in, and my friend Dr. Clapp, of Pawtucket, was called in consultation. He found her very feeble, pulse 140, tongue dry, a dark sordes about the teeth, and petechiæ (the typhoid eruption of MM. Louis and Chomel) had appeared. This patient recovered; her fever continuing about two weeks. Had she been an emigrant, her disease might with much propriety have been christened ship fever; but she was a New-England woman, she had not been exposed to contagion, and therefore her fever was typhoid.

About a year ago, I had a case of fever with decidedly putrid symptoms—Miss E., of Sinking Fund Village. My much-esteemed friend, Dr. Usher Parsons, of Providence, saw the patient three times. I know he will concur with me in the opinion that her fever was of a more putrid character than any that he saw at the Asylum in Cumberland, except the case of Mr. Vallet, the Superintendent of that institution, who has since died; and he saw five or six fever patients during his visit to Cumberland. In the case of Miss E. the nervous prostration was great, the typhoid eruption distinct. If this had occurred in the town's poor house, and had the patient lately crossed the Atlantic (*this year*), we might have styled it malignant fever; but it was an American girl, who had been well fed, &c., and she had the disorder before ship fever was known in this country!

With regard to the contagious character of this fever, there can be no doubt that, under certain circumstances, the disease may be contracted by exposure. Persons who go into crowded and ill-ventilated apartments, where the beds and clothing of the patients are filthy, will be in danger of taking the fever. Under the same circumstances they would contract erysipelas, dysentery, &c. The infectious quality of this fever, in my opinion, resides in the room, the beds, the clothing, and the patient. If the room is thoroughly cleaned and ventilated, the clothing frequently changed, and the body of the patient well washed with cool or tepid water daily, I think there will be very little if any danger in visiting those patients in the capacities of physicians, nurses or neighbors. But

if the rooms are crowded and dirty, the beds foul, and the patients neglected, there will be a strong liability of taking the fever in those persons who are daily exposed to the influence of such a vitiated atmosphere. I do not believe this fever to be one, *sui generis*, "derived exclusively from its own *specific cause*, or contagion."

I suppose that many physicians term this typhus fever, without reflecting a moment on the subject. They seem to be governed by impulse, and so they pronounce it contagious. If fifty persons are exposed to a disease, and five of them take it and forty-five escape, the evidence from such an instance would be very strong against its being contagious; yet some would say that the five were infected during this exposure, though a mountain of evidence stood out to the contrary. In the supposed case, the evidence would be on one side forty-five, on the other five. Now if fifty unprotected individuals are exposed to small-pox, the probability is forty-five would have variola, and five might escape; then the proof of its contagiousness would be reversed. This numerical mode of establishing facts is the only correct way to ascertain the truth—it is a sure and direct way when applied on a large scale. Where our materials are limited, we are not so certain of obtaining correct results, but we shall approximate the truth with somewhat deficient materials.

Upon such reasoning do I base my opinion of the non-contagious character of the fever at the Cumberland poor house. At least fifty persons have been exposed to the fever. Of that number, but three have contracted the complaint. (These three might not have been infected; the circumstance of their having the fever may be merely a coincidence.) So at the present writing the evidence of its being non-contagious is as forty-seven to three—greatly against its being a contagious disease.

All I can say more respecting the question of its being *pure typhus*, is, to quote the names of Hunter, Trotter, Blane, Lind, Bancroft and Dewees, who all declare that typhus fever is a disease of winter, or prevalent during the cold seasons, and "is as certainly arrested by hot, or even by warm weather, as yellow fever is by cold weather, or frost," &c. &c. These opinions at once destroy the idea that the fever here is typhus, also that it is contagious, for no one claims the character of contagion for any fever but typhus.

The first case of fever that occurred at the Asylum was that of an Irish girl, who landed at New York about the first of May last. She came to Valley Falls, where she was taken sick soon after her arrival. She informs me that she had a physician, who bled her for "lung fever." After being sick about ten or twelve days, she was brought to the poor house, and was attended by the lamented Dr. A. Knight, who has since died of the fever, which he is supposed to have contracted during his visits there. All I can tell you further of this case is, I am told she was very sick with the "spotted fever." She has been here about six weeks, and is now slowly recovering.

An Irishman, aged about 40, was seized with a fever about the first of May. In a week or so after the attack, he was brought to the Asy-

lum. He was also attended by Dr. Knight, and I understand his case was considered of the same nature as the girl mentioned above. This man had been in America three years. He lodged with one of his countrymen, who I understand has since died. He is very feeble, and will probably die at the poor house of phthisis.

