On the simulation of hysteria by organic disease of the nervous system : an address delivered at the Annual Meeting of the Neurological Society of London, on January 23rd, 1890 / by Thomas Buzzard.

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BY

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PRESIDENT.

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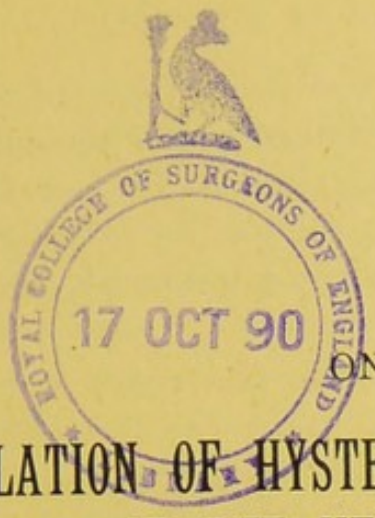

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In our practice as physicians we are continually meeting with cases which suggest the presence of organic lesion of the nervous system, whilst, at the same time, circumstances occur to make us doubt whether the symptoms present may not be dependent upon what, for want of a better term, is styled functional disorder. It is quite unnecessary here to attempt to define what is meant by the term, nor to insist upon the importance, both as regards prognosis and the treatment of the condition, that our diagnosis should be correct.

The field occupied by cases of this description is so vast that it would be ridiculous for me to attempt anything like a survey of it. I propose therefore on this occasion to limit my observations to those instances in which some loss of power in a limb or limbs is the dominating feature. The admirable paper which was recently read before this Society by Dr. Hughes Bennett on "Muscular Hypertonicity" will be very present to your minds as discussing those numerous examples which wear the semblance of spastic paraplegia, and with these therefore it will be unnecessary for me to deal. Nor

shall I dwell much upon the more common forms of so-called hysterical paralysis, the recognition of which the surrounding circumstances may render very easy. In fact I cannot hope to do more than discuss a few points of interest and difficulty, without pretending to any attempt at exhausting an exceedingly wide subject.

One difficulty in connection with the class of cases to which I refer lies in the fact that under the term functional we probably have often to include (because of the impossibility of differentiating them) examples of various forms. There is, in the first place, involuntary simulation of organic disease associated with some morbid psychical condition to which the term hysterical is usually applied. Next, there are examples of functional inability dependent probably upon a temporary malnutrition of certain parts of the nervous centres. There appears reason to believe that this local imperfection may sometimes exist for a long while without giving rise to destructive changes in the parenchyma, but that in many instances it represents but a stage of actual change in tissue which eventually becomes permanent and irrecoverable. How far we may reckon that there is a point in this progressive deterioration at which treatment may be successfully applied must still be considered doubtful, although evidence tends rather to the idea that this is probably the case. The cases of this class present peculiar difficulty in their diagnosis, because, combined with evidence of local troubles of nutrition in the nerve centres, there are often so many symptoms of hysterical or emotional character as to greatly obscure and confuse the picture.

It is especially to this category that I propose to draw attention on the present occasion. I fear that my remarks will necessarily tend rather to expose than to solve the difficulties which we are liable to encounter in dealing with this question, and that their discursive character may suggest, what is indeed the truth, that I am rather employed in thinking aloud than in imparting information. As far as possible I shall relate the sequel of cases to which reference is made. This will often decide a question which has been a puzzling one. Owing to the kindness of my friend, Dr.

Playfair, with whom I have examined during the last ten years many cases in which a serious question of diagnosis has arisen, I shall be able to refer to the results of the Weir Mitchell treatment applied with his well-known skill. The physician truly experiments, as Claude Bernard has said, when he tries to bring about a modification in the symptoms of disease. In some cases, to which reference will be made, the disappearance under improved nutrition of the symptoms which gave rise to the doubt has resolved the difficulty in the happiest way possible. In others the question has been determined by failure to interrupt the course of the malady, or by a fatal issue.

There is a form of paraplegia of which I have seen several examples, in nearly all of which important questions have arisen as to the functional or organic nature of the condition. The subject will be best introduced by briefly relating particulars of a few cases.

A young lady, æt. twenty-one, was seen by me in consultation with Dr. Playfair on November 1st, 1886.

Since the age of fifteen she had been observed by her friends to have a peculiar gait, and this was noticed two years later by a surgeon who was consulted on account of some pain in her joints. At that time she walked with a stiff and stilted gait, which was chiefly noticeable in going upstairs, and varied very much. There appeared, however, I was told, to be no want of muscular power. She could walk well, and dance. From time to time she suffered from a variety of typical hysterical symptoms, including an aversion from food, under which she had greatly lost flesh and strength at the time that I saw her. It was especially during several preceding months that she had gradually failed in her walking powers, and on several occasions had fallen down.

The question to be determined was whether the condition was an hysterical one, as it had been pronounced to be by more than one medical authority, and likely therefore to yield to a course of Weir Mitchell treatment, for which purpose she had been taken to Dr. Playfair.

On examination I observed that the girl was highly anæmic. She could stand or walk without support, but

slowly and laboriously, inclining the trunk to the side opposite to that from which depended the limb which was being advanced. When in the recumbent position she could flex the thighs upon the trunk with a fair amount of force, but when seated she had little or no power of lifting either knee. Extension at the knee joint was only moderately well performed, whilst the power of flexion at the same joint, and extension and flexion at the ankle joint, appeared to be normal. When standing it was with great difficulty that she could place her right foot upon the sofa, and only by adopting a swinging movement. She could not even swing the left foot on to it. With her right foot on the sofa she could not lift herself up so as to stand upon it. The muscles of the lower extremities were well developed. There were no sensory symptoms. No complaint was made of the upper extremities.

The wrist jerks were exaggerated; the knee jerks, on the other hand, were decidedly feeble. This contrast in the state of the deep reflexes, when taken in conjunction with the other symptoms, gave important evidence. I have often referred to the fact that the knee jerk is not, according to my observation, lost in cases of hysteria; on the contrary, it is almost always increased. Its marked diminution in this case, alongside of greatly exaggerated wrist jerk, pointed in the circumstances to impaired nutrition of the second lumbar segment of the spinal cord. The complete loss of power in the iliaco-psoas muscles, as shown by the examination of the patient's movements, indicated that the first lumbar segment was still more severely affected. An opinion to this effect was given. As regards the Weir Mitchell treatment, it was agreed that the general health was likely to receive benefit from it, but that no promise could be made that the local symptoms would be removed.

The patient went through a course of systematic treatment conducted by Dr. Playfair, who at the end of six weeks was kind enough to let me again examine her. She was no longer anæmic, and had greatly improved in appearance. She had gained fifteen pounds in weight. The knee jerks were now well marked, but there was still considerable

difficulty in the movements performed by the iliaco-psoas muscles. She could "fling" her foot on to a low chair—it could scarcely be called lifting it—and could then drag herself up, holding on to the back of the chair, so as to stand upon the seat. This was only when the right foot was employed.

I am informed that this lady still shows a somewhat peculiar gait, but that she can dance, run about quite actively, ascend stairs quickly, and appears to have full muscular power. She was recently married.

Some four years previous to this I had been consulted in the case of a well-nourished healthy-looking young woman, æt. twenty-four, who had failed in her walking powers, and a similar question had arisen as regards the nature of her disability. It is notorious that when a girl of highly neurotic temperament complains of difficulty in walking, the suggestion of an hysterical cause is very apt, and in many cases justly, to arise.

The patient, whom I saw in 1882, had been observed by her mother in 1879 to be walking in a laboured way, which was at first attributed to the wearing of high-heeled boots, and the presence of chilblains. But the difficulty continued and only increased as time went on. It appeared that in the winter of 1876-77 she had undergone great fatigue in "rinking," and it was not long after this that she had begun to feel unduly tired in walking.

I found on examination that the muscles of the lower extremities were well developed, and that the only defect in movement was in the action of the iliaco-psoas group. There appeared to be absolutely no power of flexing the thigh upon the pelvis, all the other movements being well performed. The knee jerks were normal. The patient was sent to bed, fed, rubbed, and fired in the lower dorsal region of the spine, but without any effect. In December 1883 she could still walk, but required first to be set upon her feet.

I learned last year that she had lost all power of movement in her lower extremities. There was no wasting of the limbs, which were sound and indeed unduly firm.

Last year a sister of this patient, æt. twenty-eight, was

brought to me suffering in her turn from a somewhat narrowly localised loss of power. This patient could run up stairs two steps at a time, and mount easily upon a chair without the aid of her arms, but she had no power of dorsal flexion of the right foot, and almost none in the left. The leg itself was very firm and plump. Electrical examination shewed complete absence of reaction to induced currents in the anterior tibial muscles.

The patient, I learned, had enjoyed very good health, but her walk had been observed to be peculiar for eight or nine months. This was due, no doubt, to the dropping of her feet necessitating high action. Besides the patient with iliaco-psoas paralysis above described, this girl has two other sisters, one whom I have not seen, who is thirty-two years old and married, and is described as walking in the same fashion. She is unable to walk fast. The other sister, twenty-five years of age, shows no peculiarity of gait. It is evident that in the first of these two sisters' cases no question as between the organic or functional nature of the affection could have arisen, had the muscles affected (the flexors of the thigh) been in a position to be explored by electric currents as they were in the second. But although in very emaciated persons it may, though very rarely, be possible to apply a rheophore in the situation of the iliacus muscle, the pain caused by electric currents in this situation is intolerable to most persons, and renders electrical exploration impracticable.

