

# THE BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. C. — THURSDAY, FEBRUARY 20, 1879. — NO. 8.

---

## LECTURES.

CLINICAL OBSERVATIONS UPON PARALYSIS FOLLOWING  
TYPHOID FEVER; PSEUDO-HYPERTROPHIC MUSCULAR  
PALSY; AMYOTROPHIC UNILATERAL SPINAL SCLERO-  
SIS; AND OTHER CASES AT THE ORTHOPÆDIC HOSPI-  
TAL, PHILADELPHIA.

BY S. WEIR MITCHELL, M. D.

*Paraplegia following Typhoid Fever.* — This young girl presents a very interesting instance of paralysis after one of the essential fevers. Her clinical history is briefly as follows: She is now seventeen years of age. Two years ago she had a decided and protracted attack of typhoid fever. After a tedious illness she was quite weak, and convalescence was necessarily prolonged. She had some convulsive muscular movements in the lower limbs after the fever left her, and she recalls the fact that she vomited very much. Upon attempting to move the inferior extremities she found that they were completely powerless. When she came to us, last spring, the muscles were atrophied and contracted; the knees were semiflexed, and anchylosed in that position by fibrous adhesions. She was immediately put on strychnia, iron, and a liberal diet, while massage and the constant current were daily applied to the affected muscles. The false anchylosis was overcome by force, during etherization, and passive movements, and a Stromeier splint was applied. She had always been exceedingly nervous while under observation. After two months' treatment she was discharged about the 1st of last July, able to walk without assistance. She then left us to go to her home in the country, and to-day returns, according to my request, to report her progress.

I now find that she has all the movements of the limbs, but the range seems to be limited. She does not kick very strongly; we notice that she is getting very nervous under our close observation, and has a general hysterical tremor. She can walk without aid, and tells us that her limbs are a great deal stronger, and have kept on steadily improving since I saw her last. Her strength must, indeed, be much increased to enable her to stand without assistance, and with the knees partially

flexed, as they are at present. The Stromeier splint she still wears at night, and the gymnastic exercise of legs, on the Swedish movement plan, is still kept up. She has manifestly improved, but from her pallor it is evident that she still needs tonics. In combination with iron I am very apt to give one of the three valerianates — either of iron, zinc, or strychnia — to cases of general nervousness, or hysteria. Perhaps the following prescription will answer the purpose, and be more suitable for hospital patients, as it is comparatively inexpensive : —

R̄ Zinci valerianatis,

Ferri tartratis . . . . . āā gr. ij.

M. Ft. pil. Sig. Capiat ter in die.

Her mother says that the patient is troubled with constipation. For this I recommend that she take each morning, on rising, a tumblerful of water containing in solution a teaspoonful of common salt. The water must be cold, or it will be apt to nauseate. This simple aperient I frequently employ in cases of constipation, and generally find it efficient. There is a great advantage in starting the bowels and in keeping them in a soluble condition, particularly in cases of nervous disorder in women, as it sometimes clears up obscure points in the case, and at all events eliminates one source of error.

The hysterical element in this patient, which has been previously remarked, has complicated both the diagnosis and the treatment. There is evidently a spinal affection present, in all probability connected with some degeneration of the cells of the grey columns of the anterior cornua. It is an organic affection painted upon a hysterical background.

*Pseudo-Hypertrophic Muscular Paralysis.* — The appearance of unusual physical development seen in this girl, more particularly observed in the lower extremities, is not accompanied by a corresponding increase in muscular power, but, on the contrary, in her attempts to use the limbs in walking it is only too evident that there is a positive impairment of strength. This affection began insidiously when she was about fourteen years old, and, to all appearances, in perfect health. She first noticed a slight difficulty in trying to stand still; she could not steady herself, but swayed backward and forward when the feet were together, — a trouble, apparently, of muscular coördination. This symptom became more aggravated, and soon, whenever she essayed to walk, she would stagger from side to side, had difficulty in checking herself, and constantly ran against articles of furniture or whatever was in her path. She had festination in walking, and in going across a room would miscalculate the distance and come violently in contact with whatever object she tried to reach. This symptom, she tells us, is still present; the rocking and staggering have not grown any worse. She was also very apt to drop anything that she attempted to hold or carry in her hands. There was no numbness, and no pain in the limbs.



left to that great discoverer, the future ; but I will remind you in passing that I have described areolar tissue hypertrophies owing to injuries of nerve trunks, which latter may therefore cause either wasting or overgrowth. The combination of circumstances causing the latter must be rare. They may possibly be made up of a grouping of constitutional states and local nerve troubles. This seemingly simple problem we have not yet solved, and the deeper and darker one of the causation of progressive intra-muscular areolar hypertrophy is also unsolved.