On Monday, the 7th of June, 1847, I was called to see Mrs. Vallet (whose husband had the charge of the farm and of the poor house). Mrs. V. was a slender woman, subject to pain in the stomach and vomiting. She was afflicted with palpitation of the heart and chronic diarrhœa. When I first saw her, she complained of pain in the region of the stomach, in which was tenderness on pressure. She was vomiting continually. Pulse 100, skin dry. She had not been well for three or four days, and she attributed her indisposition to care and unusual exertion. The vomiting and diarrhœa were better about the sixth day after the attack; no tenderness over the epigastrium; the tongue looked very well; she was thirsty at times; pulse intermittent, and she complained of general distress. She died the eighth day. Her mind was perfectly clear to the last. I did not consider her disease ship fever, though the public have got the impression that she died of typhus.

On the 7th of June, Dr. Knight was expected to visit his patients at the poor house. As he did not come, the next day inquiry was made, and it was ascertained that he was sick. Dr. A. Ballou and Dr. U. Parsons saw him. I did not see him, neither do I know anything about the treatment in his case, though I was informed that he bled himself largely at the onset. He died on the 16th of June, the eighth day from the attack.

During my first visit to Mrs. V. I was requested to see Ann, the maid, who was said not to be very well. I found her case to be fever, pulse 100, skin dry, tongue coated and inclined to dryness. She complained of headache, pain in the back and limbs, and had not been well for two days. As it was night, she being in pain and restless, I prescribed a full dose of pulv. Doveri. In the morning, found her in less distress, although she was sure she should die. She had a tolerable night. Prescribed a cathartic, and after its operation she was to take a weak solution of tart. antim. and sul. morph. once in three hours. Next day her tongue was very dry and coated; pulse 120; no delirium. Prescribed a solution of nit. potass. in gum water, so that she took about five grains of the salt every four hours. Her drinks consisted of as much cold water as she desired, weak tea, bread water, gruel, &c. About the seventh day she was much debilitated. She took the gum water with less nitre. On this day Dr. U. Parsons and Dr. A. Ballou saw her. It was suggested that she take small doses of protoch. hyd. and camphor water. The calomel purged her, and was discontinued next morning. Prescribed nourishing drinks, camphor, sal. nitre, small doses of ipecac. and weak rum sling. Her fever continued to rage; pulse was small and frequent; her mouth filled with a thick sordes, but her mind clear, except she was very stupid. On the evening of the tenth day I found her covered from head to foot with a scarlet rash, her skin rough and dry, pulse small. She was now

delirious. Recommended her to drink freely of gum and camphor water, and take a *little* wine. Ann was decidedly better the next morning, and has been rapidly improving ever since.

I have given you the principal treatment in her case, with the exception of the cold ablutions, which were employed in all cases at least twice daily, and in the more severe cases much more frequently. When the head was hot, cold was applied to that part, and sinapisms to the extremities.

Mr. Vallet was indisposed, but on the 7th of June he attended to his ordinary duties. The next day, his wife being sick, he was obliged to look for help. He rode all day, and came home at night much fatigued; had no inclination for food; complained of pain in the bowels and diarrhoea. The next day it was necessary for him to continue his exertions. I was at the house in the evening, and being apprehensive that he would have a fever, I urged him to take medicine, and not expose himself further. He took an emetic of ipecac. that night, also a Dover's powder after its operation. In the morning I found him much prostrated, laboring under all the symptoms of severe typhoid fever. The diarrhoea was no better. Prescribed lime water, boiled flour, gum water, &c., for drinks, and he was to take the following powder once in two or three hours:—Pulv. Doveri, grs. xij.; acet. plumbi, grs. vj. M. Div. into six powders. Next day his symptoms were about as they have been described, except the diarrhoea was not so bad.

June 10th.—Pulse small (130); surface of the body hot; the tongue, which had been moist and white, was now dry and brown. He was delirious. Prescribed a teaspoonful of spts. nitre every three hours, cold to the head, sinapisms to the feet, and recommended his nurse to wash him all over in cold water twice daily. He grew worse. The seventh day of his sickness Dr. U. Parsons saw him. From that time the plan of treatment was of a decidedly stimulating character. It consisted in the free administration of wine whey, carbonate of ammonia, capsicum, quinine, &c. He died on the 17th of June.

Without doubt the exposure that this patient suffered rendered his fever more violent. He "took a sweat," his sister says, and was out the next day in the rain. Mrs. Vallet, mother of the patient, says she lost a son last fall of the same disease. She says their symptoms were alike. The attending physician called the fever typhus, and Dr. Smith, of Sutton, who was called in consultation, said it was the "English typhus fever." She also informs me that the "spots" on them were alike. Now this son was a farmer in Burrilville; it was nearly a year ago; his case, therefore, could not have been ship fever.

Besides those already mentioned, I have had three other cases at the Asylum. The fever was of the same character, but of milder type. The treatment in those cases has been an occasional cathartic, small doses of calomel and antimony, sal. nitre, ipecac., &c.

I have seen several of these mild cases at Manville during the last spring months. Emigrants, who have friends here, have come to this

village soon after landing. The disease has not spread in those families where these emigrants have remained during their sickness.

