Chap. I

Some general considerations regarding Syphilitic affections of the nervous system.

The following thesis is the result of clinical observations made at the in & out-door departments of the North Riding Infirmary, Middlesbrough-on-Tees, where I have acted as resident surgeon during the last three years. It is a methodical analysis of the cases given in detail in the appendix. My object has been to give a systematic analysis of the symptomatology of Syphilitic nervous affections from the purely clinical point of view and the general conclusions & observations arrived at from actual study & observation of cases regarding special symptomatology, diagnosis, prognosis and treatment.

Syphilitic affections of the nervous system are commonly regarded as rare, but my experience has led me to the conclusion that they are of much more frequent occurence than is commonly believed. In the appendix I give the histories of 24 cases, but these are selected from a much larger number, which came under my observations during a period of three years. My experience has been confined entirely to the working classes and I have found nervous syphilis tolerably common amongst them. Many observers have remarked that the nervous system is attacked much more frequently amongst the better classes, amongst those who earn their livings by their brains & whose nervous tissue is subjected to greater strain. I am sceptical as to the truth of this observation. Nervous strain may be an important predisposing cause amongst the better classes, but on the other hand they are usually thoroughly treated at the period of infection & hence the liability

ProQuest LLC.
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 – 1346

to the later manifestations is diminished. Amongst the poorer classes the primary & secondary lesions are usually treated very imperfectly or in a very large number of cases not at all and hence their liability to all the later manifestations & amongst these to nervous lesions is increased. Of my recorded cases twelve had received no treatment whatever whilst of the remaining twelve only two had been treated with any degree of thoroughness.

It used to be thought that all syphilitic affections of the nervous system came late in the disease & were distinctly of the Tertiary class. Recent observations have proved that this idea is an error, that the nervous system may be affected at any period in the course of the disease & that it is frequently affected very early. In 12 of my cases the nervous symptoms appeared within the first ten years after the primary infection, in 6 within the first 5 years & in 4 within the first two years. In 3 cases they appeared in from 10 to 30 years after primary infection & in 7 cases the date of infection was unknown. I would call special attention to the development of the marked nervous symptoms in case IX during the time that the patient was under specific treatment for secondary Iritis and also to Case XVI, where Sciatic neuritis developed along with the secondary cutaneous eruption & was rapidly followed by other nervous symptoms. On the other hand Case XIV presents a marked contrast, where after an interval of nearly 30 years from primary & secondary symptoms a patient came under treatment for multiple nodes on the ribs & sternum and during treatment developed cerebral symptoms & paralyses, which after a temporary improvement sent him to the madhouse. These cases are the extremes & at all periods during the interval, we have nervous affections appearing. The conclusion, I have drawn from my own cases, is that the nervous System may be attacked at any period, that its implication in comparatively early stages is not at all infrequent, but that as a rule it is a somewhat late manifestation, appearing generally amongst the later secondary and tertiary symptoms.

There is little doubt but that there are certain conditions which predispose the nervous system to be attacked by the Syphilitic virus. It is highly probable that hereditary predisposition to nervous diseases makes the nervous system more liable to attack, but in my cases I have not been able to trace this as a predisposing cause. Traumatism is undoubtedly sometimes an important factor in favouring an outbreak of nervous Syphilis. In cases IV & VI the cerebral disease developed after the patients had received injuries to the head. It is easily conceivable how traumatic influences may render the brain or spinal cord more liable at certain points to be attacked by the Syphilitic virus. Psychical influences such as great grief, mental anxiety, alcoholic & venereal excesses and excessive brain work predispose the exhausted nervous system to the onset of the disease. In case XI the symptoms manifested themselves after the death of the woman's husband, when she had been grieving over his loss for months & had been distressing herself about the future support of her family. In case VII there was a very distinct history of great sexual excess. In most of my cases, which were amongst women workers, there was a history of confirmed alcoholic excess, which is undoubtedly a very powerful predisposing cause in the development of nervous disease.

A very interesting question presents itself as to the class of Syphilitic patients, in whom we meet with nervous disease. Do we meet with many cases amongst those who know that they have had Syphilis & who have been thoroughly treated for it or do most of the cases occur amongst those who have been treated either very imperfectly or not at all, because their primary & secondary

symptoms were very slight, in some cases so trifling as to escape entirely the observation of the patient? In 12 of my 24 cases the patients were entirely ignorant of having had Syphilis & had never been under medical treatment. Of the remaining 12 cases, only two had been treated with any approach to thoroughness. It is a fact well known to all observers that nervous symptoms may arise years afterwards in patients who have undergone the most thorough specific treatment. Hence one is never entitled to give a positive assurance to a patient that he is cured of his Syphilis even after the most thorough treatment. No doubt in a large proportion of such cases no further symptoms appear, but still cases do arise in which Syphilitic lesions appear after an interval of complete immunity from symptoms, which may extend to 20 or even 30 years. The history of an attack of Syphilis is therefore the history of the patient from the appearance of the chancre until his death, and because no symptoms have been observed for a period of a few years after treatment, it is highly illogical to infer that the patient has been cured of his Syphilis. This is the fallacy, which underlies the discussion on the question of the curability of Syphilis. Men argue from the part to the whole. They maintain that because a patient has been free from symptoms for a limited number of years, he is cured, whereas they should have traced the whole of the patients subsequent life history before coming to such a conclusion. The most accurate observers have recently maintained that Syphilis is an incurable disease & that we have no evidence that Syphilis ever is or has been cured. This may be

stating the case rather strongly, but we are correct- at least in maintaining that we have no right to give a positive assurance to any patient that he is cured of his Syphilis even after the most thorough course of treatment & after a long interval free from symptoms, because experience teaches us very plainly that tertiary symptoms occur even after the most thorough treatment- & after very long periods of immunity.

A very large proportion of nervous cases of undoubted specific origin arise in those, who do not- know that they have had Syphilis & who have therefore never been under treatment. This is strikingly exemplified by the fact that of my 24 cases, 12 belonged to this category. Many observers have noticed how often severe late lesions have followed an early stage that was slight or unnoticed. They have suggested that there may be an actual alternation in severity between the early & the late effects. This alternation however I think is largely due to the great frequency of mild or latent Syphilis & to the fact that treatment has been wholly omitted in the early stages. Besides we meet with many cases in which both early & late symptoms are slight & some in which severe early symptoms in spite of thorough treatment are followed by severe late lesions. In some of these cases of mild or latent Syphilis, on cross examination you can elicit a history of a sore & subsequent secondary symptoms, rash, sore throat, loss of hair, iritis, pains in bones & so on but these symptoms have been so slight that the patient has never sought medical advice or treatment. In such cases the history is often confirmed by the marks which have been left on the patient, old cicatrices, iritic adhesions, enlarged glands, nodes &c. But there is another class of cases, which I am

convinced is much larger than is generally thought, where the patient has never observed any secondary symptoms whatever. He may acknowledge having had a slight sore, which got better of its' own accord, but on the most searching cross examination we can elicit nothing as to secondary symptoms, even when the patient is evidently anxious to give us all the help in his power. Further no marks or traces of any kind can be found on the body of such a patient on the closest examination. In case II there was absolutely no history except that of a gonorrhœa, no traces whatever on the body & yet the brilliant results of treatment proved conclusively that the patient had had Syphilis & that the lesion was a Syphilitic one. Syphilis is such a Protean disease that we must not be surprised to find a large number of cases, in which evidently there were no early secondary symptoms at all or in which at least these must have been of the most trivial description, unobserved by the patient & leaving no traces on his body. Even the primary sore may have been so slight as to have escaped the observation of the patient. This fact has not been sufficiently insisted on, that there is a large class of Syphilitic cases, in which there is not only absence of a history of early symptoms or of traces on the body, but also complete absence of any history of infection. Every patient who has been infected with Syphilis has not had the typical hard chancre & a very large number have had a primary sore of such a trifling character as to have escaped their observation. Dr Radcliffe Crocker of University College Hospital found that of 56 cases consecutive & unselected of tertiary Syphilitic skin eruptions in no less than eleven of these the occurence of any chancre was unknown. This gives us a proportion of 20 per cent without any history