I suppose it can hardly be doubted that the condition of the anterior tibial muscles, in the second sister, gives the clue to that of the iliaco-psoas muscles in the first, and from the description given of the married sister (whom I have not seen) it seems likely that she is also affected in some of her muscles in a similar manner. It seems probable that these are cases of simple idiopathic muscular atrophy which is apt to occur in several members of the same family, is often inherited, and is not of central origin. The remarkably firm condition of the limbs, coupled with the results of electrical examination, seems to point to overgrowth of interstitial tissue. In this family I could hear of no other instance of a like affection, and the only peculiarity in the history that

I could learn was that the father and mother were first cousins.

Some years ago I saw with Dr. Playfair another lady who had been affected for more than ten years with a similar powerlessness confined to the iliaco-psoas muscles. In her case the Weir Mitchell treatment was adopted without success. She was probably an example of the same condition.

In 1885, a military man, æt. sixty-eight, consulted me on account of inability to flex the hip joints—the other movements of the lower extremities being perfect, and the electrical reactions normal. There was no loss of sensation. The knee jerks were perfect, and there was no difficulty in the action of the bladder. The want of power first showed itself at the close of the Crimean campaign, during which he had enjoyed good health. He was affected with peculiar nervous sensations. In this case there was a history of syphilis. Specific treatment had produced no effect.

Atrophy of the iliaco-psoas muscles occurring in a young female, accompanied by hysterical symptoms, would seem to be peculiarly liable to be wrongly interpreted. The patient complains of difficulty in walking, but the knee jerks are preserved, and the electrical condition of all the muscles of the lower extremity that can be tested is strictly normal. One is naturally disposed to expect in such a case that if there be a central lesion in the cord, either the muscles innervated from the lumbar enlargement will be found atrophied and their electrical reactions abnormal, or if the lesion be above the enlargement, symptoms of spasticity will be present, the knee jerks will be exaggerated, and there will be more or less ankle clonus.

I think that the cases which I have described may serve a useful purpose in drawing attention, in a doubtful case, to the fact that there may be isolated atrophy of the iliaco-psoas.

The successful result of systematic treatment by high feeding and massage in the case first related is probably to be explained by the fact that the patient was anæmic and much reduced. It seems likely that in her case the condi-

tion was not one of congenital idiopathic muscular atrophy, but that there was a temporary state of mal-nutrition of the cord, which recovered. I remember another instance of the kind in a young woman profoundly affected with anæmia, who regained power under appropriate treatment.

A governess, æt. twenty-three, came to me on Oct. 18th, 1884, on account of difficulty in walking. She had been delicate in childhood, but had usually enjoyed good health. For the last fortnight she had been unable to carry on her occupation. Five weeks previously she had felt her breath very short in going up stairs, and had kept in bed for a few days. Every time she left the bed she fainted. A fortnight since she experienced great difficulty in walking, as though her legs gave her no support, and there was a great aching at the bottom of the back. She could only just hobble about from one room to the other. There was great vesical irritability. The catamenia had been suspended for three months. The patient was suffering from marked chloro-anæmia; the cardiac sounds were normal; the urine contained no albumen nor sugar. There was some tenderness on pressure on the first lumbar vertebra; the spinal column showed no deformity. The movements of the lower extremities were feeble, especially flexion of the thigh upon the hip, which could scarcely be performed. The knee jerks were rather in excess. Iron and arsenic were prescribed for her.

After a fortnight she had greatly improved in colour and was able to walk better. The vesical trouble, however, still continued. She was unable to lift the left knee, but could lift the right. There was no affection of sensibility. In three weeks more she felt quite well in herself and the vesical trouble had ceased. She was able to lift the right knee against a certain amount of pressure, but not the left at all. She could straighten the left leg, flex and extend the foot, and in fact do anything but lift the knee. In going up stairs she would put her right foot down first, and then draw the left after her; in descending the left was put down first. She still suffered from palpitation and breathlessness.

About six weeks later, when I saw her again, the legs

had quite recovered; she was able to walk more than a couple of miles, and could lift her knee on either side in normal fashion.

It will be remembered that the late Dr. Moxon, in his Croonian Lectures before the Royal College of Physicians in 1881, called attention to the great length and obliquity of the spinal arteries which supply the lower third of the spinal cord, as a probable cause of temporary anæmia. It would seem that where there is general anæmia this anatomical arrangement may explain the localisation of disturbed nutrition in this part. I suppose that in the case first related, where the knee jerks, which were at first small, became well pronounced as the patient recovered, it was to the anæmic condition of the cord at the second lumbar segment that the imperfection of the reflex action was due. One can conceive it possible that anæmia in a given case might be so extreme as to cause a temporary disappearance of the reflex. It is necessary to bear this in mind, as the absence of knee jerk is a symptom which, if the illness has been long continued, is more suggestive of irreparable damage than of a condition capable of being treated successfully.

The absence of knee jerk, so far as my experience goes, in a young female is a matter requiring very careful examination. I need not mention the obvious conditions which usually explain the absence, but would refer to cases of a less common kind, which it is well to bear in mind. One of these I saw with Dr. Playfair in 1884. The patient, a young lady, aged twenty-six, had begun to get weak in walking eight or nine years previously. The difficulty had gradually increased until she had an attack of typhoid fever, since when she had been unable to walk at all.

Examination showed the following condition:—Her speech is ataxic, the words being slurred. The hands possess a good grasp, but are rather wildly moved about when directed to touch an object—a condition of marked ataxy. This is the case with each hand. It is not the tremor of disseminated sclerosis, but the movement of a person suffering from tabes dorsalis. There is no wrist jerk on either side. She cannot sit up. When Dr. Playfair and I tried to

make her stand and walk between us, she could do nothing; her legs and feet disappeared and were mere appendages to her frame. There was no power whatever of standing, she sank "in a heap" to the ground. Lying on the couch, she failed to lift the right foot from off the ground and place it on the couch. The sensibility of the limbs appeared good. The knee jerks were absolutely wanting; the vasti interni muscles were flaccid and did not respond to direct percussion; the sole reflex was preserved. There was enormous lateral curvature of the spine. This, she informed me, had not been observed until she was ten years of age. There had never been any pains. The powerlessness of the muscles of the trunk and lower extremities was very great. With all this the action of the bladder and bowels was described as normal, although there had been occasional incontinence.

The patient had a fairly good colour with a face not markedly unhealthy looking. Her manner was highly nervous and hysterical. The pupils responded well to light.

It appeared that her condition had been ascribed to hysteria, and that in an earlier stage of her illness she had been forced to try and walk up stairs. She managed this only by the aid of the banisters, never without. At that time (three years previously) she could get about a room with the help of a chair. The general health was good. I was of opinion that the case was one of Friedreich's ataxy and that it was not fitted for the Weir Mitchell treatment.

Her mother tells me that she has two sons and one daughter besides the patient. They are in very good health, able to play lawn tennis and take long walks. She herself enjoys good health, and so does the father of the patient. Neither in her family nor in her husband's is there any case of paralysis or nervous disorder so far as she knows.

As is well known, Friedreich's ataxy is usually not confined to one member of a family, so that in this instance the exceptional limitation increased the likelihood of the case being referred, as indeed it had been positively, to hysteria; but there can be no question of its nature.

A year or two ago a young man, æt. twenty-four, was brought to me on account of difficulty in walking, the cause

of which had given rise to difference of opinion. He had a staggering gait, with hesitating and slurring speech. The knee jerks were absent.

It appeared that up to fourteen months old he had been liable to "spasmodic croup," and he was two and a-half years old before he began to stand upon his feet. As a school boy he would tumble about at times and never could learn to dance. He did well, however, in his school work, and carried off prizes, the mental development being good. He went to one of the universities, but had to quit it after two years, the proctors accusing him of intoxication, owing to his gait. This was, evidently, a case of Friedreich's ataxy, but here again I could obtain no history of a family proclivity to the disease. There was an elder brother and a younger sister, both of whom I was informed were free from disease, and I could not hear of any other member of the family having been affected in a like manner.

I cannot remember (and my very imperfect notes say nothing upon the point) whether either of these patients presented the deformity of foot which has been specially described by Rutimeyer, Burg and Ormerod. My attention was first drawn to the symptom by Dr. Ormerod, who thus describes the development of the kind of club foot which is apt to occur in cases of Friedreich's ataxy. "The instep becomes prominent, and the meta-tarsals appear to be shortened; at the metatarso-phalangeal joints the toes become over-extended, and at the first inter-phalangeal joints flexed. The foot looks humpy and shortened. Below, the plantar arch (at least as seen from the inner side), is abnormally high, and the balls of the toes are very prominent. The foot also tends to assume the position of equino-varus."[1]

I remember seeing a case (which I do not now doubt was one of Friedreich's ataxy, although I failed to diagnose it at the time), in which the only complaint made by the patient was of this club foot, to which was attributed the difficulty in gait. The knee jerks were absent. It may be well to mention this, as there is always the possibility of the disease

[1] BRAIN, January, 1888.

being overlooked from the attention being directed to one prominent symptom.

