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ON

THE EARLY RECOGNITION OF GENERAL PARALYSIS OF THE INSANE, AND THE RELATIONS BETWEEN THIS DISEASE, TABES DORSALIS, AND DISSEMINATED SCLEROSIS.

Delivered at a Meeting of the North London District of the Metropolitan Counties Branch of the British Medical Association.

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AT the last examination for the Membership of the Royal College of Physicians I was concerned in framing one of the written questions, the exact wording of which I have forgotten, but which in effect was, to invite a brief description of the clinical features of general paralysis of the insane, and a brief discussion of the differential diagnosis between this disease and tabes dorsalis on the one hand, and disseminated sclerosis on the other. The written answers were so far good that they showed that the candidates had generally a sufficient and reasonably accurate knowledge of the symptoms of these several affections. But there were not more than one or two out of the whole number who seemed to have any suspicion that there was any affinity or similarity between the diseases thus brought into juxtaposition; and most of them asserted or implied that the distinctions were so marked and obvious that no one of experience could possibly confound them.

The question put before the candidates on that occasion is one of two questions which I propose to consider this evening. The other relates to the recognition of general paralysis in that early stage in which as yet no thought has arisen of placing the patient in a lunatic asylum, and in which its real nature is likely to be overlooked or misinterpreted.

The question of the differential diagnosis of general paralysis, tabes dorsalis, and disseminated sclerosis is a very fair one to ask candidates whose practical acquaintance with lunacy it is desired to test; for, although typical cases of these diseases present strikingly distinctive features, and cannot well be confounded with one another, there are many cases which are not typical, and in regard to which a differential diagnosis is, for a time at any rate, difficult, if not impossible; and, moreover, it is fully recognised by alienists that there are certainly two well-marked varieties of general paralysis, in one of which the symptoms are associated with those of tabes, in the other of which the symptoms are associated with those of disseminated sclerosis. But it does not often happen, when such patients are in the lunatic asylum, that there is any real difficulty in arriving at a satisfactory conclusion with respect to the nature of their disease. Patients with simple tabes and simple disseminated sclerosis never find their way into these institutions; and when either of these affections complicates well-marked general paralysis, the predominant disease is none the less general paralysis.

The real difficulty of forming a correct diagnosis is presented during the earlier stages of these disorders, before they have yet developed the distinctive groups of symptoms by which we are accustomed to recognise them severally as specific. It is at this time that such patients come under the care or notice of general practitioners and hospital physicians. And it is at this time, when it is generally so difficult, and often impossible, that it is always important, if one

can, to arrive at a definite conclusion with respect to the purport of the obscure symptoms that they exhibit, and to forecast their future.

It may be convenient, before going further, to enumerate the chief characteristics of the three diseases under consideration.

The usual symptoms of tabes dorsalis, or progressive locomotor ataxy, are as follows: impaired co-ordination of the muscular movements of the lower extremities, with abolition of tendon-reflexes, numbness of the feet and legs, and neuralgic pains in them of a peculiar character; not infrequently similar affections of the hands and arms; and liability to pains in stomach, rectum, and other viscera, to which the term "crises" has been applied. Additionally, the organs of sense are often affected; sometimes there is temporary or permanent paralysis of the motor muscles of the eyes, frequently the pupils are much contracted, and usually they are insensible to the stimulus of light, but act to accommodation; occasionally blindness or deafness ensues, or the speech acquires the scanning or divided character which is more common in disseminated sclerosis. Further, the symptoms come on gradually, and not necessarily in any definite order; so that not infrequently lightning pains, absence of tendon-reflexes, or some affection of the eyes, such as a squint, precedes by a long interval the development of muscular inco-ordination. It must be added that patients suffering from tabes become sometimes liable to epileptiform attacks, and sometimes to mental derangements wholly independently of the presence of general paralysis, and that such symptoms may either precede the true tabic symptoms or arise in their course.

The symptoms of disseminated sclerosis vary largely in different cases. Still there is a large group in which they present a striking uniformity of character; and which, in a certain sense, may be regarded as typical of the disease. The symptoms in such cases are mainly as follows:—Rhythmical tremors of the head and arms, when unsupported or in use; spastic paralysis, without impairment of feeling, in the lower extremities; nystagmus, scanning or divided utterance, and a tendency to lowness of spirits and some degree of mental failure. But, besides these, we are apt to meet, in different cases, with paralysis of the external ocular muscles, impairment, or loss of sight from atrophy of the optic discs; and, sooner or later, epileptiform seizures, in which rising temperature usually heralds the onset of each attack. In this case, just as in that of tabes, the development of the disease in a characteristic form is often preceded, at long intervals, by one or other of the symptoms which belong to it—for example, by temporary or permanent squint, by exaggeration of tendon-reflexes in one or both legs, by tremors in one or other hand, or by slight impediment in speech. And in this affection, even more than in tabes, mental derangement (chiefly, perhaps, dementia), is liable to come on early or to develop late. I have already pointed out that some degree of emotional or intellectual disturbance is one of the common symptoms of disseminated sclerosis, and that the supervention of epileptiform attacks is to be anticipated.