of chancre. Hence the absence of a scar on the penis, of a history of infection or of secondary symptoms does not exclude the possibility of a patient having contracted Syphilis. All observers are agreed as to the frequency of latent Syphilis, in which the manifestations of the disease are either absent or quite insignificant & receive no attention & no treatment. Dr Gowers sets such cases down at about 25 per cent: & I certainly think from my own experience this percentage is not at all exaggerated. It is in this very class of cases of latent Syphilis that a very large proportion of our nervous cases are to be found. Hence in dealing with the questions, are certain nervous lesions of Syphilitic origin, we must always remember that whilst positive evidence of infection is valuable, negative evidence is of little value in forming a conclusion.

In the diagnosis of Syphilitic affections of the nervous system, it is always of the utmost importance to arrive at the diagnosis as early as possible, before the grave symptoms have manifested themselves, before permanent paralyses or grave mental changes have appeared and before the onset of epileptiform or apoplectiform attacks. Such an early diagnosis is possible from the fact that in almost all cases of Syphilitic nervous disease prodromata or early symptoms have existed for weeks, months or even for years, before the onset of the graver symptoms. These symptoms may be loosely called prodromata but are really due to the gradual development of the actual disease and are therefore not true prodromata but rather early symptoms. They are met with in all classes of cases, gummata, meningitis, affections of the cerebral arteries & nerve substance itself. As Heubner well explains them, "these symptoms are dependant

upon changes in the amount of blood or lymph contained in the brain & upon temporary processes accompanying the development of the new growth. They belong to all classes of cases & are therefore to be referred to general processes accompanying the special lesions in the interior of the cranium." The importance of a close study of these prodromata or early symptoms cannot be exaggerated, because this is precisely the period when energetic treatment can cure, before grave organic changes have taken place.

In the 25 cases, which I have collected, I have taken especial pains to elicit the history of these prodromata & in them all during a period ranging from weeks & years various symptoms generally of a slight & evanescent character, but fraught with warning to the experienced observer, had manifested themselves before the onset of the graver & more permanent ones. Amongst these early symptoms I will enumerate the following, which are all exemplified in my collection of cases, headache, insomnia, attacks of giddiness, temporary dipsopia & strabismus, disturbances of vision, shooting pains & peculiar sensations in the extremities, drowsiness, mental confusion, loss of memory, great sluggishness of speech & thought, greater excitability of manner & unusual irritability of character. All these early symptoms are transient & evanescent. At intervals more or less frequent during weeks, months or even years preceding the appearance of the grave & permanent symptoms the patient has had transient attacks of slight symptoms, which rightly interpreted should have been regarded as warnings of what was likely to follow. These warnings are scarcely ever absent. The history of a patient who since his primary or secondary lesions has been entirely free from symptoms until the sudden onset of hemiplegia or an epileptic or apoplectic attack must always be received with considerable scepticism. In these

examination the patient will nearly always recollect having had some of these early symptoms, which I have enumerated. It is important for purposes of examination to bear in mind that the psychical changes frequently first manifest themselves when the patient is in a condition of mental excitement or under the influence of alcohol. The patient may recollect that of late whenever he became a little excited, he lost his memory, became mentally confused & found great difficulty in expressing himself, or that alcohol recently had had quite a different effect on him from what it used to have, a very small amount bringing him into a state of the most violent excitement & completely changing his character. Having the usual premonitory or early symptoms, we require to go over them to the patient & question him closely as to their presence or absence, otherwise he will almost certainly assure us that previously he had always been in the best of health. The only exceptions to this are headache & insomnia, which generally impress themselves on the patient's mind, so that when present we always hear of their existence. But most of the other symptoms already enumerated from their transiency & evanescence are nearly always attributed by the patient to some momentary causes, which he thinks satisfactorily explains them. He ascribes them to the heat of the room to want of fresh air, to indigestion, to excess in alcohol or tobacco or to some such momentary causes. He therefore pays no further attention to the symptoms & has even some difficulty afterwards in recalling them. But we must not only cross examine the patient on these points but also his friends & those who have recently lived in close relationship with him. Friends may have remembered transient symptoms or may have observed changes, which

the patient himself has forgotten or failed to observe, such as changes of manner & character, failure of memory, speech disturbances & so forth. Hence the great importance of corroborating the patients statements by a cross examination of friends. I have repeatedly acquired most valuable information in this way as to the previous occurrence of striking changes and important symptoms, which I would have lost, had I trusted entirely to the patient, who had either never observed them or completely forgotten them. The human memory is much more retentive for the material manifestations of disease such as ulcers, swellings, cutaneous eruptions & such like, while the significant psychical symptoms, which lightning like flash out at intervals altogether escape their attention & memory.

I have dwelt at considerable length on these early symptoms or prodromata, because their true significance & diagnostic importance have not been sufficiently emphesized by most observers. The diagnosis is evident, when the disease has developed & grave lesions are manifest, but it is of the highest importance to arrive at a diagnosis at the earliest stage before the most of grave organic changes. I would here direct attention to the great importance of making a thorough examination of the Reflexes as a matter of routine & apart from symptoms pointing directly to the nervous system, because marked changes often exist in the condition of the Reflexes before any striking symptoms of nervous disease are present. When patients therefore come to us complaining of any of these early symptoms, a careful examination of the Reflexes would almost always reveal some deviation from the normal, if these symptoms were due to incipient disease of the brain or spinal cord. We would

thus certainly avoid the error of assigning these early symptoms to rheumatism, indigestion or hepatic & renal derangements, until grave symptoms of advanced organic changes in brain or spinal cord made the true diagnosis clear but too late for effective treatment. Such was the lamentable history in a large number of cases, which came under my care, the true nature & gravity of the early symptoms not having been recognized, but regarded as trivial ailments due to temporary causes. These serious errors would have been avoided by a knowledge of the occasional gravity of such symptoms & by careful examinations of the patients Reflexes made at intervals. Especially should we be on our guard in the case of patients, whom we know to have had Syphilis. Examination of their reflexes should always be made in any deviation from health, when the diagnosis is at all doubtful. If this were generally done, the results of the treatment of Syphilitic nervous diseases would present a more brilliant record, the successes would not only be more frequent but also more complete & permanent and we would not be under the painful necessity of so frequently pronouncing the sad verdict, "too late, too late".

Chap. II.

Special Symptomatology.