There is no doubt that as a rule the fact that a patient has been observed on some occasion when she thought herself alone, to perform some movement which has been previously alleged to be impossible, lends us very important aid in coming to a diagnosis. This circumstance occurred in a case which I will briefly relate.

A lady, aged thirty-three, was seen by me at Dr. Playfair's request on June 16th, 1884. She had been for nearly eighteen years confined to her bed on account of loss of power in her lower extremities.

The patient had fallen down a flight of steps at the age of fourteen or fifteen, and shortly afterwards began to walk with difficulty and only with the help of sticks and crutches. She was seen by an eminent surgeon, who thought that she might have injured her spine and advised that she should rest. She took to her bed, and shortly afterwards completely lost the use of her lower extremities.

The patient when I visited her lay on a couch, with her legs semi-flexed at the knees and turned on their side. The feet were dropped and toes pointed. She said that she was unable to move her legs voluntarily in the least, but that they moved sometimes of themselves. She knew how they were lying without looking at them. The muscles when examined electrically were found to contract normally to induced currents. There was complete anæsthesia of both legs from just above the knee downwards—in fact of that portion of the lower extremity which would be covered by a stocking. The limbs were emaciated, the muscles being small and flabby, but there was no picked-out atrophy. The knee jerk was good on each side, and the tendo achillis jerk well marked; there was no ankle clonus. The plantar reflex could scarcely be evoked. The spinal column was free from deformity, there was superficial tenderness in the mid-dorsal region, and also in the nape of the neck. The patient gave me her left hand saying that the right was somewhat weak. The muscles of that arm contracted normally to induced currents.

The cutaneous anæsthesia was entirely confined to the legs. The patient did not suffer from any pains in the extremities; there were no bed sores. She was liable to severe dysmenorrhœa. The sight was perfect, the intelligence high, the general health very good.

I was informed that on two or three occasions the urine had been passed in the bed without the patient's knowledge. On one occasion when she had been laid up for about ten years, her maid, coming unexpectedly into her room, found her standing at the window, whence she walked to bed again. Even without this bit of history the case, it will be seen, presented no difficulty in diagnosis.

A confident opinion was given that the case was one of hysteria, and the patient was put through a course of systematic treatment. She perfectly recovered. Dr. Playfair informs me that she has remained well ever since, and leads a very busy and energetic life.

A recent experience reminds me that we must be cautious in drawing inferences from some behaviour of the patient which appears inconsistent with other symptoms. On the 8th November last I saw in consultation a lady, æt. fifty-five, of highly nervous temperament with hysterical antecedents who had been suffering for several days past from attacks of violent colic-like abdominal pain, extending at times to the lower extremities. She described the attacks as commencing with a "creeping" up the spine. In the course of time there would be a state of intense excitement with convulsive movements of the arms.

It appeared that one of her breasts had been removed in the early part of the year on account of malignant disease, and the patient was under so fixed a belief that the present illness signified a reappearance of this disease, that she could not be pacified.

The patient looked thin, but not emaciated. She lay in bed and appeared to have especially great difficulty in flexing the thighs upon the trunk; dorsal flexion of the feet was performed more easily. The muscles were very flabby. The knee jerks were absent, and there was no plantar reflex. She complained of numbness over both lower extremities

from about the level of the tenth dorsal vertebra downwards, and in this district touches were felt imperfectly. She told me that a fortnight previously numbness had commenced in the right lower extremity, and also rather to the left of the spine. At the same time there was weakness of the right leg. This had gradually, within the last few days, invaded the left lower limb, but the right was still the worst. She was sure that the loss of power and the numbness both commenced together in the right limb. Nothing wrong was to be detected about the spine nor in the abdomen.

The nurse said that the patient when by herself walked about the room quite actively, in strong contrast to the feebleness of movement shown when she was observed. In view of this, the patient's manner and history, and the absence of any sign of growth under the most careful examination, opinions had been expressed that the symptoms were probably functional, and it was with a view of helping to clear up this initial difficulty that my opinion was asked. From the fact that, whilst the wrist jerks were strongly marked (as is common in hysterical women), the knee jerks were quite absent, I had no difficulty in coming to a conclusion that the symptoms depended upon organic lesion. The opinion was expressed that she was suffering from neuritis, and this was assigned to the cauda equina. It might be due either to rheumatism, gout, syphilis, or malignant disease. The latter contingency was to be feared in the circumstances. Large doses of iodide were advised.

On Nov. 20th, there was still further loss of power, but the attacks of colic-like pain had ceased. The vasti muscles did not respond to induced currents. On Dec. 6th there was absolute paraplegia except that she could just move the toes of the right foot. The bladder was not affected. There was difficulty in swallowing and dangerous choking. Her condition became more and more grave, and on Dec. 9th she died, after an attack of choking.

There can be no doubt that she succumbed to secondary deposits of cancer.

In the case preceding that which has just been related, it will be noted that the patient had occasionally suffered

from unconscious discharge of urine. In my experience this is not at all of unfrequent occurrence in cases of hysterical paraplegia. The behaviour of the bladder has sometimes been made a crucial test in the question between functional and organic disease. It is quite certain that patients affected with hysterical paraplegia may suffer from inability to prevent discharge of urine into the bed. It is notorious, of course, that they are liable to retention. An instructive illustration of urinary troubles occurring in the course of a case which was evidently hysterical will be found in the narrative which follows.

A female patient, æt. thirty-three, was admitted into the National Hospital for the Paralysed and the Epileptic on May 26th, 1886, on account of loss of power in both legs and the left arm, of five years' duration.

In the autumn of 1879 the patient had suffered from "inflammation of the lungs," and afterwards from general weakness with "weak heart" and faintness. In 1881 her legs became very weak, and at the end of the year she could not move them. In 1883 the legs began to get stiff and since then they had gradually become worse.

In 1864 she had fallen downstairs and hurt the left side of the head. This was followed by a discharge from the left ear, and about a year later an abscess formed behind it, and there had been more or less discharge from the abscess or the ear ever since.

In 1878 she had broken "her left arm and wrist and finger," so she described it, and the hand had been useless ever since. The arm, however, and the elbow and shoulder had only been helpless since last July.

She never had severe pain in the back or limbs, and had never suffered from bedsore. There had been incontinence of urine for some months during the past year; constipation had existed since 1869. There had not been any loss of control over the sphincter ani.

The patient had suffered from scarlet fever at twelve, and diphtheria at seventeen. As regards her family history, the father as well as two of his sisters and two of his brothers and many other relations had died of consumption. Her

mother had cancer; many of her relations have had paralysis.

On admission the following note was taken by the house physician. There is complete left facial paralysis; a foul discharge comes from the left ear, copious in amount, with tenderness on pressure over the mastoid process, where there is a mark of an old scar. A short distance inside the external auditory meatus a pale polypoid mass is seen. In the left eye corneal opacities are seen in the lower half. There is no paralysis of the tongue, no difficulty in articulation or deglutition. There is aphonia: attempts to examine the larynx failed.

The left hand lies in a position of rigid flexion, the joints cannot be voluntarily moved. The patient cannot stand; there is rigidity of the legs in the extended position. Both ankles are extended and the toes over-extended on the metatarsus. There is no voluntary power over the joints. Knee jerks are equal; no ankle clonus can be produced, possibly on account of mechanical impediment; the wrist jerks are equal. There is no affection of sensation anywhere. The plantar reflexes are present, though slight. There is a little tenderness of the spine between the scapulæ; some tenderness is complained of in the iliac fossæ, especially the left. Nothing is found wrong in the cardiac and respiratory systems.

As there was no doubt, from the history and circumstances, that the case was one of hysteria, a few days after admission I forcibly extended the left fingers, which had been rigidly flexed. In doing so the skin was torn at the roots of the fingers. A splint was then applied. Next morning, when the splint was removed, the patient was able to move her fingers to a considerable extent. The legs were now also forcibly moved at the knees, and the feet actively dorsal-flexed as far as was possible. There were evident adhesions in the ankle joints, which obstructed flexion. Some of these were broken down. Two days afterwards the patient could move all the joints of her legs a little. There was still aphonia. Although the grasp of the left hand still measured 0 on the dynamometer, she was found to be using the fingers

of this hand nimbly enough for knitting. After three weeks it is noted she has now very good movements in the left hand and arm, and has considerable grasping power with it. She can move the toes very well, and bend the knees considerably, but the feet are extended at the ankle joints and cannot be flexed on the legs. There is still aphonia, but she can close her glottis for the purpose of coughing.

About six weeks later the patient was discharged, able to walk fairly well, though a little awkwardly, without help. She could use her left hand and arm perfectly well. The voice had entirely returned. There was no rigidity of any of the limbs.

This was undoubtedly a case of hysterical paraplegia, and is important as illustrating, besides the incontinence of urine, some of the trophic disorders which may result simply from long disuse of limbs. The formation of adhesions in joints, requiring forcible disruption, I have seen in other cases which were proved by the sequel to be of purely hysterical origin. There was no real muscular contracture in this case, although the dropped position of the feet suggested overpulling of the sural muscles. As soon as the adhesions were all torn through, the feet could be dorsal-flexed into a normal position. I have reason to think that this condition of joints is often regarded as strong evidence against the diagnosis of an hysterical condition, but I have convinced myself that this is an error.