General paralysis of the insane, when fully developed, is a disease which can scarcely be misinterpreted. There are, in association, peculiar paralytic symptoms and peculiar mental phenomena. The patient is irritable and variable in temper. He has delusions, which are usually of a grandiose character, such as that he is the emperor of the world, or God Almighty, that he is immensely rich and infinitely powerful, that his mental and bodily qualities are unsurpassed and unsurpassable, that he feeds on whales, elephants, and ostrich's eggs, and so on. But with these delusions he mixes up the affairs of every-day life in a curiously incongruous manner, so that while he tells us he is rich as Cræsus, he perhaps begs for money to buy a little tobacco; or while he boasts of being the king of kings, he will confess that his wife is a charwoman and his children attend a charity school. His mental condition, in fact, is one of associated delusions of grandeur, and failure of memory and power of reasoning. His paralytic symptoms are for the most part general. His limbs are weak and tremulous, his gait uncertain and tottering. But it is in connection with speech, and especially in the organs of speech themselves, that the paralytic symptoms are most pronounced and most striking. In the earlier periods, and in slighter cases, there is a mere trembling of the lips,

especially noticeable at the beginning of sentences or words; later, the tremors involve all the muscles concerned in the movement of the lips; and yet later the convulsions are apt to extend to the muscles connected with the eyelids, eyebrows, and forehead; and in both these latter cases the spasms not only precede, but accompany, the acts of articulation. In the beginning there may be only a slight and scarcely perceptible tremor or hesitation in speech; but, after a time, utterance becomes markedly hesitating and imperfect; not infrequently the patient stammers, not infrequently speaks as if he were sobbing, and sometimes the tremulousness and uncertainty of articulation become so extreme that it is impossible to understand him. Besides the above symptoms, which are characteristic, we find generally that the pupils are unequal and the skin greasy, often that the tendon-reflexes are exaggerated or abolished; and that the patient, at various periods in his illness, suffers from epileptic fits, which, like those occurring in disseminated sclerosis, are ushered in by rising temperature. The disease is recognised as beginning in several ways. In some cases the paralytic phenomena take precedence; and, not uncommonly, they continue for a long period unaccompanied by any obvious mental derangement. Here the tremor of the lips in speech, and the inequality of the pupils, are of great diagnostic import. In some cases the mental symptoms first appear; the patient becomes variable and excitable in temper, loses memory, leaves out words and letters, and shows incoherence in writing, speaks and acts foolishly and childishly, steals, lies, acts obscenely, and perhaps shows signs of the exalted delusions which ultimately dominate the remnants of his mind. In other cases, the corporeal and mental symptoms arise simultaneously; and, not infrequently, the first indication of the patient's illness is the occurrence of epileptic fits. Occasionally, the grandiose delirium is replaced by melancholia. It is commonly thought that general paralysis for the most part proves fatal within two or three years of its onset. And this statement is doubtless true, if the disease be reckoned as commencing at the time when the patient's symptoms are first recognised as those of general paralysis. But there is no doubt whatever that in a very large proportion of cases the disease begins long before it is brought under the notice of alienists; and that in its invasion, and often for a long time, it is the friends and the family medical attendant, who alone recognise that there is something amiss, which they probably misinterpret, and the seriousness of which they probably under-estimate. My friend, Dr. Savage, of Bethlem, who has interested himself in this question, and is investigating it, finds, on close inquiry, that the confirmed symptoms of general paralysis are often preceded by years of progressive slight deterioration of character, and of growing irritability and weakness of mind. The early indications consist in slight degrees of some of the characteristic phenomena of the declared disease; which the experienced and careful observer might possibly, even at this period, read correctly, or, at any rate, would regard with suspicion.

Having made these preliminary remarks, I think I shall best accomplish the purpose I had in view in bringing the subject of the relationship of the above diseases, and of the early diagnosis of general paralysis, before you this evening, not by enumerating and weighing their various points of resemblance and difference, but by giving brief details of a few of the cases, illustrative of my remarks, which have come under my immediate observation, and for the most part such as have presented more or less difficulty of diagnosis.

The first cases I shall quote will be such as were obviously, when I first saw them, or proved in the long run to be, or are still only suspected to be, cases of general paralysis.