1. Headache
2. Giddiness
3. Motor Disturbances
4. Sensory Disturbances
5. Eye Symptoms
6. Disturbances of Speech
7. Disturbances of Hearing
8. Disturbances of Taste & Smell
9. Psychical Disturbances
10. Condition of the Reflexes

1. Headache.

Headache is the most common symptom in Syphilitic affections of the brain. It is not always present, but in the vast majority of cases it is. It was present in 18 of my 24 cases. It is an important early symptom appearing frequently long before the graver symptoms manifest themselves. A marked feature of the headache is its nocturnal character. In 13 of the 18 cases in which it was present, it was markedly nocturnal in character, either greatly increased in intensity during the night or absent altogether during the day coming on only after the patient had got into bed. There were exceptions to this however, the headache in one case being present only during the day & absent at night, and in 4 cases being present with equal intensity both night & day. The headache may be diffused, localised in one particular spot or confined to one side of the head. It varies in intensity from a dull heavy aching to excruciating pain of the

most intense description. It is often increased by pressure and sensitive points in the skull can often be demonstrated by a careful percussion of it. In Syphilitic diseases of the cranial bones & dura mater, in gummata of the meninges, the headache is most intense, is increased by pressure & generally associated with a local increase of temperature. In Syphilitic affections of the Pia Mater, in the diffuse forms of meningitis & affections of the arteries the headache is generally diffused & is of a dull aching congestive character. I know of no headache which equals in intensity the worst forms of Syphilitic headache as exemplified in cases IV, V & VI.

2. Giddiness or Vertigo.

Giddiness is second in importance only to headache as a prodromal or early symptom of Syphilitic cerebral disease. I found it present in 13 of my 24 cases, & always as an early symptom, having manifested itself long before the appearance of the graver symptoms. The maintenance of equilibrium being a very complex process & being largely dependant upon impressions conveyed by the various nerves to the brain, it is easily understood how any lesion in the nervous mechanism generally leads to a disturbance of it. It requires to be carefully investigated as the patient is sure to assign any transient attacks of giddiness to some momentary cause & then forget all about them. I use the word giddiness in the sense of vertigo as a designation for any movement or sense of movement, either in the individual himself or in external objects, that involves a defect, real or seeming,

on the equilibrium of the body. In the 13 cases in which I observed giddiness as an early symptom, I could clinically distinguish four different forms, which could be demonstrated in different ways.
(1) The giddiness may be experienced by the patient only on assuming certain positions as in bending down, on raising the head after being in a stooping position or on turning round rapidly. (2) The patient may always be giddy & walk with a staggering gait or even be unable to walk without support. (3) The patient may experience no giddiness in good daylight or with eyes open, but when we test him with his eyes shut, it may become at once manifest. He may tell us that he can walk perfectly well during the day time, but that he always begins to stagger, when it becomes dark. Or we may elicit it by asking him to stand with his eyes shut & feet close together, or by making him walk forwards & backwards with eyes closed. Here the sense of innervation of the ocular muscles seems to correct the faulty impressions conveyed by the damaged nervous system & only when it is withdrawn is the disturbance of equilibrium made manifest.
(4) I would call attention particularly to the sudden attacks of giddiness, which come on in a moment, last a short time & then pass off completely. These sudden attacks of giddiness are often accompanied by dimness of vision or even complete loss of sight and by transient mental confusion. The patient suddenly becomes giddy, everything becomes dark round about him, & he has to clutch on to the nearest point of support until it passes off. In case IV these attacks of giddiness alternated with epileptiform convulsions confined to one side of the body, but we meet with them in all forms of Syphilitic Brain disease.

The importance of such attacks as an early symptom of cerebral disease in those, who are known to be Syphilitic cannot be exaggerated & should always be investigated into with the utmost care. They precede often by very long periods of time subsequent apoplectiform or epileptiform attacks, paralyses or grave psychical changes.

3. Motor Disturbances

Paralyses, Pareses, Epileptiform & Apoplectiform Attacks.

Motor disturbances appear chiefly in the form of paralyses of limbs, of groups of muscles or of individual muscles, which may be gradual in their onset, but are often consequent on or associated with epileptiform or apoplectiform attacks. In 14 of my 24 cases paralysis in some form was present.

The oculo-motor muscles supplied by the 3d, 4th & 6th nerves most frequently suffer & were affected in 6 of my cases. The symptoms observable were Ptosis, the most frequent of all, limitations of movement in particular planes, strabismus external & internal, diplopia, paralysis of the Iris & Ciliary muscle and lastly paralysis of associated movements. I have discussed these symptoms in detail under the heading of eye symptoms.

Next in order of frequency comes paralysis of the facial, which occured in four of my cases. Here there is smoothing of all the folds of the face on the paralysed side, especially the naso-labial fold; the angle of the mouth is pulled towards the sound side & there is inability to close the eye on the paralysed side from failure of the orbicularis. This form of paralysis

though present is often very slight in degree, there being no failure of the orbicularis & the paralysis only being manifest when the patient tries to talk, whistle or smile, when the mouth is pulled towards the sound side. In such cases as in case XV all that is observable with the face in repose is the smoothing of the folds on the side of the face & therefore its lack of expression. This slight form of facial paralysis often observable in cerebral syphilis, in which the upper muscles of the face are little or not at all affected & the muscles which go to the mouth suffer chiefly, occurs when the disease involves the path above the nucleus. When the nucleus itself or the fibres of the nerve, whether within the pons or outside it is the seat of the lesion, then all parts of the face are affected, orbicularis palpebrarum & frontal muscle as well as the muscles of the mouth.

I observed paralysis of the Hypoglossal in two cases. The symptom is deviation of the tip of the tongue from the middle line, it being pushed towards the paralysed side. There is also some interference with articulation & the process of mastication.

Disturbances of bladder & bowel were present in 3 cases. The bladder paralysis may take the form of paralysis of the detrusor or sphincter & hence may appear inability to retain urine for any length of time or inability to empty the bladder completely. We must be careful to exclude stricture or enlargement of the prostate in forming a diagnosis. Weakness of the sphincter Ani is shown by inability to retain a motion for any length of time, when the desire to defaecate comes on. This is well illustrated by case VIII, where the patient sometimes passed his motions in the street, being unable to retain them for a moment. There may also be obstinate constipation

Coming to paralyses of the Trunk, hemiplegia was present in 3 cases, paraplegia in 2 cases and paralysis of individual extremities in 5 cases.

These paralyses may & do occur in every possible form of combination according to the extent & seat of the lesion. They may be symmetrical in distribution assuming the form of typical hemiplegias & paraplegias, but frequently they are very irregular & anomalous in their grouping. Thus we may have paralysis of right arm with paralysis of left leg, or left arm with right leg or paraplegia with paralysis of a cranial nerve. In case XIII paraplegia was combined with paralysis of the uvula & one half of soft palate and loss of taste on one side of the tongue. Such irregular & anomalous grouping of symptoms points to two or more separate lesions of the nervous system and multiple nervous lesions; if we exclude diphtheritic paralyses should always strongly suggest the probability of a Syphilitic origin.

The paralysis may also assume every degree of intensity varying from total loss of power to a loss so slight as to be scarcely appreciable. As a rule the paralyses in Syphilitic disease are not complete, the function of the limb, of the group of muscles or muscle is only partially interfered with & therefore should be called a paresis rather than a paralysis. If the leg be affected, the patient as a rule can still walk with it, but drags it after him. If the hand or arm be affected the patient can generally grasp large objects & make coarse movements, though he may not be able to grasp a pen & execute the fine movements required in writing. If there be facial paralysis, it is often only observable by the smoothing of the folds of the face. The paralyses only rarely

assumes that complete & absolute forms met with in other nervous lesions.

A very marked feature of Syphilitic paralyses is their variability, undergoing singular fluctuations in intensity from time to time and being alternately progressive & retrogressive. This fact is well exemplified in several of my cases. On testing the power of arm or leg from day to day, it was surprising to find such marked differences in degree occurring within very limited periods of time. When the arm was affected as in cases VI, X & XIV, the patients' grasp would at one time be as weak as that of a child, but in a day or two afterwards the grasp would be firm & strong & when tested later would be found to be weak & feeble again. So too with paralysis of the lower limbs as seen in cases VII, VIII & XIII, at one time the patient could scarcely walk across the room, whilst in a few days afterwards he could walk several hours at a stretch & then he would lose the power of his limbs again for a short time.