Nor was there any real muscular contracture in the left forearm, although the *primâ facie* resemblance to the late rigidity so often seen in hemiplegia, was remarkable. In true hemiplegic contracture it will be observed that you cannot by any amount of force straighten the whole limb at one moment. If you straighten out the fingers, the wrist remains rigidly flexed. Bring the metatarsus into a line with the forearm by extending the wrist, the fingers will *ipsô factô* become rigidly flexed. But in this case I found, as I have often seen in other cases of apparent contracture of hysterical origin, that I could extend the fingers and wrist at the same moment, thus bringing the forearm and hand and fingers into the same plane. In doing this, however, the

skin at the roots of the fingers gave way, so that there was a transverse tear at each metatarso-phalangeal joint, shewing that there had been an adapted contracture of the skin from long disuse of the member.

The preservation of the plantar reflexes in this case was an exception to the rule, which according to my experience is of almost universal application, that in hysterical paraplegia tickling the sole produces no response. Sometimes by persevering in a very elaborate titillation the reflex is produced, and occasionally also it is easy to see that a good deal of voluntary action is expended in restraining the muscular contraction. But usually there is a simple absence of the plantar reflex, the stimulus being felt as touch only, even in persons who are naturally very ticklish. The behaviour of the reflexes in hysterical paraplegia is almost always the converse of that which obtains in tabes dorsalis—the knee jerks are exaggerated and there may be ankle clonus—the plantar reflexes absent. The exaggeration of knee jerks occurs even when there is no tendency to spasticity in the limb, which, indeed, may be abnormally lax.

In tolerably recent cases of hysterical paraplegia the limbs may be firm and round, the skin healthy looking, and the knee jerks well marked. If in these circumstances inability to extend the knee joint and dorsal flex the foot is alleged, whilst the muscles respond normally to induced currents, and there is no spasticity, the diagnosis I take it, must be safe, because one can exclude the presence of lesion in and above the lumbar enlargement. But given a partial loss of power in a limb, with a tendency to rigidity, and the difficulty of diagnosis is often enormous.

Here we enter the field occupied by cases of incipient insular or disseminated sclerosis, and these are apt to offer diagnostic problems which are sometimes of almost insoluble intricacy. There are few diseases more easily recognised than disseminated sclerosis when typically developed; there is none, I think, which may present so much difficulty when the symptoms which combine to constitute the type are almost all absent, or but very faintly expressed, obscured too, as they continually are, by very evident signs of hysteria. I

was long ago indebted to an article by A. Pitres[1] for hints regarding the insidious modes in which this disease might make its approaches, but notwithstanding this and in spite of all the care which a peculiar interest in the subject has disposed me to take, I am conscious of having made not a few mistakes in diagnosis. From my own observation, and what I have known of the practice of others, I am convinced that a very large number of cases of an early stage of disseminated sclerosis—the stage in which there are probably patches of sub-acute interstitial myelitis—continue to be diagnosed either as examples of hysteria or of voluntary simulation. The most characteristic symptom of the disease is doubtless that tremor upon voluntary exertion which Charcot has so admirably pictured in his classical account of the disease. But this, as well as the articulatory difficulty, the rigidity of muscles, the nystagmus, and the so-called apoplectiform seizures, may be absent. The symptom which is perhaps least liable to fail is an excess of knee jerk, but even this may not be present—in rare cases, indeed, there may be no response to a blow upon the ligamentum patellæ—ankle clonus may not unfrequently be unattainable. Moreover, as is well known, exaggerated knee jerks are common in hysteria, and ankle clonus also is sometimes observed. The place properly (so to speak) occupied by the characteristic symptoms of the disease may be usurped by a temporary weakness of one limb, a transitory numbness in an extremity, loss of sight of one eye, a narrowly localized atrophy of a muscle group, or some so-called rheumatic pains. It is evident that when one of these symptoms (the atrophy alone perhaps excepted) stands by itself, and is obscured by very distinct signs of hysteria, the probability of an error in diagnosis is enormous. Indeed in the nature of things it is impossible in all cases to avoid this, but the chances of error are obviously diminished in proportion as we are alive to them.

I have been able in several instances to follow up cases which presented great difficulties to myself and others, and the sequel in these has proved so instructive that I make no

[1] "Anomalies de la sclérose en plaques."—*Revue Mensuelle*, 1877.

apology for detailing them. Unfortunately they are in some instances not quite so complete as would be desirable. Nor is it at all easy to describe with the pen the peculiarity of look and manner which so strongly suggest hysteria when one is in the presence of the patient.

A patient whom I saw on only one occasion nearly thirteen years ago, exercised my curiosity very much, and I should be very glad to learn for certain the ultimate issue.

A girl, aet. 20, was sent to me by her medical attendant on June 5th, 1877. There was a bad family history. Father epileptic. Several brothers and sisters died early.

Her mother, a very intelligent woman, had prepared the following notes of her case. "Almost total loss of the use of her legs, especially the left, which is very stiff. Formerly the right leg was most affected. Sharp pains through the right knee.

"Tingling feeling in fingers, with occasional numbness in the left hand.

"Mouth sometimes slightly drawn. At such times speech slightly affected. Appetite bad. Complains of feeling swollen. Her feet are generally cold. Her habit is costive. The breath is offensive.

"Her temper is peevish, variable, and hysterical.

"The urine is thick and high coloured: it reddens litmus paper and stains linen. Its specific gravity 1013. It contains no sugar or albumen. Perspiration is profuse and offensive."

The patient was a tolerably well-grown girl with red cheeks and large pupils. She could not stand without support, and then only with great difficulty. The legs, being bared, presented a helpless appearance—especially the left. The hair on the skin was rather long. The feet were cold and clammy. In trying to reach a chair in my room she fell down on the floor. I was told that she had fallen down several times at home.

In February, 1876 (about sixteen months previously), there had been a weakness of the right leg and the left hand, of which she got the better. Again, in the autumn of the same year, whilst at the seaside, there occurred suddenly

a weakness of the right leg. But just before she came to me the left leg became the weakest. She complained of tingling in both hands (most in the left), and said that she could not write, play the piano, or draw as she formerly could. She suffered very sharp sudden pains like a knife going through the right knee. There was also a dull aching pain in the left knee—especially in walking. A well-marked feeling of waist constriction was described.

Her articulation was peculiar—the words seeming to stick in her mouth. When at my request she held out a pencil in her right hand, and tried to measure the length of a face in a photograph, the arm shook up and down, so that she failed to do it.

In the left leg the patellar tendon reflex was strongly marked. When seated, if she drew the left foot towards her at a certain point spontaneous ankle clonus of a very marked kind was set up. This also happened when she lifted her foot from the ground and held it up. Tickling the sole also gave rise to clonus.

The heart and lungs were healthy. There was no spinal curvature nor tenderness on pressure. The ophthalmoscope showed no change. There was no nystagmus. In childhood she had been rickety, it was said, and she did not walk until more than three years old.

Her mother told me that within the last year or two she had become completely changed. She had taken strongly to ritualism. Her moral character had degraded—the girl having become peevish, ungrateful, and strongly inclined to prevarication. It appeared to me that along with the hysterical symptoms there was typical evidence of disseminated sclerosis, and I expressed a distinctly unfavourable opinion as regarded the future. Arsenic was suggested, and a visit to the seaside.

A few months later I learned that she had quite recovered. But I could never get the opportunity of seeing her. In July, 1878—a year after she had been brought to me—I learned from her medical attendant, who frequently saw her socially (not professionally), that the girl seemed quite well. She could walk any distance, occupied herself, and appeared,

as far as he could judge, to have nothing whatever the matter with her.

In answer to an inquiry of mine a year and-a-half after this (two and a-half years from the date of my examination), he wrote :—"When I last saw Miss T. she was very well, but she left E—— about three months ago, and has gone to reside in D——. From time to time she has limped a little, or squinted, and then has taken the arsenic. I cannot help thinking her symptoms are due to that wonderful simulator hysteria."

Since that time I have been able to obtain no information about this patient. I have still no doubt that it is a case of disseminated sclerosis, but the narrative illustrates some of the difficulties encountered in coming to a conclusion as to the functional or organic nature of certain symptoms.

The fact that in the course of disseminated sclerosis there are apt to be periods varying in length, of almost or even complete subsidence of symptoms, though mentioned by Charcot and writers generally, is not yet, I think, sufficiently remembered and taken into account when we are occupied with the diagnosis of a case which presents difficulties. The circumstance of this girl's apparent recovery would not unnaturally lead to the conclusion that the case had been simply one of hysteria, which the consultant had mistaken, but it will have been observed that a year after the supposed recovery mention is made of occasional "limping" and "squinting," expressions which in the circumstances are of grave significance.

Before remarking on the value of some individual symptoms, I should like to record some cases which originally gave rise to a difficulty of diagnosis which has been resolved by the sequel.[1]

A lady, æt. thirty-one, was brought to me on February 7th, 1878, on account of loss of power in the lower extremities. She had been quite well, I was told, though never very robust, until two years previously, when she

[1] Many of the cases which follow could not be read at the meeting for want of time.

began to complain of numbness in the feet, and shortly afterwards in the right hand, and also of stiffness in her joints. There was also some numbness in the left side of the face and head for a short time.