CASE I: A merchant, aged 35, consulted me in January 1881. He was stout, and a free liver, and appeared to be perfectly well. But in the previous July he had had a distinct epileptic fit in the night; in the October following he had had a second fit, also in the night; and he had had another fit three weeks before his visit to me. He had had syphilis thirteen years previously; and, discovering no better clue to the causation of his illness, or hint as to treatment, I prescribed accordingly. I heard nothing more of him until November, 1883, or nearly three years afterwards, when he paid me a second visit. At this time his hands were tremulous, his gait was tottering, his tendon-reflexes were greatly exaggerated; he stood (as I find recorded in my notes) as though he had defæcated into his trousers; his lips trembled before and during utterance, and his speech was hesitating and drawing; his pupils were unequal; he looked about suspiciously, and he laughed fatuously and at nothing. He was clearly suffering from general paralysis. I learnt—partly from himself, but mainly from his wife—that he had had no recurrence of epileptic fits, but that he had been slowly failing mentally and bodily; that he had become forgetful and weak-minded, emotional and irritable with his children; that he slept all the even-

ing long, and had ceased to be in any sense a companion to his wife; yet that he had been going daily to his business in town, and had not only exhibited no delusions, but had shown no tendency to speculate, and had not misconducted himself in any way. I had at this interview, and subsequently, to explain to the wife and friends, and to the medical attendant, the unfavourable view which I was compelled to take of the patient's case and prospects, and to warn them (so to speak) of the rocks ahead. I never saw him again; but I have learnt that some time afterwards he had to be removed to an asylum, and that within the last twelve months he has succumbed to his malady. I am not sure that I ought not to have had suspicions of the true nature of this case when it first came under my notice. But there is nothing in the notes I made at the time to show that I entertained any. I do not appear to have examined his pupils, and I made no remark as to his tendon-reflexes or his mode of utterance.

CASE II.—A stonemason, aged 32, came under my care in St. Thomas's Hospital in October, 1883. The history was that for fifteen months he had been suffering from curious fits, in which he became numb and powerless, and talked and acted foolishly, but did not fall down, or apparently lose his senses; and that during the last few months he had been getting weak in body, and defective in speech. He was a healthy-looking man, without obvious loss of power in arms or legs, with little or no tremor in them, but with slight increase of knee-jerks and slight ankle-clonus. His lips, however, trembled markedly in speaking, his utterance was hesitating and indistinct, and there was some inequality of pupils. There did not appear to be the slightest intellectual deficiency; he was neither emotional nor forgetful, and neither then nor subsequently was I able to discover any evidence whatever of delusions. Two days after admission he quitted the hospital without notice, and found his way to his home in Putney. He returned, however, two days later, and stated that he had no recollection of leaving the hospital, and recollected nothing that had happened until he found himself at the Waterloo Station. While in the hospital he had occasional attacks of his fits. They came on with numbness, usually beginning in the feet, and extending thence to the rest of the body; were attended with loss of power, and, for the most part, complete loss of speech. He did not appear to be wholly insensible in them. They lasted for about half an hour to two hours, and were followed by headache. On one or two occasions his temperature was taken before and after, and was found to be normal. He remained in the hospital for two months, during which time no change whatever in his condition was observed. For the next year the patient used to visit me occasionally at the hospital, and I had the opportunity of watching the progress of his malady. I cannot say that I detected any obvious deterioration in the condition either of his mind or of his body. But he complained to me more than once that his fits continued to recur, and that though he did not fall down he often had no recollection of what happened during their continuance, and that on several occasions while in them he had been violent and destructive, and had more than once assaulted his wife murderously. I need scarcely say that when he left the hospital, shortly after his admission, he must have been in one of these fits. I have since heard that the poor fellow has had to be removed to an asylum; but whether he is now living or dead I do not know. This case so far resembles the last, that the earliest indication of the patient's disease was the occurrence of epileptiform seizures, on which, at a later period, the characteristic defect of speech supervened. Here also, as in the other case, there was long delay in the development of mental symptoms. Indeed, I cannot say that there was any real mental impairment during the whole time he was under my observation.