Evanescence & vagrancy are also marked peculiarities of Syphilitic paralyses. Loss of power may be felt in a limb for a limited time, then entirely disappear and the paralysis appear in another. In case XII we had ptosis of right eye appearing for some time, then disappearing entirely & ptosis of left eye developing.

Paralyses of Syphilitic origin therefore frequently present marked characteristics as contrasted with the paralyses due to embolism, thrombosis & haemorrhage. Of these peculiar characteristics the following are the chief 1st their frequently irregular & anomalous grouping, 2d their incompleteness, 3d their variability or alternating progression & retrogression & 4th their occasional transiency & vagrancy.

These paralyses are most frequently gradual in their onset. The early or premonitory symptoms are gradually followed by increasing weakness of one or more limbs or of particular groups of muscles. But they may be sudden in their onset occurring in a moment and accompanied by convulsions or loss of consciousness, the so called epileptiform or apoplectiform attacks. The patient may go to bed all right as in case XI & awaken in the morning with mouth drawn to the side & loss of power in arm or leg. In case XIV the patient fell to the ground while at work with momentary loss of consciousness & on being picked up had lost power in one arm & leg and had the mouth drawn to one side. Or the paralysis may develope suddenly without any loss of consciousness as in case XII, so that the patient can follow step by step its development. We thus meet with sudden paralysis accompanied by profound loss of consciousness as in ordinary apoplexy or without consciousness being at all affected. Between these two extremes there is every possible shade of variety. The loss of consciousness may be profound lasting some time or only imperfect amounting to mental confusion & lasting only a few seconds or there may be no disturbance of consciousness whatever. In this category of apoplectiform attacks may be classed those peculiar somnolent conditions of which case XVIII furnishes an excellent example. Here the patient lay as if in a condition of coma, but there was no absolute loss of consciousness, as he could be easily roused & he answered when spoken to. On rousing him, he opened his eyes astonished, gaping & sighing, just like a healthy individual aroused from sleep. He answered questions put to him in a peculiar hesitating, vacant manner, frequently correctly,

but betraying a great loss of mental activity and especially of memory. The moment that his attention ceased to be occupied either by shaking him or shouting aloud to him, he would sink back into his former somnolent or semi-comatose condition. Such a condition may last only for several hours or it may extend to several days. In case XVIII the patient remained in this condition three days. Gradually the mental processes became more active, the memory became better, he was more easily roused & the waking intervals became gradually more prolonged until he resumed his normal mental condition. Frequently paralyses more or less complete are associated with or consequent on such conditions, but sometimes paralyses are completely wanting & the somnolent condition alone attracts attention as in case XVIII.

The grave symptoms such as paralyses & psychical changes often make their appearance in the most sudden & alarming manner by an epileptic fit, which is soon followed by more or less similar attacks & between the intervals with the development of motor or psychical disturbances. These fits may be of the true epileptic character with loss of consciousness, or may be only rudimentary attacks with giddiness, mental confusion & loss of sight. These rudimentary attacks may alternate with those that are completely developed as in cases IV & V. In 5 cases I met with epileptiform convulsions. In case VI it was a genuine epileptic fit with loss of consciousness, dilated pupil, frothing at the mouth &c. In case XIV there was momentary loss of consciousness, but the convulsive movements were confined to the right arm & leg and were followed by paresis of these. In case IV the convulsions were confined to the left side of the body

& in case V to the right side. In both these cases there was loss of consciousness only in some of the attacks & these severe attacks alternated with rudimentary ones of vertigo, mental confusion & peculiar sensations. In case IV the attacks always began with a sensory aura in the left hand, a peculiar numb tingling sensation of the fingers. The hand became clenched, the left arm shook, then the convulsive movements spread to the left leg & the patient generally became unconscious. In case V the fits were always preceded by a feeling of giddiness, blindness of the left eye & a peculiar feeling of numbness of the right-leg. The convulsions began with the right arm & right leg, the mouth was drawn to the right side, there was slight frothing at the mouth & loss of consciousness and there was conjugate deviation of the eyes to the left side which continued during the whole fit. Sometimes the convulsions extending to the other side became general & sometimes there were only the premonitory symptoms or aura without any convulsions. Here we have two typical cases of Jacksonian epilepsy dependant upon irritation of a definite area of the cerebral cortex, which could be very definitely localised in both cases to the arm & leg centres, occupying the middle & upper portions of the ascending frontal & parietal convolutions, in case IV of the right hemisphere & in case V of the left. In case VII, a case of Spinal meningitis we have a very interesting account of a convulsive attack confined to one leg. Here the patients' left leg jumped about in bed to such an extent that it kicked all the clothes off & he had to sit up in bed & hold it down by force. This convulsive attack confined to one limb was probably due to irritation of the anterior nerve roots in the lower part of the cord.

4. Disturbances of Sensation

Under the general term sensation are included the different forms of sensibility viz. sensibility to pain, to touch, to temperature & muscular sensibility. In my cases I have several marked examples of disturbances of sensibility to pain & sensibility to touch. The most common sensory symptom was that of sensory irritation, which was present in a more or less degree in nearly all my cases. The manifestations of this sensory irritation varied in nature & in degree. In some cases there were pains in the limbs, which were nearly always worse at night & in some cases were present only during the nighttime. These varied in intensity from a slight dull aching to pain of the most excruciating description, which made the patient shriek aloud, as in case VII. Generally the sensory disturbance manifested itself in the form of peculiar sensations, numbness, tingling, formication & so forth. The patients would describe the sensation in a limb or limbs, as a feeling of numbness & tingling, as if the parts were asleep, as if insects were crawling over them or as if cold water were trickling down them. Such disturbances of sensation or "paraesthesiae" are exceedingly common in Syphilitic nervous diseases & I found them present in 13 of my 24 cases. They were sometimes associated with paralysis or paresis of limbs, but in many cases occured altogether apart from any symptoms of paralysis & sometimes preceded by considerable intervals of time the loss of power.

In case VI the sensory disturbance was of an exceedingly interesting & unusual character. There was absolute loss of the sense of touch & the sense of pain in the left leg & arm, whilst the muscular sense of both was perfect even on the application of very exact tests.

I wish to direct very special attention to the sensory condition in this case, because in the discussion on Dr Bastian's paper on the Muscular Sense read before the Neurological Society of London in 1886, Dr Ferrier said "I do not know a single observer, with the exception of Dr Bastian, who has ever seen a case of hemi-anaesthesia in which muscular sense was not abolished or impaired in proportion to the degree of the Anaesthesia existent." Here I have a most striking case in favour of Dr Bastian's view that in hemianaesthesia there is generally no very appreciable loss of muscular sense. Here we have total loss of sense of touch & sense of pain in left arm & leg, but with the power of discriminating between light weights accurately preserved. In testing the arm 6 cartridge cases filled with small shot were used. These were exactly similar in size & shape and weighed from 1 to 6 drachms, there being a difference of 1 drachm in each. The patient at once arranged these rapidly in the order of their weights. In testing the leg heavier weights were used with an equally good result. Sensation gradually returned under treatment.

In case VII, there was complete loss of sense of pain in the lower limbs, while the sense of touch was accurately preserved. In the upper limbs the sense of pain was not totally abolished, but was absent in the hands, much diminished in the forearms & normal in the upper arms. Here also the sense of Touch was accurately preserved. There was no interference with sense of Temperature or muscular sense. The sensibility to pain gradually returned with the improvement of the other symptoms under treatment. The peculiarity of the case was that whilst there was complete analgesia of lower limbs & partial of upper, the patient suffered much from excruciating attacks of pain in the limbs, which were markedly increased at night.

