ON

PARALYSIS OF THE EXTENSORS.

BY

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THE object of the present paper is to illustrate by the few cases that have come under observation a rare form of paralysis, which is sometimes confounded with diseases of a totally different nature, and hitherto, as far as the writer is aware, has escaped description.

Until recently no opportunity was afforded by a fatal case of ascertaining the morbid alterations in this interesting form of disease, and as diagnosis was consequently verified by post-mortem examination in only one instance it seemed advisable to confine the remarks to be made to a simple description of the cases under notice, trusting to future observations for a more accurate portrait of the disease.

In the form of paralysis here illustrated the extensors of the hands and feet are paralysed, either or both forms of paralysis being present, and a patient is easily recognised by the dropped hands and analogous condition of the feet. This condition may be preceded by hyperæsthesia, or associated with some altered sensation which will serve to distinguish this form of disease from lead poisoning. In none of the cases observed was any history of lead contamination elicited, nor was there any evidence of the presence of lead by the blue line round the gums.

On looking over the post-mortem registers of St. George's Hospital, which have been carefully kept since 1845, I have only been able to find one instance of this disease, recorded by Dr. H. W. Fuller, in 1846. The accurate description there given leaves little doubt in my mind that the case was similar to those that are here recorded, and though unfortunately the spinal cord was not examined, the case is quoted as entered in the register.

The first case that attracted notice was that of a man, æt. 41, admitted March 28, 1866. He was a pork butcher, a large corpulent man of full habit. He had been accustomed to live freely. The history he gave was that he had suffered from pains in the limbs attributed to rheumatism, two months before admission. Two weeks before admission he was suffering from decided pain in the knees and feet, which was followed by dropping of the hands. There was no history of lead poisoning, and no blue line on the gums. On admission he had all the appearance of a free liver: very stout; face congested and dusky; no evidence of gout, nor of rheumatism; the urine was not albuminous. He complained of aching pain in the hands and feet; there was paralysis of the extensors of the hands, which were flexed but lax, and loss of power in the feet. It was not noticed in this case that the feet were affected in the same way as the hands. He was dull and heavy, but he answered questions intelligently, and there was no symptom to lead to the conclusion that the brain was diseased.

He was ordered to take ʒj of the Liq. Hyd. Bichlor. three times a day, which seemed to produce some improvement of the general state of health. But the paralysis was progressive, and the pains gave place to numbness affecting the lower extremities. Subsequently strychnia was injected subcutaneously, but this caused so much tingling that the patient refused to submit to it again, and he was ultimately sent out incurable.

A woman, æt. 46, was admitted in May, 1866, with a

history that she had been suffering from paralysis of the legs and feet, which had come on suddenly four weeks before admission. It was ascertained that she had been lately drinking very freely; she was a very corpulent woman of full habit. She was quite helpless, could not walk nor feed herself, and on admission there was paralysis of the extensors of both hands; the feet were also affected, but it was not noticed that the extensors only were affected. No history of lead poisoning, and no signs of lead in the gums. She complained of pains in the head and about the legs, and there was numbness of the upper extremities. She was extremely low spirited. She was treated with the biniodide of mercury, strychnia injections, and the tincture of nuxvomica, and she improved slightly, so far indeed as to feed herself, though with much difficulty. She was four months in the hospital, and dismissed as incurable.

A woman, æt. 38, was admitted into St. George's Hospital on the 9th October, 1867, with the following history and symptoms. She had enjoyed good health until attacked with pains three months before admission. These pains were attributed to rheumatism. There was no evidence of either rheumatism or gout. She confessed to having been a tippler of ale and gin, and for some time had slept but little. When seen she was apparently on the verge of delirium tremens; was very nervous, tremulous, and jocular in manner: the face was dusky, the facial veins much congested; the urine was carefully examined, but found natural; the tongue was clean. She was not in a state to give any accurate account of herself; but her speech was natural and her answers coherent. She was delirious at night, and was very noisy, requiring large doses of opium to keep her quiet. After she had been in the hospital three weeks, it was observed that she was losing the power of grasping; she was very sensitive and would cry out hysterically when touched, subsequently both hands became dropped; they were perfectly lax, and there was no contraction of any of the muscles; the hands fell by their weight in the form of extension or flexion, in

whatever way they were placed, and they were quite useless to perform any of the ordinary actions. The prominent parts of the palms were very red, and erythematous; there was a little more power in the right hand than the left; there was well-marked hyperæsthesia of both upper extremities.

She could at this time move her legs, but was very helpless, and lay in bed motionless and taking very little interest in anything about her unless roused, when she would talk jocularly and laugh in an excited manner.

No history of lead poisoning was obtained in this case, and there was no evidence of lead about the gums.

A few days afterwards the feet were observed to be affected in a similar way as the hands. The feet were turned inwards and the soles slightly upwards, and there was no power of motion in the feet. The same hyperæsthesia and the same erythematous blush were observed here as in the hands. Galvanism was applied and found to produce considerable pain, but no increase of power. She continued in the hospital for nearly four months. She became weaker, and more helpless, and much thinner, and was finally sent out as incurable. When she went out the hands and feet were in the condition above described, there was slight wasting of the interosseous muscles, the hyperæsthetic condition being not so marked. She had no power of moving the left leg, and but little of moving the right. The urine was not albuminous; the pulse was 80 in the minute.