CASE III.—An officer, aged 38, a fine, handsome-looking man, was sent to me in November of last year. He had been ailing for twelve months or more, and had been under treatment, I was told, for indigestion. Shortly before I saw him he had been on a visit to some relations in the country, who were struck with the change that had taken place in him within a comparatively short time; and with the fact that, whereas he had formerly been an excellent shot, he now invariably missed the birds at which he aimed. It was at the suggestion of those relatives, and that of a medical friend of theirs, that he came to see me. His pupils were unequal; he spoke in the drawing, hesitating manner of general paralytics, with the usual tremors of the lips and muscles of expression; his hands were tremulous; his legs trembled, especially in rising from his seat, and his tendon-reflexes were much exaggerated. He told me that he was inclined to be low-spirited, that he had lost flesh and strength, that his memory was not so good as it had been, that in speaking he was apt to misuse words, and that he had had to give up writing—partly because of unsteadiness of hand, partly because he was apt to leave out words and letters. I observed, moreover, that he was inclined to be talka-

tive, and to say things about himself and others that were neither called for, nor such as most reasonable persons would have cared or liked to mention. I thought him somewhat weak-minded, but there was no evidence that he laboured under any delusions. There is no doubt that he was suffering from general paralysis of the insane. But, having regard to the little impairment of intellect he presented, it is not surprising that his friends and even one or two medical men who saw him, hesitated for some time to accept the diagnosis and prognosis of his case that I felt it my duty to lay before them. I need scarcely say that further inquiries showed that his fellow-officers had for a long time observed growing impairment of mental and physical power, and growing unfitness for his duties; or add that his mental inability gradually increased, and that a few months since he had to be removed to an asylum. I do not know that even yet he has manifested definite delusions; but I know that he had become quarrelsome, and untrustworthy and feeble-minded.

The above three cases seem all fairly typical, and, at any rate, were such as, notwithstanding the absence of delusions and mental exaltation, could scarcely be misinterpreted by anyone who was familiar with the disease. I proceed to narrate some of which the diagnosis was, or even remains, doubtful.

CASE IV.—In June, 1884, a young man, aged 32, was brought to me by his medical attendant. He had been ailing for twelve months, during which time he had been nervous, "hysterical," forgetful, and at times drowsy. Moreover, he acknowledged that his temper had become very irritable, that his memory was apt to fail him, that his handwriting was not so good as it had been, and that he was apt to omit words when writing letters. But he had been an active man of business, and had continued during the year to perform his usual onerous duties. He was a spare, fairly healthy-looking man. The pupils were unequal, and acted to light. There was no paralysis of the external ocular muscles. His speech was a little slow, and attended with slight tremor of the lips. The hands were slightly tremulous. His gait appeared to be natural, but the patellar tendon-reflexes were abnormally brisk. I suspected the presence of general paralysis in a very early stage, but thought the case might possibly turn out to be one of disseminated sclerosis. I heard nothing more of my patient until April, 1886; he was then brought to me for the second time. His symptoms had varied during the interval, but, on the whole, he had deteriorated. About a fortnight after his first visit to me, his eye-trouble had become aggravated, and he consulted an eye-surgeon, who observed that "the right pupil was larger than the left, and acted neither to light nor to accommodation; and that the discs were normal." Three months later, the same oculist reported on the state of his eyes as follows: "The left pupil is now somewhat too large, and motionless—a new symptom, pointing perhaps to slowly progressive disease about the nuclei of both third nerves." Shortly afterwards he consulted one of the most eminent London physicians, who elicited a history of syphilis, and ordered him to take mercury. This was said to have been followed by some amendment; but his irritability of temper continued to increase, and he had been liable to attacks of depression, rapidly alternating with fits of boisterous spirits and boastfulness. He had been quarrelsome and unmanageable at times, and, though not lavish in other respects, had been spending largely on his personal adornment. His memory had been very defective, but he did not seem to have had any delusions. He stated that he wrote better than he formerly did, and that he did not now make mistakes. He had still been going on with his occupation. His tongue trembled a little when put out; his lips also trembled slightly in speech. His articulation, however, was perfect while he was speaking quietly, but became hesitating and indistinct when he was excited; at which time, too, the tremors would extend from his lips to the rest of his face. The pupils were unequal, the right being the larger; and they both acted sluggishly to accommodation, but not at all to light. There was no noticeable tremor of the arms. No inco-ordination in walking could be detected, and he could stand with his eyes shut. The knee-jerk in the right leg was, if anything, a little exaggerated; it was wholly wanting on the left side. He had had lightning-pains in his legs for a few weeks. There was no loss of sexual desire or power. I have only, so far as his history is concerned, to add that, two months after I saw him, he was removed to a lunatic asylum, where I believe he now is.¹

I think there can be no reasonable doubt that my original surmise was correct, and that this case was really one of general paralysis. But, just as in the other cases I have narrated, there was no grandiose delirium—no delusion. And the paralytic phenomena presented curious changes; the ophthalmoplegia interna varied from time to time, and the tendon-reflexes in the legs, which were at first exagge-

¹ I have since heard that he died there very shortly after admission.

rated, in the course of time diminished in one leg and disappeared absolutely in the other. There were, in fact, associated with fairly characteristic signs of general paralysis, both symptoms of tabes and symptoms of disseminated or lateral sclerosis.

