PSEUDÒ-SCLEROSIS.

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IN March of 1887, Wm. B., aged 49, presented himself in my out-patient room. The patient was stout; the face was pale except for dark-coloured blotches on the cheeks. The skin had a greasy and unhealthy appearance; the hair was grey, but plentiful. The patient walked with an unsteady gait, the legs shaking as they were moved. When he was sitting up, the head and neck showed a continuous movement, which bowed the head downwards, and twisted the chin to the right, the occiput to the left. This movement, although continuous, was not regular in rhythm, or in extent. If the head were lightly supported, it almost, but not quite, disappeared; if the patient lay down so as to be entirely at rest, no movement was perceptible. The slightest attempt at voluntary movement of the head, or voluntary support of the head, or an attempt at speech, provoked an exaggerated and more rapid movement—always, however, of the same kind, and in the same direction. The lips were very tremulous when the patient spoke, but quiet at other times. The voice was shaky, the syllables were markedly scanned, pronounced slowly, and somewhat drawled; the words, however, were distinct, the pitch of the voice was monotonous. The hands and arms showed a general tremor even when the patient was at rest; afterwards, when the patient was admitted into hospital, it was noticed that a slight amount of this tremor persisted during sleep. The tremor was slow, not very fine, and not purposeful; the fingers had no special tremor, but moved with the whole hand, and even with the forearm. The tremor was greatly exaggerated when voluntary movement was attempted. The

patient could not carry a cup to his mouth without spilling the contents; on attempting to do so, the involuntary movements, which were somewhat increased when the cup was held at arm's length, became more violent and a little more rapid, as the cup was brought nearer the mouth, until, when the cup almost touched the lips, the movement of the hand and of the head, which was brought down to meet it, were so great, that nearly the whole of the fluid in the cup was spilled before it could be got into the mouth. It was noted, however, that the movements were not at all choreic in character, and the hand was throughout carried in the desired direction, albeit in shaky fashion. The tremor was equally marked in both hands. When at rest, no tremor was observed in the legs; but when the patient attempted to rise, the muscles of the thigh were seen to shake, and the trunk was for a time unsteady; there was no sign of ataxia in the gait.

The grasp of the hands was feeble, and a general weakness was found on examining the principal muscles individually. There was no loss of sensation; there was no muscular atrophy.

The knee-jerks were greatly exaggerated; slight ankle-clonus could be elicited on the right, but not on the left side. The reflexes at the wrist and elbow were excessive, and jaw-reflex was also obtained. The superficial reflexes were normal.

The patient was somewhat lachrymose, but usually the expression of the face was apathetic; the mental state was childish. He complained of headache within an area about the size of the palm of the hand, at the top of the head. The pupils were dilated, and reacted very slowly both to light and accommodation; there was no nystagmus, no strabismus, and no diplopia. The ocular movements were carried out slowly, but this seemed to be from the stupid mental state rather than from inability to move the muscles. The right optic disc was white, the edges not well marked; but the blood-vessels were distinct; the left optic disc was irregular in form, but otherwise normal. No sign of optic neuritis was discernible; smell, taste, and hearing were normal.

The tongue was tremulous when protruded. It was red, scarred, bald and glossy in some places, covered with thick

white flakes in others. The appetite was good, and thirst was complained of; the abdominal organs were normal. In the lungs, signs of emphysema were observed. The pulse was large, soft, regular and full, and beat 68 times in the minute.

There was some pain on passing urine, and the stream was small; the urine was amber-coloured, clear, sp. gr. 1028, faintly acid, contained neither albumen nor sugar, and deposited phosphates on standing.

The temperature continued normal throughout his stay in the hospital.

The patient was born in London, but had lived most of his life in other parts of the country, and served in India and the West Indies for a time as a soldier. He was never intemperate, and retired from the army after fifteen years' service with a small pension and several good-conduct badges. Latterly he had been very badly off, thinly clad, and short of food, and had slept out in the streets for three nights during the fortnight before admission. The reason of his poverty was that the tremor of his hands prevented him getting work.

The family history was of no importance. He had suffered from gonorrhœa and syphilis, the latter 22 years ago. He was attacked by yellow fever in the West Indies; after this his hair turned white, and has remained so. He did not think he was treated with mercury for the syphilis, and certainly was never salivated.

The patient first noticed that he had a twitching at the back of the neck, with sometimes trembling of the hands, in 1876 (when he was nearly forty years of age). It gradually became worse, until in 1878 the medical staff of the Royal Marine Artillery discharged him as unfit for service. The disease progressed, and the patient stated that first the neck and head, then the arms and then the hands, were affected. Only about five months before admission had the legs commenced to be affected, and caused him to walk unsteadily. He had at different times applied for treatment at various hospitals, and been more or less relieved.

The patient was kept at rest in bed, and was given iodide of potassium in 10-grain doses, with a draught of bromide of potassium and chloral hydrate at bedtime.

On March 30th he seemed much better. The tremors were of much less extent, the sleep quieter, and the headache less. On April 14th the step was quite steady, very little shaking of the head could be perceived, and the lips were no longer tremulous; the speech had lost its shaky character, but was still slow, monotonous, and somewhat scanned. No tremor of the hands was now observed when at rest, and but little when voluntary motion was attempted. The patient was able to feed himself and drink liquids without spilling them. The knee-jerks were lively, but there was no ankle clonus. The mental state was still childish, but the patient was no longer so emotional as when admitted. On April the 21st he went to a convalescent home for six weeks, and I heard from him whilst there to the effect that tremor had almost entirely left him.