All treatment is useless here. The disease has, however, a slow march, and sometimes halts, as one may do who, having an inevitable staircase to descend, lingers on certain steps a while. I have found it useful to put on apparatus mechanically to support the spine and legs, when the time came that locomotion unaided was about to end.

*Amyotrophic Unilateral Spinal Paralysis.* — This man, thirty-six years of age, presents a peculiar paralysis of the right leg and arm, evidently due to a spinal trouble. For his history and treatment I must turn to the notes. He first applied for treatment September 27, 1878. He then told us that he had worked in lead paint for twenty years. He positively denied venereal infection. Three years before, in the spring of 1875, he had been attacked, without assignable cause, with pain, which began in the right elbow, and ran up the back of the arm to the shoulder, through the shoulder blade, and down again. The pains were sudden, and of a sharp, acute character. This malady continued for two years without much change, but one year before I saw him he had been compelled to give up work on account of pain and weakness in the arm. The muscles of the shoulder blade were decidedly atrophied. There was a slight rhythmic tremor of the right hand when at rest, but it was not increased by efforts at voluntary motion of the part. He never had any other symptoms of lead poisoning, and he did not exhibit at any time a blue line on the gums. He was somewhat dyspeptic, but his general health and strength were good. Walking gave rise to trembling of the shoulders and pectoral muscles, and caused the tremor in the hand to become greater and oscillatory (pendulum movement). He also complained of shooting pains through the head, and stated that he always had headache after eating. He occasionally had tinnitus aurium. In talking he felt as if something were catching him in the throat ; there seemed to be a laryngeal spasm which affected his speech. While standing, there appeared, upon pressure with the finger, to be a tension involving all the muscles of the right side of the body, but varying in amount. This was increased when he walked, and, owing to this muscular contraction, he was drawn over somewhat to the right, and the great toe and the next two toes on the right foot were drawn towards the sole. The ribs upon the right side were pulled together, as if the intercostal muscles were affected by

spasm. When the abdominal or thoracic muscles were struck on the right side there was an unusual contraction of the fibres; this local spasm was not well marked on the left side. The right foot dragged in walking. The right thumb was drawn into the palm of the hand, but this relaxed when the patient went to bed; while walking, however, the thumb muscles contracted so firmly that the nails frequently cut the palm of the hand.

The urine was not albuminous. O. D. Ophthalmoscopic examination showed deep physiological cupping with pulsation of veins. Cribiform fascia sharply defined; outlines of disk somewhat indistinct. Relation of veins to arteries normal. O. S. Cupping deeper, otherwise the same as the preceding. He had no difficulty in swallowing, but had been subject to pyrosis and vomiting.

He has been taking, since October 4th, elixir quiniæ, ferri, et strychniæ phosphatis, a drachm thrice daily; with cod-liver oil, a tablespoonful, after meals. On the 25th of October, it was noted that his digestion had improved. The grip of both hands was alike, and satisfactory as tested by the dynamometer. The trembling was much less marked. The right leg did not drag in walking. The muscles of the right side now gradually lost their condition of tonic contraction, and the large tremor had disappeared by November 1st. He had so greatly improved that he could read the newspaper, which before was rendered impossible by the shaking of the paper by the hands, the left arm being shaken by the active movements of the right. He said that he felt very well until he ate his meals, after which he was liable to regurgitation, headache, and pain across the shoulders.

We find now that the improvement has been permanent, and that he really seems to be getting well.

This case, you perceive, was marked by a slight and quite equal general atrophy confined to one side, but most marked in the arm, neck, and shoulder; by distinct tonic contraction of numerous muscle-groups; by exaggerated reflex motility. Except in the fact of being one-sided, the case corresponds to the picture of amyotrophic lateral sclerosis drawn by Charcot's master hand. There is, of course, no reason why the disease may not exist on one side only, but I never saw such a case before.

There is, also, or was, fibrillar muscular contractions, and a fine, constant tremor, not always found in this disease, while the conversion of this trembling into large, sweeping, pendulum-like swings of the right arm during walking, and then only, is also curious and most unusual. We are at once reminded that the swing of the arms during walking is normal, and that therefore these singular convulsive exaggerations of a natural act are, so to speak, provided for in our locomotor mechanism, and are of the nature of one of the forms of functional spasm, which I

described very fully in the *American Journal of the Medical Sciences*, October, 1876.