A woman, æt. 32, was admitted October 13, with symptoms of paraplegia. The history she gave was that for the last three months she had been drinking freely, having been much distressed at the loss of a child. For seven weeks she had been getting weak in her legs. On admission there was no diminution of sensibility in the legs, but there was some loss of power; the feet were turned in and the soles upwards; there was some redness of the soles; the left foot was more affected than the right; there was a condition of general

weakness, and her manner was excited, her face rather congested and dusky. She passed her water under her. Subsequently she complained of weakness of the hands, but no dropping of the wrists was observed. No lead was observed about the gums. She improved with strychnia and galvanism sufficiently to walk without help, but the feet were a good deal turned in and the sole was put down quite flat; no albumen was found in the urine.

A young girl was admitted on April 18, 1868, with the following history. She was a prostitute (æ. 19), accustomed to drink a great deal, and her companion mentioned that she had been used to take considerable quantities of spirits at a draught. The history the patient gave of her illness was, that seven months before admission she caught cold, and this was followed by loss of power in the hands, which shook when she tried to lift anything. In three weeks she lost all power in the hands, and there was also some loss of power in the legs, but she was able to walk even up to the 9th of April. One month before admission she had two fits of an epileptic character. When she was admitted her hands were dropped and useless; her face was full and dusky, there was nothing hysterical in her manner, but she had the appearance of a debauchee; there was complete sensibility of the hands and no loss of heat; the feet were useless, the soles being turned inwards; there was slight loss of feeling in them, pulse 100. Tongue slightly furred; urine not albuminous. The catamenia had ceased altogether for seven months.

On the 16th she was observed to become very irritable and cross in the evening, and at 1 a.m. on the 16th she had a fit of convulsions lasting four hours, after which she lay in a comatose state, rolling her head on the pillow; breathing stertorous; pupils both equal and small. She moved the left leg when the soles were tickled, and there was very slight reflex action in the right foot. The left arm was apparently quite paralysed, but she moved the right arm. She subsequently had another fit on the 26th, in which she died.

At the post-mortem examination, which was made by Mr. Pick, the following notes were taken :

The examination was made $20\frac{1}{2}$ hours after death.

The body was natural in appearance.

The lungs were œdematous, the bronchi congested.

The left side of the heart was contracted and empty, the right dilated and full ; the valves and structure were natural.

All the abdominal viscera were perfectly healthy.

There were a number of soft condylomatous growths just within the vagina.

No tubercle was detected, though carefully looked for.

The brain throughout was very pale, and was also rather wet, a considerable amount of serum dripping from it on section, but with this exception it was quite natural.

On exposing the spinal cord it was found to be softened in two places ; the upper lesion was opposite the sixth cervical, the lower opposite the twelfth dorsal. These lesions were rounded and formed a limited swelling (the size of a threepenny piece $\frac{4}{8}$ inch $\times$ $\frac{3}{8}$) on the posterior columns with a depression in the centre of the swelling, the seat of considerable softening. The upper portion in the cervical region was laid open, the lower was put aside and hardened in chromic acid. The spinal cord, elsewhere, seemed to be in its natural condition.

The extensor and flexor muscles of the forearm were examined, and were found to be in a very early stage of fatty degeneration ; the muscular substance was rather paler than natural, and less striated than in a healthy condition, but no fat-globules were found in the tissue, and it was quite clear that the disease was not primary in the muscles.

The musculo-spiral and the median nerves were examined, and the former was found to be considerably attenuated and much smaller than the median, which was of normal size. The peroneal nerve was also found much diminished in size.

The following case was admitted on July 22, 1846, under Dr. Wilson : the notes of which are due to Dr. Fuller. The patient, a woman, æt. 40, had been ailing for two years,

during which time she had felt weak and languid, and had suffered from pain in the head. Nothing more than these general symptoms was observed until eight or nine months ago, when she began to lose power over the extensors of the hands, and the general symptoms of dyspepsia were somewhat aggravated. She continued to work up to eight weeks ago, when a bilious attack supervened. The palsy of the extensors of the hands became more complete. The general symptoms since that time have been much more severe, so much so indeed that she had hardly been a day without vomiting.

On admission her complexion and the conjunctivæ were somewhat yellow. She had dropped hands as if from lead poison, but no history of the kind could be obtained, and there was no blue line along the gums. The right hand was rather more affected than the left, which in the first instance was the worst of the two, but had partially recovered after being bandaged up in tea lead. Her tongue was clean but fissured, urine abundant, acid, sp. gr. 1008, albuminous. She suffered from constant vomiting. On the 25th she suffered from diarrhœa; the bowels continued relaxed until 3rd of August, when in the afternoon she had a violent fit of an epileptic character which left her in a comatose state, and apparently moribund. Eight fits of the same character occurred in the course of the day.

The next day, after having passed a very restless night, talking incoherently, and frequently attempting to get out of bed, she became much quieter, but was extremely weak, her skin cold and clammy, and she spoke incoherently. Her excretions were all passed involuntarily. After lying in a comatose condition for some time, she expired on the morning of the 7th of August.

The body was examined by Mr. Prescott Hewitt.

The cranium contained a small quantity of fluid in the subarachnoid tissues; the brain was anæmic, but otherwise quite healthy. The kidneys were granular and small. The spinal cord seems not to have been examined.