At first she could not feel the ground with her feet, and then by degrees there was failure of power, so that she tottered in walking. This had gradually increased, and at the time of her visit to me she could not apparently walk across the room without taking hold of the furniture in order to balance herself.

Now and then she had a feeling of waist constriction. Sometimes there was delay in passing urine. At other times she could not hold it. The bowels were always confined. The grasp of the right hand was almost *nil*. In picking up small things from the table there were rhythmical movements of the hands. The faradaic excitability of the arms was normal. She complained of pain, or a dull weight at the back of the head; there was no noise in the ears. As she sat everything seemed going round. She had had no vomiting. Always myopic, her sight had latterly become feeble. With all this she had rather gained flesh.

With the ophthalmoscope I found the right disc more pale than the left, which, for its part, was of a dull grey hue. There was no posterior staphyloma. She could see much better with the left than with the right eye. There was no nystagmus. She had a sallow aspect. The heart and lungs were healthy. Three sisters had died of consumption.

On the right side there was ankle clonus. When she pointed the foot it was moved wildly to and fro. The patient was sent to me as a case of hysteria.

It was clearly an example of disseminated sclerosis. I did not see her again, but learned a year or more afterwards that she had become decidedly worse.

I saw, November 23rd, 1881, with Dr. Playfair, a young lady, twenty-three years of age, who could not walk without help, and the question to be determined was whether the case was one of hysterical paralysis, which it had been pronounced to be by many of the medical men who had been consulted. Dr. Playfair was inclined to think that it was

not a case of hysteria. The patient who was unwholesomely fat lay in bed. I was struck at once with the fact that she had a little horizontal nystagmus; the pupils were moderate in size; she described herself as being short-sighted. Some five years previously she had complained of her eyes, and had been advised to go to the seaside.

In 1876 she strained her left knee, and was lame in that leg for two or three months afterwards. In 1878 she had a fall on the back, and since then she had gradually lost power in both legs, in the left especially. There was no loss of sensibility. I found the knee jerks excessive in each leg and ankle clonus in the left, rather strongly marked, slighter clonus in the right. The reflex from the soles of the feet was very imperfect and suggested a hysterical condition. The legs seemed flabby and the skin was coarse and cold and inclined to the purplish tinge that one often sees in the legs of hysterical patients.

As she lay in bed with her hands upon the bedclothes in repose they were quite quiet, but when at my request she put out her right hand to pluck a grape from a bunch, the arm immediately betrayed the rhythmical movements characteristic of disseminated sclerosis in a marked form. The same symptom was noted though to a less extent in the left arm; so also, when she sat up in bed with help, the muscles of the trunk became affected with movements and the head began to shake. When put upon her feet the muscles of the trunk and extremities felt rather rigid.

I examined the eyes with the ophthalmoscope; the right disc showed no important change, but the left presented that dark grey discoloration (resembling the tint of hyperæmic grey matter of cerebrum) which I have seen now in several cases of disseminated sclerosis. My opinion was that the patient was affected with disseminated sclerosis. Dr. Playfair recently informed me that this young lady was brought back to him six years afterwards in the hope that he would undertake her case which, however, he declined. By that time the symptoms of disseminated sclerosis were very marked and far advanced.

The following case is extremely interesting. Mrs. ———

was seen by me in consultation with Dr. Playfair on March 13th, 1883. She was the mother of four children, the last child having been born a year previously. She had been ailing for two or three years, and complained of loss of power in the lower extremities. There was partial rigidity of the legs, which were not ill-nourished. The soles of the feet were very ticklish and the legs moved up vigorously when they were touched. Tendon reflex was in excess and there was ankle clonus. As she lay she was unable to move either foot from off the bed. She complained of a sense of tightness around the ribs. Examined by the ophthalmoscope the right optic disc was seen to be white and presenting that metallic glistening look which is observed in some states of atrophy.

There was a history of loss of sight of the left eye with gradual recovery, and later, of loss of sight of the right eye with gradual recovery, which had been thought to point strongly to hysteria. In spite of this, I believed from the symptoms that the case was probably one of disseminated sclerosis. She was afterwards seen by a distinguished colleague, who thought that the condition was hysterical, and she went under Weir Mitchell treatment in the hands of Dr. Playfair.

I learned only a few days ago from a friend of this lady that she "sometimes walks five or six miles to the services of her church on Sundays." Her husband's report of the same date is "Partial only, and I fear never likely to be complete recovery. Greatly improved power of locomotion, less nervousness, but a great deal remaining, and decided inability to think of much at any time."

A lady, aged 27, the mother of two children, the last being three years old, was seen by me in consultation with Dr. Playfair, on June 6th, 1883.

The patient who said that she had enjoyed good health till two years previously, did not present the aspect of illness in her face. Her complaint was of difficulties in walking and also in the sense of sight. When examined I found that she could not guide her steps rightly, and her head shook with every step that she took. She could not go through a

door straight. If she ventured to look back in walking she would fall down from a feeling of extreme giddiness. She had been numbed all over her body. The left leg appeared to her to be weaker than the right, the knee jerks were present and well marked in each leg, more in the left than in the right. There was no ankle clonus. No tremors of the limbs were noted. The wrist jerks were well marked. She did not suffer from headache, or deafness, and there was no facial paralysis. The patient's manner was highly hysterical.

It appears that she lost the sight of one eye (the left) entirely two years ago. It recovered to a certain extent in about six weeks. One year ago the sight failed in the right eye, though not to the same extent as it had done in the left. At the time of my examination she could not read or do needlework after exerting herself; she was always obliged to lie down first. After resting thus for a few minutes she was able to read a book. She read No. 2 type at four inches; the right pupil contracted to light; I was unable to be certain about the contraction of the left. Her appetite was bad: she did not suffer from any pain, but was depressed in spirits. She had lost all numbness, except in the tip of the tongue and the fingers. It appeared that two years previously she had felt numb all over the body; the numbness began in her waist, and descended to the feet, and then mounted from the waist to the throat. The ophthalmoscopic examination showed no change in the optic discs. As this patient quitted the house walking, I noticed her gait, which was staggering like that of the intoxicated.

She appeared to be very quick and intelligent, and this her husband confirmed. He said, however, that she was emotional and inclined to be sentimental. He told me that two very distinguished authorities had both considered the condition hysterical.

I wrote to Dr. Playfair that I could detect no distinct evidence of organic disease.

It seems that when the eyes failed she was taken to an ophthalmic surgeon, who examined her and found nothing perceptibly wrong. He sent her to an eminent colleague, who took a grave view of her case. This patient was sub-

mitted to systematic treatment by Dr. Playfair, who, in answer to my enquiry, writes as follows:—"I treated this case. I have a note, July 21st, 1883, to this effect: Mrs. J—— got quite well, and could walk with perfect ease, but she will not take my advice about going away with her nurse, and is going straight home, and I fear she will relapse. This fear appears to have been justified, for I have a letter from her husband, dated September 24th, 1883, in which he says: 'At first my wife was able to walk a mile or a mile-and-a-half, but she did not seem to make further progress, and latterly she has lost ground very much, and her sight is worse than before, and she can now only walk a very short distance.'" For my part I should have little doubt from the last paragraph that the case is one of disseminated sclerosis, but I have failed to obtain any more recent information regarding her.

A lady was seen by me in consultation with Dr. Playfair, November 27th, 1884. She was very deaf, fifty-three years of age. I found her lying in bed; she could not completely flex the knee joint, though Dr. Playfair had seen her do it on the preceding day. In trying to do this she lifted the whole lower extremity off the bed. The right limb was alone affected, the foot was flexed in the plantar position, apparently from semi-contraction, whether or not of the plantar fascia I am doubtful, but certainly there was contraction in the sural muscles. As she thus lay in bed, the tendo achillis was felt to be very rigid, but when I got her out of bed, seated, with her foot on the floor, this rigidity was not noticeable whilst she sat with the leg at right angles to thigh. In this position, unless by a determined effort (looking meanwhile at her feet), she brought the heel down, this part of the foot remained off the ground, but apparently she could put the flat of the foot on the ground. It was, therefore, impossible to say whether or not there was any permanent contraction of the sural muscles. With a view of helping towards the solution of this point I tested the anterior tibial muscles of the right leg, which responded normally (considering that they were smaller than the left) to induced currents.

The knee jerk was exaggerated on both sides, and there was some ankle clonus in the right leg. There was no affection of the bladder or bowel.

Her symptoms dated from two or three years back. Several years previously she had lost the use of the left arm and leg for a time, but recovered on going to Switzerland.

There was a sense of numbness in the right leg, as if it were covered (as she described it) with an extra skin of kid. The plantar reflex was good in both feet. Frequently she did not know where her leg was, and when she got out of bed it seemed quite useless and an encumbrance. It tended to wave about in a "drum-stick" fashion. She described her leg as being better than it had been, and she said that both her leg and thigh were bigger than they had been. She complained of a soreness in the left sacral region, which she felt especially on putting the right foot down.