CASE V.—A gentleman aged about 30, consulted me first last February. About ten years previously he had had syphilis, not followed by secondaries. Five years later he had had gonorrhœa, from which a stricture resulted. For four or five years he had been liable to shooting pains in the thighs, knees, and legs, which came on irregularly, lasted a variable time, and were often very severe. He had been married three or four years, and since then had resided abroad; and a year and a half or two years before I saw him he had been nursing his wife during a very alarming illness which followed her confinement, when, without warning, he was attacked with an epileptic fit. About twelve months ago he came back to England, and on his voyage had a succession of similar fits, and was unconscious for a fortnight, after which his memory was much impaired. He improved, however, very much in this respect, and was able on his arrival in England, to undertake clerical work. A few weeks ago he had another epileptic fit, not followed as the previous group was by loss of memory. He has suffered from lowness of spirits, and ever since his illness aboard ship has lost all sexual desire and aptitude, and has been liable to attacks of coldness (with goose's skin) involving the left half of the body only, coming on suddenly and terminating in heat of surface but no sweating. He stated that he had lost flesh, but he was in fair condition. His expression was dull and sad; his face was greasy; his pupils were unequal, neither of them acting to light, and the left (which was the larger) not acting to accommodation. The optic discs were normal and the sight good. There were no tremors in the hands; there were no traces of tendon-reflex in either leg, and no numbness. He could walk without difficulty, and could stand with his eyes shut. He had no defect of speech or writing, but I was inclined to think his lips trembled slightly previous to utterance. Beyond the facts that the patient was dull and low-spirited, and not very companionable, and that his memory (though it had improved) was still not quite so good as it formerly was, I was unable to elicit any evidence of mental derangement. I saw him occasionally during the following six months, but nothing occurred to throw any further light on the nature of his disease. There was a little variation in the symptoms from time to time; occasionally he complained of pains at the back of the head and neck, and for the last month or two his water had run away from him occasionally both in the day and when asleep. I learnt later that he had consulted an oculist ten years previously for ptosis on the left side, of which there were still occasional traces. That this patient is suffering from some chronic degenerative change in the nervous centres there can, I conceive, be no doubt, but whether he will ultimately find his way into an asylum cannot yet, I think, be positively affirmed or denied. I suspect that the case will prove to be one of general paralysis.

CASE VI.—An officer, aged 33, consulted me, at the instance of his friends, in January, 1884. He was a remarkably fine, handsome, healthy-looking man, who had obtained sick-leave six months previously, and returned to England from a tropical climate. He had distinguished himself greatly, and had obtained high promotion at an early age. For the last three years he had been resident in one locality; and for the last year or two of that time had presented symptoms of mental disturbance. He had continued to do his work to the last; but he had become irritable, variable in temper, quarrelsome, taking dislike to his friends, showing jealousy of the success of others, complaining of being neglected, expressing a desire for active employment, but neglecting the work which he had to do. As an example of his behaviour, I am told that, on one occasion, he, without any apparent reason, seized upon a favourite dog of his and threw it on to the ground with great violence, then almost immediately repented of what he had done, took it up, fondled it, and seemed greatly affected. Since he had been in England he had shown something of the same quality of mind; he had been vacillating and irritable, and particularly had manifested a great tendency to fall in love. Indeed, when he called on me, he had already been entangled in two or three love affairs; and, on the spur of the moment, had engaged himself to a girl, whom he had since almost as suddenly discarded. His family now, as previously his friends abroad, were not satisfied as to the soundness of his mind; but he had never shown any delusions, nor had he done anything specially or noticeably outrageous. I could discern very little amiss with him; he was perfectly courteous and gentlemanly, talked freely with me about his condition, said that he was sleepless, and expressed regret at his behaviour to the girl whom he had jilted. It seemed to me, however, that there was a want of healthy reticence in regard to himself and his own affairs, and that he was inclined to

be over-garrulous. There was some inequality of pupils, but no sign of affection of speech, or of any form of paralytic affection. I saw him again about a month later. He looked well; but it appeared that he had continued sleepless, and that he had been alternately low-spirited and excited. He had spent the previous three nights at balls, and told me that at one of them, much to his annoyance, a girl had proposed marriage to him. I saw him on one or two subsequent occasions, and also some of his relatives, and was instrumental in obtaining for him extension of leave. But I lost sight of him about the middle of 1884, and heard nothing more until some two or three weeks ago, when happening to meet a medical man who had come over to England from the town in which my patient had previously been, and was now again stationed, I asked him if he knew anything of him, and then learnt from him that he had married while in England, and taken his wife abroad with him, and that mentally he still showed all that vacillation of character, violence of temper, and quarrelsome disposition, which he had shown before coming to England—qualities which were foreign to his original and true character.