5. Eye Symptoms.

In 14 of my 24 cases, eye symptoms were present. These occur so frequently & are of such great importance as an aid to diagnosis, that a very careful examination of the eye should be made as a matter of routine in all cases of nervous disease. The ocular motor muscles should be carefully examined, the mobility & reflex excitability of the Iris, the field of vision, the conditions of the cornea, iris, vitreous, optic nerve & retina should be investigated into. The occurrence of eye symptoms is often the cause of a patient first seeking medical advice, although he has been suffering from nervous disease for some time & hence we should always bear in mind the possibility of the ocular changes being due to disease of the nervous system: In cases XI, XVI, XVII & XXIV the patients came to consult me only about their eyes, the discovery of hemianopsia in the first & of abnormal conditions of retina & optic disc in the others at once directed my attention to an examination of the nervous system & led to a correct diagnosis.

Of all the eye symptoms paralysis of the external ocular muscles is the most frequent in Syphilitic nervous disease. It was observed in 6 of my 24 cases, in cases I, II, III, X, XII & XIX. These muscles are supplied by the 3d, 4th & 6th cranial nerves. In 2 cases the three nerves were affected, in 3 cases the third nerve alone & in one case the paralysis was confined to the 6th. The 3d nerve is most frequently affected & the paralysis may include all the muscles supplied by it, but more frequently is confined to a portion only of its distribution. Thus we may have Ptosis alone, or paralysis of the internal rectus or paralysis of the iris & ciliary muscle. Next to the 3d the 6th supplying the external rectus is most commonly affected & isolated paralysis

of the external rectus with consequent development of an internal strabismus occuring in an adult, as in case III, is nearly always due to Syphilis. Isolated paralysis of the 4th supplying the superior oblique is rare & I have not met with a case.

In examining the condition of the oculo-motor muscles the associated movements of the eyes must be examined, because we may have paralysis of convergence, while all the other movements of the eyes are perfect. Until within the last few years paralysis of associated movements of the eyes has been completely ignored. I therefore direct special attention to case XIX, as good example of paralysis of convergence & also to Parinaud's delicate method of detecting insufficiency of the internal recti. In case XIX all the movements of the eyes were normal, but on asking him to fix his eyes on an object & gradually approaching it to his face, the patient could not continue to converge with both eyes, but one of them turned outwards & developed an external squint. On making him fix a near object alternately with either eye, the eye which had been momentarily excluded from vision, executed a movement of readjustment in order to fix the object. On looking at distant objects there was no squint & the range of movements of both eyes in all directions was normal. Here the innervation of the internal rectis was at fault only in the movement of convergence but was normal in all displacements, where the visual axes were parallel. I also demonstrated the existence of diplopia in this case by adopting Parinaud's method of seperating the two images by employing a prism placed base upwards before one of the eyes, when there was crossed diplopia, with a moderate seperation of images, which persisted without notable modification in all directions of looking.

Loss of power in the ocular muscles is indicated by five kinds of symptoms, limitations of movement,

non-correspondence of visual axes (i.e. Strabismus), secondary deviation of the sound eye, erroneous projection of the visual field & diplopia. All these symptoms are exemplified in my six cases, in which ocular paralyses occured. Like other Syphilitic palsies these are frequently of a very transient nature. A slight squint may be observed for a short time & the patient complain of diplopia, when suddenly the symptoms disappear, perhaps to reappear after an interval.

Cases I & II afford two perfect examples of the somewhat rare condition of Ophthalmoplegia Totalis, complete paralysis of all the external & internal ocular muscles. Mr Jonathan Hutchinson calls attention to the fact that it is exceedingly difficult in cases of Iridoplegia with Syphilitic history to produce any improvement under specific treatment, whilst the cases of paralysis of the external ocular muscles almost always recover quickly. In both my cases, there was complete recovery of the external ocular muscles, in one with a persistence of the paralysis of the Iris, but in the other with its complete disappearance, which is a very rare event in Mr Hutchinson's experience.

The condition of the Iris is often an important factor in our diagnosis. The size of the pupil, the mobility of the Iris apart from adhesions and its reflex excitability to the stimulus of light & accommodation should always be carefully examined. There may be old iritic adhesions as in 3 of my cases & this may be a very important point in the absence of any distinct history of infection. In examination of the Iris we have three forms of paralysis to bear in mind, all of which may occur together as in Ophthalmoplegia Interna or each of which may occur apart from the others. In Cycloplegia or paralysis of the ciliary muscle there is complete loss of accommodation, in Iridoplegia or paralysis of the Iris itself, the reflex contraction of the Sphincter on exposure to light & the contraction on

accommodation must be seperately examined, as the one may be lost, while the other remains normal. Complete Cycloplegia + Iridoplegia is called by Mr Hutchinson Ophthalmoplegia Interna + is nearly always dependant on Syphilis. Cases I + II afford examples of this condition, but combined with Ophthalmoplegia Externa. With regard to the abnormal conditions of the pupillary reflexes, the Argyll-Robertson pupil i.e. loss of the light reflex, is the most frequently met with, being found in about four fifths of the cases of Locomotor Ataxia, which is consequent on Syphilis in at least two thirds of all cases. It is of the utmost importance as a diagnostic factor in the pre-ataxic stage of Syphilitic Tabes, when there may be some hope of combating the disease by energetic treatment. In cases XXIII + XXIV the presence of this symptom combined with an abnormal condition of the reflexes was the chief point in forming a diagnosis of Syphilitic Tabes in the pre-ataxic stage of the disease. In case XXIII the diagnosis has been confirmed by the recent development of Ataxic Symptoms. In case XIX there was Iridoplegia without Cycloplegia i.e. there was loss of the light + accommodation reflexes, whilst there was no loss of the power of accommodation. It was curious to observe in this case how these reflexes gradually improved while the patient was under treatment, until they attained their normal activity.

In three cases I found abnormalities of the visual field, which ought always to be examined in nervous disease + which will be found to be abnormal in a considerable proportion of cases. In case VI, peripheral vision was completely lost, only a small central part of the field being left, but here vision was normally acute. In case XXIV there was peripheral contraction of both fields, but most marked in the right eye, where only central vision was returned. In case XI

there was Right Homonymous Lateral Hemianopsia, loss of the temporal half of the right field & the nasal half of the left. This involved a defect in the corresponding parts of the retinae viz. the nasal half of the right retina & the temporal half of the left, which pointed to a lesion somewhere in the course or origin of the left Optic tract beyond the Chiasma. This patient came to consult me simply about her vision, as she was always running against people in the street, not being able to see anything to her right hand side without turning her head. Further examination revealed the presence of grave cerebral disease.