The opinion was given that the condition was of functional character, and she was put under systematic treatment by Dr. Playfair. He reports to me, Nov., 1889: "This patient got apparently quite well. When she left me she had got rid of her crutches, sticks, &c., and could walk about. I have not since heard of her, but her nurse tells me she heard about a year ago that she was fairly well, but still could not walk perfectly." This would be four years after treatment.

The sequel as thus described, as well as subsequent experience in cases presenting the symptoms noted, make me think that I was wrong in my opinion, and that the case was one of organic disease, probably of disseminated sclerosis, which had evidently, however, derived great benefit from the treatment. I would note here that I was probably unduly influenced by the statement that several years previously she had lost the use of the *left* arm and leg for a time, but recovered on going to Switzerland. I shall have to say something more on this point later on.

A well-grown, healthy-looking lady, æt. twenty-five, of good figure and development, was seen by me in consultation with Dr. Playfair on Nov. 17th, 1886.

Until five years ago—*i.e.*, when she was twenty—her

health had been good. She was very active, particularly fond of walking, and able to walk nine miles. Then, without ascertained cause, she began to get some powerlessness of the left leg, which was at first thought to be rheumatic. It went on increasing so that ere long she could only walk half a mile. Since that time, although she had varied apparently a good deal—being sometimes scarcely able to move her legs and at others walking pretty well—she had never been able to walk two or three miles. The loss of power, which began in the left leg, shortly extended to the left arm, and afterwards the right leg and right arm became affected. It would sometimes be the right, sometimes the left lower extremity which was most weak, and so likewise with the arms. Moreover it would occasionally be the leg of one side and the arm of the other which would be co-incidently affected.

The patient walked in a tottering way. The muscles flexing the thigh appeared to be stronger on the left than on the right side. She could get up on to a chair with either leg first, but with the left better than with the right. The muscles appeared to be well nourished. Her power has varied very much from time to time. Five years ago she had a manifest squint with double vision, which lasted for several months. It was on account of the squint that she was taken to an eminent physician, who expressed an unfavourable opinion of the case. The knee jerks were exaggerated, and ankle clonus was said to have occurred, but I did not elicit any. An opinion was given that the condition as then observed was of functional character, and systematic treatment advised. Dr. Playfair treated her, and she apparently got so far well, that when treatment was discontinued there was only a slight difficulty in walking. From recent enquiry, however, it appears that now, three years later—she remains *in statu quô*, and is evidently affected with organic disease.

A lady, aged thirty-nine, the mother of one child, was sent to me by Dr. Playfair on July 9th, 1888. She complained of loss of power in walking. In Scotland, four years previously, she could walk six miles, and gradually after that

she lost power, staggered in her walk on looking up, and was obliged to hold on to something. At the same time, she said, a touch was not felt on the left side of the forehead and cheek, and the mouth was pulled on one side—she thinks the left. When examined, it is noted that her hand is steady for holding or writing; the ends of her fingers tingle. Her speech is of a hesitating clipping character, but this, it seems, she has had since the age of fourteen. Her sight began to fail in 1882; the failure in her walking powers a year or two later. The knee jerks are well marked; there is no ankle clonus. She picks up anything from the table easily and without tremor. Three years ago she could not see to read and write, but recovered the power, and for two years she could read fairly small print. Now she can hardly read minion (No. 4) at all. Both optic discs are found to be distinctly atrophic.

Dr. Playfair informs me that this patient apparently made a good recovery under systematic treatment, and went abroad with her nurse. For two and a-half months her condition remained quite satisfactory. Then one day after unusual fatigue she had a cerebral attack, the precise nature of which is left in doubt. She appears to have been quite unconscious for a considerable time, perhaps some days, and was supposed to be dying. Eventually she recovered from this and came back to England.

I saw this patient on May 29th, 1889, and examination shewed distinct symptoms of disseminated sclerosis. The cerebral attack was probably of the apoplectiform character described by Charcot as occurring in cases of disseminated sclerosis.

A lady, æt. twenty-four, was seen by me with Dr. Playfair, on May 14th, 1884, when the following notes were made. She has a good colour, large pupils, and is not unhealthy looking. She is rather, but not very thin. She rises from a chair with difficulty and stands tottering, glad to put her hand on anything to support her, and elects to have the feet wide apart, so as to enlarge the base. In walking, the gait is somewhat ataxic, with a slight tendency to over-action. There is but little power in the flexors of the thighs. The

knee jerk is much in excess on both sides, and there is ankle clonus. The plantar reflex is present and not abnormal. Complaint is made of considerable anæsthesia of the lower extremities. A touch is felt, but dimly and less distinctly on the right than on the left leg, and she cannot distinguish by the touch of her foot a Turkey from other carpet. In reply to a suggestion, she says that her legs feel as if asleep. She does not know where they are in bed without kicking against something. There is slight cutaneous anæsthsia in the fingers. She cannot pick up small things without looking. She has had cutaneous anæsthesia of the left side of the face, and indeed more or less all over her body. No bladder trouble is reported, except rather frequent micturition. There is no nystagmus.

The patient's illness dates from three years. First there was deafness, or rather sounds were heard as though at a great distance. Then followed diplopia; there was no strabismus perceptible, according to her sister's account. A surgeon said there was paralysis of a nerve, but an ophthalmic authority is reported to have said that it was of no consequence. In a week or two or more she lost the sight of the left eye almost entirely, but after some little time it returned. Now nothing abnormal is to be detected with the ophthalmoscope. She says that now the sight of the *right* eye is not so keen as that of the left.

It seems that at one time she had lost the use of both her arms. Now there is good grasp with each hand; no increased reflex is to be observed at the wrists. There are no tremors in the arms.

An opinion had been given by two eminent physicians three years previously that this patient had disease of the spinal cord, but two equally distinguished authorities who had more recently seen the case (one of whom had indeed sent the patient to Dr. Playfair) said that it was an example of hysterical paralysis.

Having been informed that three years previously the anterior muscles of the left leg had been found by a high authority to give no response to induced currents, whilst those of the right contracted well, I submitted the patient to a careful examination with electrical currents.

The application of currents to the legs gave rise to a good deal of reflex muscular action in the muscles moving the thighs. The Faradaic excitability was everywhere quite normal in the lower extremities, as also in the forearms and hands. With the galvanic current K S Z > A S Z. I gave the opinion that all the symptoms observed at that time could be explained by functional trouble, but some reserve must be felt owing to the past history.

The patient underwent a course of systematic treatment for nerve prostration, but without satisfactory result as regards her power of walking.

At her mother's request I saw her nearly four years afterwards, February 27th, 1888. She was then a good deal more helpless, but could lift the right knee a few inches, and the left, perhaps, one inch. She could not dorsal-flex either foot. With a stick and an arm she walked in a laboured manner, and the exertion to do this caused her great fatigue. Her eyes now presented nystagmus, both horizontal and vertical. There was a little waviness in the movement of the hands. Speech and hearing were good. Patient suffered from great frequency of micturition, every quarter-of-an-hour needing relief. She had no trouble with the bowel. She slept well, and her general health was good.

Tested by induced currents the anterior tibial muscles of the left leg shewed more defective response than those of the right, but on both sides the reaction was distinctly lowered. It does not need to be said that symptoms of disseminated sclerosis were now strongly pronounced.

In the case which follows a diagnosis of hysteria had been made before it came under my observation, and the girl certainly presented very much the aspect of an hysterical patient. It seems worth recording because of the sequel.

A young woman, æt. twenty-two, was admitted into the National Hospital for the Paralysed and the Epileptic on August 3rd, 1887, on account of loss of power in the hands and also in the lower extremities. There was no history of injury. She had suffered from measles when a child. About five years previous to admission she began to suffer from pains in both hip joints and weakness in the legs. Nine

months ago her knees gave way, and she complained of severe pains in the lower limbs. For three months she was able to go about with the aid of sticks, but for the last four months had been confined to bed.

For the last three years she had had attacks of loss of power in the hands, accompanied by semi-flexion of the fingers and pains.

On admission it was found that she could perform all movements of the upper limbs. No wasting or rigidity was present. She stated that she had occasional numbness and a pins-and-needles sensation in the fingers of both hands, and that she often had loss of power in the hand for a short time. No loss of sensation was observed. When asked to take hold of a pen held at a distance, there was marked tremor and inco-ordination. This was present in both upper limbs. It was with difficulty that she could drink from a cup without spilling the contents. The wrist jerks were present on both sides, not exaggerated.

She could perform all movements of the right lower limb as she lay in bed, but they were feeble. The left lower limb was flexed at the hip and knee, and patient was unable to extend fully at these joints. She was able to dorsal-flex the foot to a slight extent, also to flex and extend to a very slight degree the left hip and knee, but was unable to perform any other movements of the left lower limb. There was drooping of the toes of both feet, especially the left foot, but the patient was able to extend them. There was great rigidity in both lower limbs, especially in the left, which resisted all attempts at passive movements. The plantar reflexes were present on both sides, ankle clonus present on both sides, especially marked on the left. The knee jerks were exaggerated; there was knee clonus on the right side.

The right lower limb was subject to attacks of great rigidity in a position of extension; the left to attacks of rigidity in a flexed position. Formerly, according to her account, the left limb was apt to fall into a rigid posture in the position of extension.