That this patient has been mentally unsound for some years is obvious; but whether he will in the course of time become a general paralytic is, I take it, uncertain. All I can venture to assert is that the symptoms, so far as they go, are compatible with the coming on of that disease; and they are, I believe, such symptoms as one finds, on looking back into the history of general paralytics, they often present before the true nature of their malady is recognised. I need scarcely add that the symptoms in this case were entirely mental; and that obviously the question of relationship to tabes, or any such affection, did not and does not arise.

I proceed now to quote a few cases of what I regard as locomotor ataxy, but in which the specific symptoms were so far complicated with others referable to the brain, that I can conceive that the diagnosis of locomotor ataxy might be disputed.

CASE VII.—The case I am about to narrate was included in a paper which I published in the thirty-first number of *Brain*. It is that of a musician, who was admitted into St. Thomas's under my care in 1880. He was then between 30 and 40 years of age. He was suffering from obscure symptoms, the meaning of which I failed to interpret. He was extremely nervous and irritable, and gave me the impression of being hysterical. Whether I did not trouble myself to investigate his complaints thoroughly, or whether I did investigate and could discover nothing to explain his symptoms, I cannot recollect. The case, however, made little impression on me at the time, and I should have forgotten all about it but for its subsequent history. Late in the year he called at my house complaining of "tightness in his leg," but he walked without difficulty; and I still failed to discover what was the matter with him. He was still nervous and emotional, and I thought hysterical. The next time I saw him was in 1883; he was then distinctly ataxic. He was suffering from lightning pains, numbness in the feet, and inco-ordination in walking. He had complete ophthalmoplegia interna, and on the left side partial ptosis. He suffered also from gastric crises. He was still nervous and hysterical. Since then he has gradually got worse. The ataxic symptoms have increased; considerable paralysis of the external ocular muscles has taken place; he has been complaining not only of crises referable to the stomach, but of others referable to the rectum, and of a peculiar spasmodic cough. His mental condition has not changed. I have little doubt that if I had investigated with sufficient minuteness and care when the patient first came under my treatment I should have discovered the presence of phenomena pointing to the true nature of his malady. And I may add that, even if at that time the discovery of ataxic symptoms had led me to think that the hysterical manner of the patient pointed to the coming on of general paralysis, the subsequent progress of his case would have proved my surmise to be erroneous. The case is essentially one of complicated tabes.

CASE VIII.—The next case is that of a gentleman, aged 39, whom I saw in December, 1883. He had been ailing for seven years, and his illness had apparently been induced by long-continued overwork and anxiety. His first sufferings were mental. He became low-spirited, suicidally inclined, and was unable to apply himself to his business duties; noises worried him; he had a peculiar dread of riding in omnibuses, cabs, or railway carriages, and of walking over London Bridge. But he had no delusions, and kept most of his sufferings to himself. These symptoms, varying in severity, but never wholly disappearing, continued for five years, when they left him. Shortly after the beginning of his illness he began to suffer from a sense of weight and soreness in the right hypochondrium. This soon became almost constant, but presented frequent acute paroxysms, often induced by moving about, and also, as he believed, by taking food. When specially severe it would shoot from the hypochondrium

into the lower part of the belly. The pain had tended to increase from the time of its first appearance; and during the last year or two had been so intense and a source of so much misery to him that he had been compelled to give up business altogether, and had been almost entirely confined to the house. It is noticeable that his appetite had never failed, yet that he had been in the habit of taking very little food for fear of increasing pain, that he had never suffered from sickness or flatulence, and that, indeed, he had never had any of the usual symptoms of dyspepsia. Further, he had never shown any symptoms of hepatic, renal, cardiac or pulmonary disease; nor had there ever been any obvious defect of the organs of special sense. He had lost flesh latterly. It appeared on further inquiry that for some few months he had suffered from "rheumatic" pains down the right leg, mainly a kind of soreness in the muscles, and that he had experienced a little difficulty in using the limb. He was a pale, thin man. He had a soft, flaccid abdomen, which presented no tenderness anywhere, and admitted of easy exploration. There was no discoverable tumour, or enlargement of any organ. He had an umbilical rupture, about the size of a pea, which could be readily reduced. His pupils were equal, and acted to light and accommodation. His speech was unaffected. He had no numbness or tingling anywhere, no muscular tremors; but in walking the movements of the right leg were a little uncertain and awkward. There was total absence of tendon-reflexes on both sides. This fact had been recognised three or four years previously; but its significance, apparently, had not been appreciated. Formerly the knee-jerks had been brisk. The discovery of ataxic movements in the right leg, and the absence of tendon-reflexes, led me to make further inquiries; and I elicited that, although he could walk fairly well in the daytime, or some year or two he had shown great unsteadiness in walking, and even in standing, in the dark; and that not infrequently, when washing his face at the wash-hand stand, he would become so unsteady that his wife had to run to him and support him. The patient died about a year later. Although many of the symptoms in this case, and their sequence, were unusual, there can be no doubt that the patient suffered essentially from tabes dorsalis, and that the hypochondriac pain which had continued for six or seven years when I saw him was a form of the gastric crisis common in that disorder. It is interesting that the specific tabic phenomena should have been ushered in with prolonged mental derangement. It is clear, however, from the progress of the case, that there was never, even on this account, any sufficient reason for regarding the disease as general paralysis.