Affections of the Optic Nerve & Retina are very frequently associated with Syphilitic nervous disease & in four of my case I observed changes in the fundus. In cases V, XVI, XVII & XXIV, the patients came to consult me about their eyes alone & the condition of the fundus suggested examination for nervous symptoms. In case XVII, there was amblyopia of left eye, which had developed in 5 or 6 weeks. The patient could only tell the difference between light & darkness. I found well marked Optic Neuritis in both eyes, but most advanced in the left. In case XVI, the patient also came complaining of sudden loss of vision in one eye, being only able to distinguish with it the difference between light & darkness. Here too I discovered Optic Neuritis of both eyes, but most advanced in the blind one. This case is specially remarkable from the fact that the Optic Neuritis & the nervous symptoms developed themselves during the eruption of the secondary rash. Mr Jonathan Hutchinson narrates a very similar case in his clinical commentaries. In case XVII the Amblyopia disappeared under treatment, so that the patient could see equally well with both eyes on dismissal, but in case XVI there was

no improvement in the sight of the blind eye under treatment. In case V of Epileptiform convulsions confined to the right side of the body, vision was normally acute but on Ophthalmoscopic examination I found well marked Optic Neuritis of both eyes. In case XXIV I found Optic Atrophy in both discs, incipient in the left but well advanced in the right. The right disc was porcelain white & the vessels reduced to mere threads. Vision was very defective in the right eye & slightly so in the left.

In the early stage of Optic Neuritis there is hyperaemia & swelling of the papilla, with haziness ("woolly" appearance) of its margins & increase in the size of the central vein, while the central Artery remains of normal dimensions or is contracted. In extreme cases as in case XVII, in the amblyopic eye, the disc was swollen to a great size assuming quite a mushroom shape, the veins were enormously distended & tortuous and the arteries contracted so as to be barely visible. In this early stage even where the Ophthalmoscopic signs are highly developed vision is often but little below the normal, whilst in these & possibly less well marked cases, it is reduced to perception of light or even that may be wanting. In case V with well marked Optic Neuritis of both eyes vision was normal. In cases XVI & XVII vision of one eye only was interfered with, although neuritis was present in both. These remarkable differences in the degree of blindness depend probably on the extent to which the nervous elements of the inflamed parts are pressed on or altered. Consecutive atrophy of the Optic Nerve is very liable to follow the Neuritis due to Syphilis & in case XVI, where there was little improvement under treatment, the disc was becoming white & the vessels abnormally narrow.

6. Disturbances of Speech.

This is a more frequent symptom in cerebral Syphilis than is commonly supposed. It is a very striking fact that speech was interfered with in 10 out of my 24 cases. The speech disturbance varied greatly in degree. In investigating the condition of the speech we must examine the patient & his friends as to its previous condition in health, if we were not acquainted with him before the onset of the nervous disease. In some cases the speech disturbance was manifest only under certain conditions as during mental excitement. So long as the patient kept cool he spoke quite fluently & correctly, but the moment he became excited, he came to a sudden stop, had the greatest difficulty in recalling the proper words & in expressing even the simplest ideas. The most frequent form of speech disturbance that I met with was a marked sluggishness of speech, which was generally combined with a sluggishness & lethargy of all the mental processes. The patient spoke in a peculiarly slow & deliberate manner, pronouncing each syllable evidently with a great effort. Now & again he would come to an abrupt stop & pause for a time, before he could recall & express the proper word. The patients themselves often volunteered the information that they did not speak so well as they used to do, or the friends in some cases being the first to observe the difference of speech. These speech disturbances were frequently observed before any paralytic symptoms had appeared & are therefore of great importance in early diagnosis. The most marked disturbances occured after apoplectiform attacks as in case XIV & were usually associated with paralyses. These speech disturbances might be due either to some interference with the Speech centre in the posterior extremity of the lowest frontal

convolution & the adjacent part of the ascending frontal in the left hemisphere; or as is very frequently the cases in Cerebral Syphilis to some weakness of the muscles employed in articulation caused by some lesion either in the origin or in the trunk of the Hypoglossal.

7. Disturbances of Hearing.

Disturbances of hearing of various degrees & referable to lesions in the external, middle or internal ear have been occasionally identified in connection with the acquired disease, but much more frequently in connection with the inherited. In one only of my cases, in case VIII, was there a marked disturbance of hearing, but this in many respects was an exceptional & interesting case. Mr Jonathan Hutchison says that cases of absolute deafness occurring in acquired Syphilis are rare & that in the whole course of his experience he has only seen 3 or 4 patients absolutely deaf from it. In my limited experience I have met with two, but unfortunately have exact notes only of one. In case VIII the development of the deafness was remarkable in three ways; (1) from its rapid development & absolute character. The patient went to bed with his hearing all right & awoke next morning absolutely deaf. (2) From its early appearance. It occurred twelve months after the primary chancre. He had slight secondaries, but was not treated for Syphilis & at the time of the appearance of the deafness he had large sores on his legs. He immediately afterwards went to Leeds Infirmary, when he was put under specific treatment with rapid healing of his sores, great improvement in general health but none as regards hearing. (3) From the development five years afterwards of nervous disease with the appearance of the nervous symptoms the

development of distressing noises in both ears. The noises, which he described sometimes as loud ringing & sometimes as loud buzzing like steam whistles, distressed him exceedingly, so that he could not sleep for weeks & while under treatment, he threatened to destroy himself if they did not soon get better. They disappeared however entirely under treatment, although there was no improvement in the deafness. I met with another similar case of the sudden development of absolute deafness shortly after secondary syphilis, but with no development of further nervous symptoms & with no subsequent ringing in the ears. In both patients curiously it occured during the night, both going to bed well, but in the morning finding that they could hear nothing.

The rapid development of absolute deafness is of much more frequent occurence in the inherited disease & is due either to disease of the internal ear or of the auditory nerves or centres. It usually occurs along with interstitial keratitis & seldom happens till eight years of age. I have met with one example of this in the case of a boy, aged 11 years, who came to me with interstitial keratitis of both eyes & gradually increasing deafness. He had Hutchinson's teeth & his mother had had a miscarriage before his birth & another after it. Under treatment the keratitis disappeared, but as the eyes got better, the hearing got gradually worse until in about 5 months, he was almost absolutely deaf.

8. Disturbances of Taste & Smell.

I have not met with any disturbances of smell, although this occasionally occurs in cerebral Syphilis. In case XIII there was loss of the sense of taste, confined to the right side of the Tongue. This was very

carefully examined by means of crystals of salt & sugar. On the right side of the tongue no difference was appreciable until after a considerable time, when these dissolving out extended to the left side. On placing a small crystal of salt or sugar on the left side, the difference was appreciated in a few seconds. This was associated with a very distinct loss of sensibility on the right half of the soft palate, right Tonsil, right side of anterior arch of fauces & right half of uvula. A touch on these parts could be felt only very faintly & excited no reflex spasm whatever, just as if the parts had been brushed over with a solution of Cocaine. There was paralysis also of right side of soft palate, flattening of the right arch of the fauces, the uvula was drawn to the left side & when he took a deep inspiration was still further drawn to the left. It was interesting to observe this paralysis & loss of tactile sensibility in those parts supplied by the second division of the Fifth Nerve associated with loss of taste on the same side of the tongue. The discovery of these symptoms led to a diagnosis of a cerebral origin for the paraplegia with which they were associated. The correctness of the diagnosis was confirmed by the further development of other cerebral symptoms & by the final development of insanity. The loss of taste gradually disappeared under treatment along with the paralysis & loss of sensation on the same side of the soft palate, until all these regained their normal condition.

9. Psychical Disturbances.

In 11 of my 24 cases, I found the other symptoms accompanied by various degrees of psychical disturbance. In investigating into the mental condition of a patient it is of the utmost importance not to content ourselves merely with an examination of the patient,

but also to cross examine those who have lived in close relationship with him. Changes in demeanour & character very noticeable to those coming into daily contact with him may have entirely escaped the observation of the patient himself. The physician without such assistance may fail to observe even the most marked psychical changes, for the simple reason that he may have had only an imperfect acquaintance with the patient before the onset of his disease or even no acquaintance at all. By careful examination of the patient's friends as to his present mental condition as contrasted with his past much valuable information can frequently be gained, which otherwise would be lost.