There was no loss of sensation anywhere, but the patient complained that she suffered from twitchings and drawing

up of the legs, especially of the left. She also had pain in the thighs and knees. She had been unable to walk for the last three months.

When examined she was unable to stand without help, and she could not put the left foot to the ground on account of the contraction described. There was slight nystagmus and tremor of the head and neck when the patient was asked to fix her eyes on any object. Her speech was rather slow, and there was a tendency to pronounce the words in syllables; there was very slight tremor in the lips and tongue. She suffered occasionally from pain in the head, in the vertex, and also in the forehead. She described having frequently suffered from diplopia. The pupils reacted to light and to accommodation.

There was no spinal deformity and no tender spot on percussion of the spine. There was no vesical trouble, and nothing wrong in the respiratory and circulatory systems.

The optic discs were very pale. On sustained convergence there was well marked quick nystagmus occurring simultaneously in both eyes, but generally better marked in one than in the other. The pupils were not observed to vary consentaneously with the nystagmus.

The patient having been attacked with scarlet fever, was sent to the Fever Hospital, where she died. Dr. Barlow, under whose care she was admitted, was good enough to let me examine a hardened specimen of the spinal cord, which showed characteristic evidence of disseminated sclerosis.

During the first week or two of the following patient's stay in Hospital, I could not make up my mind as to the nature of her case, and I distinctly inclined to the belief that it was of functional character. She was highly hysterical; there was a history of long continued vomiting, and of loss of voice. But further observation convinced me that it was one of disseminated sclerosis—as was proved by the sequel.

A female patient, æt. forty-two, was admitted into the National Hospital for the Paralysed and the Epileptic, Queen Square, on Dec. 3rd, 1884, complaining of stiffness of both legs, being unable to walk without aid; also of pain, especially in the back, which seemed to radiate down both legs,

shooting in character. The left leg appeared worse than the right. The pains were better when the patient was up and walking about.

For the last twenty years the patient had been subject to attacks of sickness after every meal (sometimes only after one meal in the day), the longest interval of freedom from sickness at any time being 14 days. During this time the patient used to be readily tired, the legs would ache, but she did not have any special pains.

Four and a half years ago the aching and weariness of the limbs began to get worse, and the patient complained of the weight of her dress. The calves of both legs used to swell, and become shiny and hard. This disappeared in about a fortnight or so, but would occasionally recur. After this she began to suffer much from sharp shooting pains in the head and neck, relieved by lying down. The toes also at that time became very tender, and the tenderness continued for about two months, but had not returned.

Twelve months ago the patient noticed the legs begin to get stiff, but even before this her legs had occasionally drawn up when she was in bed. On two occasions during the last fifteen months, the urine has had to be drawn off.

It is noted on admission that the patient is fairly well nourished. The hands tend to turn over, and she would drop things unless very careful; the grasp is fairly good. She is not able to do fine needlework. Occasionally there is a pins-and-needles sensation in all the fingers of the right hand. She has difficulty in touching the nose with the fingers, her eyes being closed, but there are no tremors. She is able to localise touch and pain correctly in the arms; the wrist jerks are not increased. There is no nystagmus.

She has a feeling of tightness around the waist; the whole leg from the knee to the ankle feels tight as if it were going to burst. Tactile and painful sensibility is much impaired all over the legs and thighs. The plantar reflex is well marked in both legs; both legs are very stiff. Knee jerk is well marked when the legs are not too rigid, but it is impossible to get ankle clonus because of the stiffness of the legs. She is able to direct each foot pretty well to an object.

As regards the sickness from which she used to suffer, she says that she never felt sick, but food would come up at once. There was no pain in her stomach; she was obliged to get up from the table; the smell of fish would make her sick. Eight years ago for about three months she lost her voice. Her manner is highly hysterical.

This patient died in 1885 in Guy's Hospital under the care of the late Dr. Carrington. The notes of the autopsy, for which I am indebted to Dr. Gay, are as follows:—Large bed sores over the sacrum extending down to the bone, and one over the great trochanter of the left side. Abscess in each thigh, which had been opened. Brain weighed forty-one ounces. Meninges and arteries at the base presented nothing abnormal. The left temporo-sphenoidal lobe shewed yellow softening on the surface and interior extending to the corpus striatum. The whole brain was very carefully cut into fine sections, but no sclerotic patches were found. The spinal column was normal. A patch of purulent lymph was found on the posterior surface of the spinal cord in the lumbar region. The cerebro-spinal fluid was rather in excess. Patches of sclerosis began in the pons varolii, at the centre of which there was a patch on either side, and one also on the surface. They are raised, hard, semitranslucent and glistening. There is a patch on the surface of the medulla oblongata, spindle shaped, half-an-inch long and extending inwards to the white matter. There is no softening of the cord but many patches of sclerosis on the surface or more deeply.

The dorsal region of the cord was the least affected, the lumbar most. The posterior columns were most diseased, many parts between the posterior cornua and commissure being completely sclerosed. In some parts of the lumbar enlargement the whole transverse area, including the grey matter, was affected. All the other organs were healthy.

A case which was quite recently under my care in hospital furnishes so good an illustration of the difficulty in diagnosis that may be caused where a moral shock forms part of the history that I think it worth recording.

Ann B———, æt. thirty-one, widow, was admitted into

the National Hospital for the Paralysed and the Epileptic, under my care on October 26th, 1889. The following notes were taken by Dr. Taylor, resident medical officer.

Nine years ago, two or three weeks after the death of her husband (after a fortnight's illness), which had been a very great shock to her, she suddenly in one night lost power in her legs, and was unable to stand or walk for several weeks. She gradually recovered, but has never been as she was before—has never been able to run or to walk fast.

During the last six months she has gradually lost ground, not suddenly, but she is now worse than she has been during the last seven years. Her difficulty is to get her legs to separate from each other, and also in going up stairs. For the last four years there has been at times great difficulty in passing water, and sometimes she has suffered from incontinence. Patient was a strong healthy woman previous to her husband's death. On admission she complained of difficulty in walking. The condition of the arms was normal, except that a slight tremor showed itself at the end of the act in attempting to touch an object with the left hand. In the lower extremities all movements were carried out though rather feebly and with some tremulousness, especially to be noted on bending the knees.

There was a peculiar condition of the skin, of icthyotic character, which appeared to be sufficient to account for any blunting of sensibility observed. This has been present according to the patient's account, all her life. The knee jerks were greatly exaggerated. Ankle clonus was present in the right leg, and a tendency to it was evident in the left. The patient appeared well nourished. The gait was that of a person with functional paraplegia, but the legs shewed notable stiffness. When standing the legs were widely separated and became tremulous, whilst the body swayed to and fro.

Under observation in hospital this patient has continued much in the same state. There is no peculiarity of speech and no nystagmus. The ophthalmoscope shows no change in the optic discs.

I am disposed to think that this woman is affected with

organic disease of the spinal cord, and probably in the form of disseminated sclerosis, but the difficulty of pronouncing an opinion will, I think, be manifest.

I am conscious that these records do not serve to present the consultant, whose diagnosis has been exposed to the criticism of time and treatment, in a particularly favourable light. That is a misfortune for me, but not, I trust, for my audience. And I would venture, in a very modest spirit of self-defence, to say that these cases have been selected for the reason that in many instances the sequel was not that which had been expected—with the express object indeed of showing in what the difficulties of diagnosis may consist. It would have been easy enough to have brought together numerous instances in which the result proved the accuracy of the diagnosis, but that would have been little to the purpose of my address.

There can be but little doubt that of all organic diseases of the nervous system, disseminated sclerosis in its early stages is that which is most commonly mistaken for hysteria. This is evidently due especially to the following circumstances. The disease is particularly common in young females—symptoms showing themselves about the period of puberty. There is very often a history of some moral shock immediately preceding the first symptoms. It is a question well worthy of consideration whether sudden strong emotion or long continued mental worry may not be found to be important etiological factors in the disease, but this is not the occasion for discussion of the point. In addition there are few cases of disseminated sclerosis in females in which marked hysterical symptoms are not mixed up with those belonging essentially to the disease. Obviously this combination of itself causes a peculiar liability to mistakes of diagnosis. But there are other sources of error in the fact that many of the symptoms of disseminated sclerosis are supposed to suggest of themselves an hysterical origin. A sudden alleged loss of power in a limb of an apparently healthy young female, a localised numbness, or pins-and-needles sensation, complaint of loss of sight in one eye, are symptoms familiar enough as expresssions of functional

trouble. They represent equally modes in which organic disease of the kind we are discussing may make its first appearance. These local symptoms may clear off after a short time, just as would be the case if they were of hysterical origin. The girl recovers her sight, or the use of her limb, and nothing more is heard of the numbness. A little later perhaps loss of sight in the other eye is complained of; a pins-and-needles sensation is described in some other part; another limb is said to be very weak. The opinion that the symptoms are of hysterical origin may very possibly appear to be absolutely confirmed by this reappearance of trouble in other situations. Or the patient perhaps complains of weakness and stiffness in both legs, which increase so that in six or eight weeks she cannot stand. Then comes a rather rapid improvement and she recovers her power completely, soon, however, to fail again. After recoveries and relapses of this kind, the characteristics of confirmed disseminated sclerosis show themselves.

In the other sex also in persons of neurotic temperament and inheritance there may be a great liability to error. I will give an instance.