I can hardly regret that the great gain made by our patient should have partly spoiled the interesting clinical picture of disease he presented but lately. Even yet there is much to notice. You observe as he stands that the facial muscles on the right side are drawn into triple curves about the right angle of the mouth; that the occipito-frontalis is slightly contracted all the time, so as to give a queer, one-sided expression of surprise. At the same time the head is bent to the right, the right shoulder pulled down, the trunk flexed to the right, and even bent on the pelvis. Note also the slight halt on the right leg; the general wasting of the arm, face, and shoulder; the absence as yet of like loss in the leg. The tremor of the arm is very visible, but walking no longer exaggerates it into large spasm, as it once did.

There can, I think, be no doubt that this case is due to disease both of the lateral columns and of the gray matter of the anterior columns, and that the permanent basis of the trouble is a sclerotic alteration of portions of these regions; neither have we any reason founded on experience to hope in such a case for any result but a gradual extension and deepening of the disease, until death ends the long torment after years of sickness.

We have here, it is true, a case of one-sided disease, an unusual form of the malady, and also there does seem to have been a gain so great as to shake one's confidence in the absoluteness of the diagnosis. There are, however, two points to which I would like to call your attention: The man was thin, feeble, anæmic, ill fed. He was ordered a full and systematic diet, and was given malt extract, cod-liver oil, iron, and arsenic. With the gain in general health there has been a very remarkable improvement in the symptoms believed to be due to the spinal malady, and this is, I think, a not uncommon case, and is competent to explain almost all of the gain by treatment which we are able to show in these terrible sclerotic alterations of the spinal cord and brain. I do not mean to assert that sclerotic changes in the cord are never cured, but I incline to think that when once well developed the most we dare hope for is an arrest of the disease, and I certainly as yet have never seen a cure in a typical case of advanced posterior sclerosis. I am even willing to go further than this and to say that while I have seen posterior sclerosis (locomotor ataxia) — and I use this as the type — arrested, and have seen it remain unaltered for long periods, reaching in one case to twenty years, I have never been assured that such arrests were due to the therapeutic means employed. The appearance of an exceptional therapeutic success in single cases must always awaken doubt. Yet the very fact that such arrests do occur spontaneously must ever encourage us to hope that we shall some day learn to control the condi-

tions which must be present in order to insure the permanent checking of the malady.

I have alluded above to the fact that attention to the general health offers the best chances of helping sclerosis in all its forms, and that on this account more is to be hoped from the use of change of air, cod-liver oil, malt extract, and the mechanical tonics, such as massage and electricity, than from drugs supposed to have a more specific value.

Another reason for the false encouragement to be had at times out of the clinical history of sclerosis of the cord, and especially out of locomotor ataxia, is the fact that besides the definite sclerosis, with the equally definite mischiefs it causes, there is another coincident element of trouble which varies. This is probably a congestive state, and may with reason be supposed to exist in and about the sclerotic patches, and perhaps elsewhere. I think this element of ataxic cases has been quite too much overlooked, but to it we must turn for an explanation of the sudden increase or lessening of symptoms, and to the false appearance of gain in many cases of posterior sclerosis. I have over and over seen cases in which there was for a time complete ataxy of both arms and hands, so that no useful motion was possible, and I have seen this condition almost entirely disappear for months or even years. In one gentleman, now in my charge, this loss and gain has taken place twice, and each time there has been left a larger residuum of permanent mischief.

Whatever be the varying element of trouble in posterior sclerosis it is influenced largely by exercise, which, whenever it is extreme, is apt to be hurtful to such cases. This is why some ataxics are always best on rising from the night's sleep, and why, especially in the earlier stages of ataxia, long periods of absolute rest are so useful. I have already described elsewhere the influence of repose on some of the phenomena of this disease, and it is perhaps enough, here, to remind you that I have over and over seen the neuralgia of this disease pass away permanently, or for long periods, owing to rest in bed for two months.

---

## A CASE OF INVERSION OF THE UTERUS OF NINE MONTHS' STANDING.<sup>1</sup>

BY E. H. STEVENS, M. D., CAMBRIDGE.

MRS. C., aged twenty-two years, French Canadian, was first seen by me September 18, 1876, when she presented the following history: She menstruated for the first time at the age of thirteen years, and continued regular and in robust health. She married at the age of twenty. Eight months afterwards she became pregnant, and went to full term. She first began to have pains January 18, 1876. The pains

<sup>1</sup> Read before the Boston Society for Medical Observation, October 7, 1878.