The psychical symptom observed most frequently by me was loss of memory, which was noted in nine cases. It varied in degree from a slight failure of memory to a condition in which the memory was entirely unreliable, the patient not being able to remember anything & hence finding it almost impossible to perform the ordinary duties of life. For example, the patient if a woman would find that she could not get on with her household duties because nearly all her time was occupied in looking for things, the locality of which she had forgotten and if she began to do something she would shortly forget what she had intended to do and so on. Cases XI & XXI furnish examples of this extreme degree of failure of memory. In case XI the woman's memory was at one period so bad that she did not dare to leave the house alone, as she had the greatest difficulty in finding her way back, having forgotten the localities & names of streets, with which she had been familiar all her life time.

A general dulling of the intelligence & lethargy of all the mental processes was very often observable in patients suffering from syphilitic affections of the brain. I observed this in 8 cases & it was generally associated

with some failure of memory & sluggishness of speech. In its most extreme degree this was seen in case XVIII, where the patient lay as if profoundly asleep, being completely indifferent to everything that was passing around him. From this condition he could be momentarily roused by pinching or shouting to him & made to swallow his food or to answer questions. He spoke in a peculiarly slow vacant manner, often stopping short in the middle of his answer, just like a man talking in his sleep, and then he would sink into his former condition of stupor again. This was the extreme degree of that peculiar mental lethargy which is most frequently found in Syphilitic disease of the Cerebral Arteries, but which is usually met with in much less pronounced forms as a dulling & blunting of the mind & a sluggishness of all the mental processes. This may be met with in different degrees of intensity but the fundamental type is the same and is exceedingly striking & characteristic to the experienced eye. The patient himself may volunteer the information that his mind is not so vigorous as it used to be, but more frequently the friends have observed that he is duller & slower in speech & thought. Cases XI, XII, XIX, XX & XXI furnish typical examples of this mental change, which is so characteristic & yet so difficult to describe in words. The physiognomy of such patients was generally characteristic, a dull, miserable, vacant look being their constant expression. On asking them a question you had to wait a considerable time for an answer & then it was delivered in a peculiar sluggish dreamy way, as if the patient had to make a great mental effort to grasp the meaning of the question & had great difficulty in preserving the continuity of his ideas. Sometimes the question had to be repeated several times, before the patient seemed

to grasp it & then an interval had to elapse, before he was able to give an answer. It is difficult to express in words the manner & bearing of such patients, but I think it is best described by the phrases, mental lethargy or sluggishness of all the mental processes. The various cerebral processes involved in apprehension, memory, reasoning & speech required a much longer time for their accomplishment than in the healthy brain.

Changes in demeanour, manner & character were frequently observed by patients themselves & by their friends. In 4 cases such changes were observed. The patient was conscious perhaps that he was much more irritable & easily excited than he used to be. A description of their mental state very frequently given by patients was that they felt very nervous of late, that they were startled by the slightest cause, & always in a state of apprehension, as if something dreadful were going to happen them. They could not understand this, as they had no reason to be in this frame of mind. Such a history I got from the patients themselves frequently. Or the patient's friends had noticed that he had become very morose, melancholy & disagreeable of late without any apparent cause, though previously he had always been of a cheerful temperament; that he was "quite different from what he used to be" as they frequently expressed it. It is a curious & interesting fact that these changes of temperament were often first observable when the patient was under the influence of alcohol. The friends observed that whilst formerly he used to be happy & jolly after his customary quantity of alcohol, now he became gloomy, morose & quarrelsome, & sometimes even became furiously excited after partaking of a very small quantity. "Drink", as they expressed it, seemed to have quite a different effect on him, from "what it used to have". The patient himself sometimes

observed that he could now take only a very small quantity of alcohol without "losing his head", although he used to indulge in it freely. One patient told me that three glasses of beer now made him quite maudlin, whereas previously he could carry comfortably twenty in the course of an evening. Such was the history that I got from patients frequently and it is a fact worthy of observation that psychical changes may first manifest themselves by a marked change in the patients' demeanour & conduct during his customary indulgence in Alcohol and by the remarkably powerful effect on him of even very trifling quantities.

Melancholia was a very common psychical symptom. The patients though previously of a bright & cheerful temperament became gloomy, morose & wretched. Although this melancholia & mental depression generally disappeared along with a corresponding improvement of the physical symptoms, yet in two of my cases, XIII & XIV, it developed into insanity. In these two cases as the melancholia gradually deepened, delusions began to appear. They imagined that all kinds of plots were being formed against them & would not associate with the other patients in the wards but sat moping by themselves. In both cases, whilst the physical symptoms, the paralyses, improved considerably under treatment, the mental condition gradually got worse. Both cases went to the Asylum & one attempted suicide by cutting his throat the day after his removal from hospital.

I am very strongly convinced that Syphilitic disease of the brain is a much more frequent cause of insanity than is commonly supposed. Leubner in his article on cerebral Syphilis groups the manifold expressions of the disease into three fundamental types & in the third of these types he describes the cerebral disease as running

a course similar to that of dementia paralytica; & in which psychical disturbances form a very striking feature. In no fewer than 11 out of 24 cases I found psychical changes associated with the paralyses, the sensory disturbances & other physical symptoms. The frequency & importance of psychical disturbances as a symptom in cerebral Syphilis have not been sufficiently recognized, because the mental condition of the patients has not been carefully & systematically investigated into by the majority of observers. I further found that the mental condition generally improved with the other symptoms under early & energetic treatment. It was very striking to observe the great mental improvement in some cases after a thorough course of treatment. The nervousness, the mental lethargy, the melancholia & depression had disappeared & the patients became bright, intelligent & cheerful. They lost the dull, vacant, wretched expression & the memory always became greatly improved. As many of them pithily expressed it "they felt themselves again". The two cases in which insanity developed formed a sad exception to the general rule of improvement under early treatment. The important lesson which I draw from the facts of my own experience is that Syphilis should always be thought of as a possible cause of insanity & especially of those lesser mental changes & disturbances, which though not yet amounting to insanity, greatly alarm both patients & friends; that in all such cases we should consider with the utmost care the possibility of Syphilis as a cause & remember the terrible importance of early, energetic & thorough treatment.

10. Condition of the Reflexes.

The value of a careful examination of the reflexes as an aid in the diagnosis of diseases of the brain & spinal cord cannot be exaggerated. In 22 cases I found some deviation from the normal, leaving only 2 cases, where the examination of the reflexes gave us no assistance in our diagnosis. In the reflexes we have a valuable objective symptom, altogether independent of the patients' mental peculiarities. Many of the symptoms of Nervous disease especially in the early stages are subjective & can be elicited only through the patients appreciation of them & hence there is always a certain amount of uncertainty attaching to them. We cannot auscultate or percuss or palpate the brain or spinal cord and hence every objective symptom relating to them is of the highest value. Great care however must be exercised in the examination of the reflexes before forming any definite conclusion regarding them. In the same individual the condition of the reflexes may vary within certain limits at different times & under different conditions. Hence no conclusion should be come to regarding them, until repeated observations at different times have been made and these carefully compared with one another. Again the normal condition of the reflexes varies to some extent in different individuals & is especially influenced by age. In the young they are exceedingly active & in the aged become much fainter & slower. When any diminution or increase of reflex activity is apparently observed in a given case, it is often helpful to compare it with the activity of the reflexes manifested in several healthy individuals of the same age. The eye reflexes, the superficial or cutaneous reflexes and the deep or tendon reflexes ought all to be carefully & systematically examined. I have already discussed the Eye reflexes under Eye symptoms & will therefore say nothing more of them.