In 1882 I examined in consultation a young man with sallow complexion, large pupils, and very nervous manner. He was lying on a couch, and said that he was not able to walk much, because walking brought on a queer sensation in his legs, especially in the left leg, a pins-and-needles numbness being described. There did not appear to be any anæsthesia of the legs. His symptoms were entirely subjective. It appeared that at Easter, 1881, he played fives during a very cold wind. He was dressed in flannels, but felt it cold to his legs, and thought that he would get a bad chill. Later there was a feeling of numbness, especially in the left leg. Since then, with intervals of good health, he had had several breakdowns, which had occurred after walking too long a distance, jumping, riding, some physical strain. There had been no moral strain.

I tested the muscular power, which seemed perfect in all the groups of muscles of both lower extremities. The knee jerk on each side was much exaggerated, and there was a

slight attempt at ankle clonus, more on the right than the left side. There was, however, considerable excess of reflex in the triceps and wrist also, whilst there was no complaint of anything being wrong with the arms, so that I thought the excess in the knees might be "discounted." There were no tremors. Plantar reflex was not very strong.

The pupils contracted readily to light; the ophthalmoscope showed nothing abnormal. His tongue was covered with a thick fur, probably from the bromide and iodide which he was taking. There was a strong neurotic history on the mother's side. I diagnosed a functional disorder, and advised that the patient should go for a voyage and then resume his studies.

I saw this patient about fifteen months later. It appeared that after seeing me he went for a time to the seaside, and thence to one of the Universities, where he took his degree satisfactorily, and appeared to be quite well. Soon afterwards he walked in Scotland as well as ever. He only complained of a little numbness about the knees, equally on each side. I congratulated myself on a successful diagnosis, but this, as the result showed, was premature. Not to weary you with details, it is enough to say that this patient now presents characteristic symptoms of disseminated sclerosis.

In view of this communication I have looked through a large number of notes of cases both of hysterical paralysis and of disseminated sclerosis which have been under my care, and in many of which I have been able to learn the issue. As regards the value of individual symptoms in enabling us to differentiate organic disease from functional disorder, I find that whilst there is still much to be desired, there are points in which experience appears to speak with a fair amount of distinctness.

As a rule, though this is not without some notable exceptions, the class of hysterical paraplegia is not difficult of diagnosis by those well acquainted with the symptoms and course of organic disease, the surrounding circumstances, and especially the contradictions palpable in the symptoms leaving one usually in but little doubt. I need not dwell upon these before my present audience, but would remark

that the attitude and conditions of the lower limbs may vary exceedingly. The limbs are most often in a state of perfect flaccidity, a condition of spasticity being comparatively rare. The feet are frequently "dropped." After long disuse it will not unfrequently happen that there are strong adhesions in the joints. I have already referred to this, and to the pseudo-contracture due partly to this fibrous ankylosis and partly to contracture of the skin—not of the muscles. Hysterical paralyses are most often complete. The loss of power in disseminated sclerosis is very rarely (except in advanced stages) more than moderate. I cannot help thinking that the view still generally held that a shifting of loss of power from one limb to another (such as that which I have described) is really characteristic of hysteria is quite an error. The hysterical woman who has lost all power in her legs, will, it is true, very often later on (whilst still paraplegic) lose the power of one arm, usually the left; but I have not found that she is prone to lose the power in a limb, then recover it, and then lose it in another. It seems to me that the idea of this shifting of powerlessness being strongly suggestive of hysteria has arisen from the mistakes in diagnosing as hysteria cases of disseminated sclerosis, which must have been continually occurring before the latter disease had been differentiated. No doubt the hysterical are prone to changes of disorder; at one time, for example, losing the use of a limb or limbs, with or without profound anæthesia, at another losing the voice, or closing one eyelid, or contracting a limb, but the shifting about of a state of more or less powerlessness, which we see in disseminated sclerosis, appears to me to be *sui generis*, and should, I am disposed to think, save us from error. And equally so with the occurrence of numbness or pins-and-needles sensation, sometimes at one part and sometimes at another, which, if my notes do not betray me, points with considerable distinctness to disseminated sclerosis.

There would appear to be a little more difficulty in regard to the impairment of sight in one eye to which I have referred. The ophthalmoscope perhaps shows no change. But we shall find, I think, that the hysterical patient as a

rule, when loss of sight of one eye is in question, is quite blind on that side, whilst the patient with sclerosis has only more or less obscurity of vision. I cannot call to mind, since I have been better acquainted with disseminated sclerosis, any case of simple hysteria in which first one eye lost some amount of vision for a time and recovered, and afterwards the other eye behaved in a similar fashion. So that this symptom I should now take to point with considerable force to disseminated sclerosis. When the ophthalmoscope shows atrophy of disc (and it is remarkable in what a large proportion of cases of disseminated sclerosis some atrophy is to be found—in some a stage of hyperæmia preceding it) my experience would teach me that a diagnosis of functional disorder must be discarded.

The same must be said of nystagmus, a symptom of peculiar value when combined with others about which there might otherwise be some doubt. It is necessary, of course, to remember the possibility of chronic alcoholism producing a temporary nystagmus, but this chance of error ought not to be difficult to avoid.

We next come to the tremor on intentional movement, upon which I am disposed to place a diagnostic value higher than that possessed by any other symptom of disseminated sclerosis. Looking back many years I can remember observing numerous cases which presented this symptom at a time when I used to feel very great difficulty in the differential diagnosis which we are considering. I cannot call to mind one which the sequel proved was simply functional. It is true that in the hysterical we not unfrequently see a clumsiness of movement of the hand when directed towards an object, which is somewhat liable to deceive, but observed carefully it will be found that this is rather of the nature of ataxy than a rhythmical tremor such as is found in sclerosis.

There is also another variety which is worth noting. The patient asked to touch an object with her finger, does so without difficulty or hesitation, but when the finger has rested upon the object for two or three seconds the arm becomes affected with somewhat rude tremors. This is in striking contrast with the tremor which affects the arm in disseminated

sclerosis, as the patient brings the finger near the object, tending to cease when it is attained.

There may be very fine and rapid tremor only when the patient stands upon the feet, ceasing when the sitting posture has been assumed.

On the coarser semi-convulsive movements, twitchings, jerkings, and grimacings not rarely met with in hysteria I do not dwell. They could not for a moment deceive any one acquainted with the subject.

Localised atrophy of muscles with loss of electrical reaction is well known to occur sometimes in the course of disseminated sclerosis, and in a case otherwise open to doubt its presence is undoubtedly of the highest value in determining the organic nature of the disease. But I do not think it is generally known that the localised atrophy may behave like the temporary powerlessness of a limb or limbs, or the shifting numbness. I have seen several cases of disseminated sclerosis in which atrophy of some muscles, with loss of electrical reaction, has cleared off entirely, to be succeeded some time afterwards by a similar lesion in another or the same part.

It is scarcely probable that disseminated sclerosis is a new disease. Little more than half a century has elapsed since it was first figured by Cruveilhier in his "Atlas d'Anatomie Pathologique," and twenty-two years ago Charcot expressed his belief—a well founded belief, I have reason to think—that the disease was not known, that is to say not recognised, in England. It is practically indeed to Charcot that we owe our acquaintance with the disease, from the admirable summary of its clinical and pathological features published by him in his earlier lectures. We all know what a length of time it takes for a disease, however excellently pictured, to fix its features so firmly in the minds of medical men generally as to make the diagnosis of it come readily to those who have not gone out of their way to seek examples of it. And this, which is true of most forms of organic disease, is from the nature of things most marked in reference to disseminated sclerosis. In that disease the infinite irregularity in the situation of the essential pathological

lesions creates difficulties of recognition beyond those to be met with in any other example. This being the case it is not surprising that the symptoms, characterised as they are by frequent remissions, should, in the absence of other explanation, be set down to the vagaries of hysteria. The almost constant admixture of circumstances pointing to an emotional origin or accompaniment of these symptoms greatly increases the likelihood of this confusion occurring. As I have before remarked, it appears to me reasonable to conclude that many symptoms which have come to be considered characteristic of hysteria will, if examined by the light of improved knowledge and experience, be relegated to disseminated sclerosis. The same principle holds good, as I have already shown, in reference to atrophy of the iliaco-psoas muscles, and to Friedreich's paralysis, not to mention others. But in none so much for the reasons mentioned as in disseminated sclerosis. There is a point of great interest to be worked out in regard to the possibility of hysteria—a disease of which the pathology is unknown—merging gradually into disseminated sclerosis. We are quite in the dark on this point, and this is not a fitting occasion on which to do more than advert to it. What is the connection between disseminated sclerosis and hysteria? It seems impossible to doubt, in view of the marked and almost constant occurrence of hysterical symptoms in the earlier stages of the disease, and the preponderance of cases affecting the female sex, that there is a connection of some kind, but in what that association consists I for one cannot pretend to say. No more interesting and important subject than this could engage the attention and study of our Society. The result, if one may venture to hazard an opinion founded on the experience of that which happens in regard to other diseases, would almost certainly be to refer to an organic origin many symptoms which we now term hysterical. The figure of Hysteria shrinks in proportion as the various forms of organic disease acquire greater solidity and sharper definition.