CASE IX.—Nearly five years ago I saw a gentleman, aged about 35, who for several years had had marked and increasing symptoms of locomotor ataxy, including momentary pains in the lower extremities, absence of tendon-reflexes, loss of co-ordination in the movement, and numbness, of the lower extremities, and gastric crises; and in whom the symptoms had become so severe that he had been compelled some little time before I saw him to retire from business. He had recently been for a voyage to Australia, and while at sea he experienced peculiar attacks. These at first consisted in an indescribable pleasurable sensation at the epigastrium, which he was tempted to encourage. But after a while the epigastric feeling became disagreeable, and was followed or accompanied by a strange mental condition, in which it seemed to him that everyone became two or three times as tall as natural. During these latter attacks his face became livid, and his eyes fixed; and his coming-to was attended with smacking of the lips. He never cried out or fell in the attacks, and believed he had never lost consciousness. Those who had the opportunity of observing him at these times thought differently. I verified the facts of his gait being ataxic, and of the absence of knee-jerks. The pupils acted to light and accommodation. I have not seen the patient since, but I believe I heard some little while ago that he had improved a good deal. Now here, again, we have clearly—at least, so I think—a case of tabes; but it is peculiar from the circumstance that the pupils did not present the Argyll-Robertson phenomenon, and from the supervention of fits, which are so common in general paralysis, so rare in tabes. There was no mental defect, nor affection of speech, and I think, therefore, no sufficient reason to suspect the coming on of general paralysis.

CASE X.—Another case, not unlike the last, came under my observation nearly four years ago. The patient was a gentleman, aged about 54, who had suffered for several years from lightning pains in the legs, and for about a year from occasional severe gastric crises. But he had had no difficulty whatever in walking or standing. He was thrown off his horse the year previously, but apparently sustained no injury. A year later he fell off his horse, probably in a fit. And since then he had, on two or three occasions, suddenly become in-

sensible, and remained insensible for some time. He had lost flesh during the last few months. The pupils were unequal, and presented the Argyll-Robertson phenomenon. The patellar tendon-reflexes were entirely absent. But he had no numbness in hands or feet, walked naturally, could stand with perfect steadiness when his eyes were shut, and could walk and stand in the dark without tottering. His speech was perfect, and there was no sign whatever of mental impairment. Again, notwithstanding the occurrence of fits, and certain other peculiarities as regards symptoms, the case must, I think, be regarded as one of locomotor ataxy.

It would have been easy for me to multiply cases, and even to quote many specially interesting cases, of tabes, disseminated sclerosis, and general paralysis, had my object been simply to lay before you striking and typical examples of these diseases. My aim, however, has been, as I explained at the beginning of my address, to show how important it is that medical men, and especially those in private practice, should not only be acquainted with these affections in their fully-developed phases and typical forms, but should recognise the fact that complex and puzzling cases are of frequent occurrence; and that, especially during the earlier periods of their history, their true nature is often extremely difficult, often impossible of determination; and yet that, even at this time, there may be apparently trivial yet really valuable signs for those who have the wit or knowledge to read them correctly. I may add that, in looking back to my past experience, I can recall some cases that a few years ago I regarded as examples of locomotor ataxy, which I am now convinced were examples, not of locomotor ataxy alone, but also of something still more serious, which at the time I overlooked; and that during the last two years I have, on two occasions seen, in hospitals which I chanced to visit, patients whose cases their physicians looked on as cases of tabes dorsalis; but whom, I am certain, anyone skilled in lunacy would have set down as general paralytics.

ABSTRACTS OF THE HARVEIAN LECTURES ON CANCER OF THE UTERUS.