The *treatment* of this fever must depend altogether on the peculiarities of the case. The type of the disease, the constitution and age of the patient, all have a modifying influence. I have not seen a case that required the lancet or even local bleeding. The most dangerous cases would be aggravated by the abstraction of blood in any way.

Emetics I should think were highly useful at the onset. If there was a strong determination of blood to the head, three or four leeches might be applied with safety, and perhaps advantage, before the emetic is given. I should employ ipecac. in most cases.

Cathartic medicines are proper remedies during the first stage of the fever, but they should be used sparingly. I have found one or two doses of laxative medicine sufficient for most persons in this disorder, unless the bowels were unusually costive.

Diaphoretics are of great service; when there was not much prostration, when the febrile symptoms were considerable, I employed antimony in small doses, either alone or combined with nitre or opium. Or I administered ipecac. with sal. nitre. I often gave the nit. pot., *per se*. I used it in the bad cases with a view to its antiseptic properties. I have made extensive use of the nitrate of potash in typhoid fever, and I esteem it one of our most important remedies. Under its influence, the skin and tongue keep moist, the kidneys are stimulated into action, the pulse is softened, and the burning heat of the body relieved. Nitre is a powerful antiseptic. The medicines mentioned above all have a tendency to loosen the bowels. While using them I have not often found it necessary to give cathartics; on the other hand, I have frequently been obliged to give opium when it could be borne, or some astringent, to prevent too loose a state of the bowels. When the diarrhoea was very troublesome, I used minute doses of opium and lead, alternated with a teaspoonful of spts. nit. dulc.

Blisters I have not thought proper to apply. Sinapisms to the feet and ankles were kept on in most instances.

In the early stage of fever there is much good to be derived from affusions or ablutions. I think many bad cases need no other treatment, after an emetic or cathartic has been given, until the sinking stage comes on, when stimulants will be required, such as wine, quinine, capsicum, ammonia, &c.

The external use of cold water should not be continued too long, nor should the use of stimulants be too early; but as soon as the general febrile heat begins to subside, water should be applied with more caution, and the treatment be a little stimulating. As the surface of the body gets cooler, we should substitute *tepid* for *cold* water, and resort to wine whey, ammonia, &c.

The clothing of the patient should be often changed, the bed-clothes aired, the room ventilated, the floor sprinkled frequently with warm vinegar, and the patient should be kept as quiet as possible.

The chief *prophylactic* measures are cleanliness, free ventilation, absti-

nence from bad food and stimulating drinks, avoiding close rooms and night watchings, having a nourishing diet, and the frequent ablutions of the body in cold water. Cold ablutions are spoken of by various writers as being an important agent of this class. So are fumigations of nitric acid, vinegar, &c. We have had no new cases at the poor house since the house was cleansed, whitewashed, &c.

The poor house is situated on high ground, commanding a view, east and west, of at least a mile each way. The road runs north and south (or nearly in that direction), and descends gradually for the first mile to the south. I know of no pond near it, nor any receptacle of filth. There is no wood-land near. The house is ventilated by means of numerous windows and outside doors, which have been kept open for the last two weeks in most of the rooms. It was not thoroughly cleansed till after I had charge of the patients.

The Selectmen have taken no action on the subject; but the overseer of the poor has provided a hospital at Woonsocket for fever patients (emigrants), and I understand there are two cases of the disease at this hospital.

[Dr. Leonard adds, June 28th, 1847—]

There have no new cases occurred at the poor house, nor on Cumberland Hill, since I wrote, though many have been exposed to the infection.

A ship-load of emigrants was landed at New York last week, and six of the passengers, who had friends at Albion Village, found their way there last Saturday. Two are now sick with what I suppose to be the fever. There are three cases of ship fever at Woonsocket, in the hospital under the care of Dr. Dickinson, of that place. I understand that there are about fifteen cases in all at Woonsocket.

There have been no deaths from ship fever at the poor house, except in the instance of Mr. Vallet; the other patients are doing well.

If this fever is the typhus of British authors, why is it not more contagious? Dr. Marsh, Physician to St. Stephens's Hospital, &c., in his "Observations upon the Origin and Latent Period of Fever," gives several cases in proof of the contagiousness of typhus. In the majority of his cases, the patients had the disease immediately after exposure. "The heavy disagreeable odor arising from a person affected with the disorder," &c., in some instances *instantly* caused headache and rigors, followed by fever; others were seized during the first twenty-four or forty-eight hours after exposure. Twelve cases are reported. In all these the exposed persons were aware that they had caught the infection the moment they inhaled it; most of them fell sick as soon as the next day.

Now, this does not correspond with the appearances and results of the present fever. Those who had the care of Dr. Knight and Mr. Vallet, realized offensive "odors," &c.; but as yet no one has taken the fever, and the long period of three or four weeks has elapsed since a hundred (at least), of both sexes, of all ages and conditions, were exposed to the infection.