I have since been informed that some time after leaving the Convalescent Home he was admitted into the Union Infirmary, with a return of symptoms resembling those for which he was treated in St. Mary's. This time, however, he was relieved to a certain extent without the use of iodide of potassium.

Naturally in this case the diagnosis was perplexing. One thought in the first place that the extreme hardships which the patient had had of late to undergo might have produced the symptoms. It is occasionally seen that simple malnutrition of the nervous centres from starvation will cause tremor, and excessive reflexes, but the history in this case was clear that the tremor had induced the hardships, and in consequence of it the patient had been dismissed from the army. Mercurial tremor may produce an assemblage of symptoms very like that described, but this cause was carefully eliminated. Although the case was lacking in many of the symptoms of disseminated sclérosis, and although some of the symptoms found are not met with in the latter disorder, yet this was the disease which was most forcibly suggested on examining the patient. The persistence of the tremor resembled that of paralysis agitans, but the tremor in this disorder is finer, purposeful, does not affect the head and neck muscles, and moreover does not show the exaggeration on voluntary movement described

above. On the other hand, a diagnosis of disseminated sclerosis did not seem to be altogether permissible. As mentioned above, the symptomatology did not entirely correspond with that of disseminated sclerosis, but nevertheless in the latter disorder the symptoms in different cases are variable, within somewhat wide limits. The age of the patient when the first symptom appeared was very late for the commencement of disseminated sclerosis, and also we should have expected after twelve years a much more pronounced degree of the disorder at the time when he came under observation. Yet these are only probabilities. Disseminated sclerosis may, in rare instances, first show its symptoms at a very late period of life. Strümpell, for instance,¹ mentions that he has observed a case in a man 60 years of age, and confirmed his diagnosis by an autopsy. Again, disseminated sclerosis may sometimes pursue a very latent course. Nevertheless, balancing the probabilities of the whole case, I diagnosed, not disseminated sclerosis, but a functional disorder simulating it. This I think was confirmed by the progress of the case. It is difficult to believe that marked symptoms due to organic lesion could show such rapid amelioration as was here observed. In the earlier stages of disseminated sclerosis more or less improvement may be sometimes observed, but after twelve years' duration of the symptoms we could hardly consider any patient to be in an early stage. Syphilis we know may simulate the symptoms of general paralysis of the insane, and yet the recovery of the patient marks the difference between the two affections. Thinking of this I was at first inclined in the case reported to ascribe to syphilis the rôle of producing the symptoms, although, I believed, without the presence of a local lesion. For this, however, there was no real ground, and the second recovery, of which I have heard, without the use of iodide of potassium, would be opposed to such a view.

Westphal in 1883² described two cases in which during life many of the symptoms of disseminated cerebro-spinal sclerosis were present, and yet after death no lesion whatever was found. For purposes of comparison, I may be permitted

¹ *Specielle Pathologie und Therapie* IIa., p. 189.

² *Archiv f. Psychiatrie*, xiv. p. 87.

to give a condensed abstract of the exhaustive reports on these two cases.

The duration of the disease was in the first case nine, and in the second ten years from the appearance of the first symptoms. In both cases there was motor weakness of numerous muscles of the limbs and trunk, sometimes with spastic phenomena. In both cases the movements of the head were slow, tremulous, and interfered with by involuntary movements of the neck muscles. The gait was spastic-paralytic; the spastic affection was almost entirely confined to the muscles of the lower limbs; passive movements met with more or less resistance, and there was usually tremor on voluntary movement. In the upper extremities there was motor weakness, and also marked tremor on voluntary movement. In both cases the knee-jerks were present, and also Westphal's paradoxical contraction. Sensory symptoms were almost entirely absent in both cases, and the bladder and rectum were unaffected. In the first case the speech resembled that of bulbar paralysis in not being sharply articulated; but in the second case it was more scanning, without any affection of the sharpness of articulation; in both it was monotonous.

There was no nystagmus or paresis of the eye muscles, although in one case double vision had been complained of before the patient came under observation. The movements of the eyes were, however, very slow, and performed with difficulty. This symptom, Westphal remarks, is occasionally found in paralysis agitans, when the muscles become stiff, but has not been observed in multiple sclerosis. The expression of the face was stupid, the face-muscles in one of the cases trembled during speech.

Headache and dizziness were complained of, and in both cases there were psychic disorders. In the first case there was general intellectual weakness; in the second a childish manner and excessive irritability. In this latter case curious attacks occurred in which consciousness was lost, and hemiplegia of the right half of the body without affection of the facial muscles followed. Other paralytic phenomena of both sides with diminution of sensibility were observed later on.

The course of both cases was extremely chronic ; the symptoms occasionally showing marked and rapid improvement. Death in the second case occurred suddenly in the night, and in the first resulted from a scorbutic condition.

At the autopsies, no change whatever, neither in the central nervous system, nor in the peripheric nerves, could be discovered in the body of either patient.

There are, it is clear, many points of difference between these cases reported by Westphal and my own, yet there are also many points of resemblance. All three presented many symptoms of disseminated sclerosis, and from a perusal of Westphal's paper, I take it that he did not wish to describe these two cases as illustrative types of a new disease. To quote the conclusion with which Westphal ends his paper: "There is a general neurosis, which one may possibly, if not very happily term pseudo-sclerosis, and which can be separated clinically from disseminated sclerosis, neither by its symptoms nor its course." I have therefore ventured to place my case in this category, seeing that it much resembles disseminated sclerosis in its symptoms, and yet, for reasons which I have already fully detailed, it seems to me probable that no organic lesion exists. Naturally, however, the criticism will be made—and, I admit, justly—that in the absence of an autopsy such a diagnosis is very uncertain.