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LECTURE I.

THE malignant growths which are met with in the uterus were first enumerated and defined, and it was shown that cancer could be distinguished from sarcoma, not by microscopical characters only, but by microscopical characters and mode of growth. Both sarcoma and cancer attack the uterus, but the lectures were limited to the consideration of cancer. The uterus was divided into three parts: the vaginal portion, which was the surface exposed in the vagina, bounded above by a line drawn from the external orifice, or a little above it, to the insertion of the vagina; the cervix proper, bounded below by the line just mentioned, and above by a plane drawn transversely through the inner orifice; the body and fundus formed the part above this plane.

Cancer of any one of these parts was cancer originating in that part, and not cancer invading it from another source. Cancer of the vaginal portion was rare. It was of the squamous type, and began in the stratified epithelium of the portio vaginalis. Eight cases were described in various stages of growth. These showed that cancer might begin at any point of the vaginal portion from the os uteri to the vaginal vault. It might begin at the external orifice, or on the surface of a polypus growing from one of the lips; on any part, in fact, covered by squamous epithelium.

The forms it assumed were few. In three there was simply enlargement of the lips; in two the disease was papillary, and possibly the beginning of a cauliflower excrescence; one presented a red tuberculated surface, and one an uneven granular surface. The cancerous portio vaginalis might be quite smooth, and appear fairly healthy, presenting perhaps only a slight lividity of the surface. In no instance did the disease start from a tear of the cervix; nor was there any evidence that laceration played any part in the etiology of cancer of the vaginal portion.

The lines of growth of the disease were peculiar and important; it did not grow deeply and involve the uterine tissues, but spread superficially towards the vaginal vault, and then down along the surface of the vagina towards the vulva. Its thickness, as a rule, did not exceed one-sixth to one-third of an inch. Later it spread in the cellular tissue, and the broad ligaments and the sacro-uterine ligaments were said to become affected; but in none of the author's cases were the latter attacked. The disease did not appear to spread up the cervical canal, but it showed a preference for the vagina. Various stages of its progress in this direction were exemplified by the cases read.

Whether the anterior or posterior lip was most frequently affected was not known. When it grew like a cauliflower it was superficial and entered but for a short depth into the cervix, as was shown by the cases which had recovered after removal of the growth by the *ceraseur*, which removed, as a rule, a very superficial portion of the cervix.

One instance was given in which the disease ran a course differing entirely from that described. In this case the cancer began on the vaginal surface, midway between the external orifice and the vaginal vault, and then it bored its way into the substance of the cervix, ulcerating as it grew until it had penetrated the cervical wall to a depth of about one inch. It presented no tendency to spread superficially, nor to affect the tissues extensively, for the depth of the diseased tissue, at any point, was not more than a quarter of an inch.

Cancer of the portio vaginalis appeared to be much more frequent during menstrual life than after the menopause, though it was sometimes met with in old people. It was not clear that childbearing had much to do with the disease, for, of the eight cases, five had less than the average number of children, and three none; nor had difficult labours, for in no case had labour been very bad. In one only was a family taint observed—a sister having died of cancer of the womb.

The early symptoms were by no means characteristic. *Hæmorrhage* was present in half the cases, and discharges in all with one exception. A fetid discharge was generally regarded as a sign of a late stage of cancer, and as depending upon sloughing and breaking down of the growth. It might, however, be present in the earliest stages, and was then independent of sloughing.

Of the exact duration of this form of cancer of the uterus nothing was known, but it might last for several years.

Fig. 1.—Epithelioma on posterior lip of uterus.

Fig. 2.—Vertical section of the same (semi-diagrammatic).

The patient from whom the specimen, represented in the drawing, was taken was 39 years of age; she had suffered for about a year from a yellow discharge, and had lost flesh for the same time. For nine months she had had pain during, and bleeding after, sexual congress. In five weeks this bleeding had increased, and the discharge had been offensive. On admission she was thin, but looked fairly healthy. On vaginal examination there was found what was taken for a red, ulcerated surface, raised about a line above the level of the surrounding parts, and situated on the posterior lip and part of the anterior. There was a narrow strip of healthy mucous membrane on the posterior lip between the growth and the vaginal vault, and another about three-quarters of an inch in width on the anterior. The red surface had the diameter of a florin. On the left side there was a fissure in the cervix and the lips were inverted. The cervix was amputated above the internal orifice, and what was supposed to be an ulcer proved to be a papillary growth about three-fourths of an inch in diameter and one-sixth to one-third of an inch in thickness. On microscopic examination it was seen to be a squamous epithelioma commencing at the external orifice and growing along the posterior lip towards the vaginal vault.