The cutaneous reflexes are the plantar, gluteal, cremasteric, abdominal, epigastric & scapular. Of these the examination of cremasteric, abdominal & epigastric is most important, because these are the most constant. They are elicited by a gentle touch & are soon exhausted by repeated stimulation. The importance of the cutaneous reflexes in diagnosis is strikingly manifest from the fact that in 20 cases I found some marked deviations from the normal. In ten cases I found complete absence of all the cutaneous reflexes. In nine cases I found them very faint or irregular, some being absent and some present. This absence or diminution of the cutaneous reflexes was nearly always accompanied by a heightened myotatic irritability & marked exaggeration of the tendon reflexes. In case VII with absence of knee jerks there was very marked exaggeration of all the cutaneous reflexes, the gentlest touch producing the most marked contractions. This was beautifully marked along the whole extent of the muscles of the back from the lumbar region to the lower cervical as well as in the epigastric, abdominal, cremasteric, gluteal & plantar reflexes. Although we cannot infer from the condition of the cutaneous reflexes alone the existence of nervous disease, still complete absence, marked exaggeration, irregularities or marked differences between the two sides of the body afford valuable confirmatory evidence of a diseased condition of the brain or spinal cord. Complete absence of cutaneous reflexes or marked diminution of their activity as seen in my 19 cases is nearly always met with in cerebral disease, whilst marked exaggeration of these reflexes is met with in some lesions of the spinal cord as in case VII, a case of spinal meningitis. From my own experience I am convinced that the careful & repeated examination of the cutaneous reflexes will often give us very

valuable help in the early diagnosis of obscure symptoms because marked changes in their conditions are frequently observable at a very early stage, before any corresponding changes can be observed in the tendon reflexes. Dr Gowers supplies a good working theory, which assists us in understanding more clearly the clinical facts observed. "The frequency" he says "with which the cutaneous reflexes "are abolished in cerebral lesions seems to indicate that the "cerebral centre, which controls reflex action is itself habitually "controlled by a higher centre perhaps in the cortex. When "this is destroyed or the path from it is interrupted, the "controlling centre passes into a condition of increased "activity & the reflex action is lessened."

In examination of the deep or tendon reflexes, the patellar tendon reflex is most important but the Tendo Achilles reflex & the arm reflexes viz. the tendon reflexes of Flexor digitorum, Triceps, Biceps & Supinator Longus ought all to be examined. In 11 cases I met with marked exaggeration of the tendon reflexes & in most of these the other phenomena which accompany a condition of heightened myotatic irritability. The pyramidal tract is the path, disease of which determines excess of these reflexes. We know that disease of the pyramidal fibres in the brain causes the same excess of this form of reflex action as does disease of the pyramidal fibres of the cord. In cerebral disease, as was well exemplified in my 11 cases, the knee jerks & all the tendon reflexes are generally exaggerated in range of contraction & quickened in time. In these 11 cases the exaggeration of the tendon reflexes was always accompanied by complete absence or diminished activity of the cutaneous reflexes. If the disease be confined to one side of the brain, the reflexes may be abnormal only on one side of the body. Hence a very slight deviation from the normal if confined to one side,

can very easily be detected by contrast with the other side. With exaggerated tendon reflexes certain additional phenomena can usually be elicited which are consequent on the heightened myotatic irritability such as front tap contraction, ankle clonus & contraction of the Rectus on tapping the patella downwards with the leg extended. The knee jerk in such cases can also be elicited by a very gentle tap on the tendon of the Rectus.

The myotatic irritability is diminished or lost & hence tendon reflexes are diminished or absent in diseases which seperate the muscle from the spinal cord, in diseases of the anterior & posterior roots & in diseases of the grey matter at the level from which the nerves for the muscle proceed. In case VII, a case of spinal meningitis, where the nerve roots would be subjected to compression, the tendon reflexes were completely absent, whilst the cutaneous were greatly exaggerated. In the pre-ataxic stage of Locomotor Ataxia the absence or marked diminution of the tendon reflexes is a very important aid to diagnosis & in cases XXIII & XXIV led to a diagnosis before the development of the ataxia.

The indications afforded by the reflexes are of such great value in the diagnosis of Nervous disease that the importance of a routine examination of these cannot be insisted on too strongly. The reflexes as a rule are only examined when manifest symptoms of Nervous disease are present, but I wish to insist strongly that the condition of the reflexes should always be investigated in every routine examination of a patient, just as we examine his lungs, heart, liver & kidneys, because through the reflexes we can often get most valuable information as to the state of the brain & spinal cord, which otherwise would escape our observation. Their great value & importance in early diagnosis, I have already called special attention to.

Chap. III.

Diagnosis.

In Syphilitic diseases of the nervous system, there is no symptom or symptoms, which can be regarded as peculiar to or especially indicative of this group of diseases. The sensory, motor, psychical & other functional disturbances which Syphilitic disease calls forth are likewise produced by non-specific tumours, by abscess, by circumscribed or diffuse inflammatory or degenerative processes. But though there is no symptom which is patho-gnomonic, the history of the case & the grouping of the symptoms often suggest & sometimes very strongly the probability of a Syphilitic origin. The diagnosis from symptoms alone without evidence of Syphilitic infection either from the patients history or from traces on his body can only be a probable diagnosis, but this can often attain to a high degree of probability, which is frequently confirmed by the brilliant results of treatment. The history of the characteristic prodromata before the development of the graver manifestations, the variability, vagrancy & transiency of the symptoms and their frequently irregular & anomalous grouping present in many cases a clinical picture so characteristic that Syphilis at once is suggested as the cause.

In many cases however the clinical picture is not so characteristic & in forming a diagnosis, other factors outside the symptomatology must be taken into consideration. If the patient volunteer a history of infection, this is valuable evidence, but even the absolute denial of infection is not of much weight in forming a diagnosis. We can often be certain of his infection by the traces of past specific processes left on his body such as

characteristic cicatrices, old cystic adhesions, indurations in the bones, &c. Frequently it is possible to elicit a history of secondary symptoms, sore throat, cutaneous rash, loss of hair, & subsequent nocturnal pains in joints & bones, even where all infection is denied & where there are no traces to be found on the body. Sometimes the diagnosis is made easy by the presence of characteristic Syphilitic lesions such as Psoriasis, nodes, characteristic ulcers & so forth observable on the patient, when he comes to consult us about his nervous symptoms. The fact of infection may thus be ascertained either from the patients' confession or altogether independently of this from a distinct history of secondary symptoms or from traces left on his body or from the actual presence of Syphilitic lesions. But there is a large number of cases, in which there is nothing to aid us either from the patients history or from anything observable on his body, in which there is no history or trace of previous infection, & yet in which we are confronted with an unmistakeably Syphilitic lesion of the late secondary or tertiary type, which not infrequently takes the form of disease of the brain or spinal cord. I have already dwelt at considerable length on the frequency of these cases of "latent Syphilis." Hence while a history of infection either from the patients mouth or from the evident traces on his body is of the highest value, too great importance must not be attached to a complete absence of these, because negative evidence does not all exclude the possibility of a Syphilitic origin. In such cases our diagnosis may be aided by other considerations, the history of the case, the symptomatology, the exclusion of other causes & lastly a factor of great importance the age of the patient.

In only three of my 24 cases were the patients over 45 years of age. Syphilis is generally

acquired in youth and the nervous lesions generally developpe as we have seen within the first ten years after infection. Hence the youthfulness of the patient, if we can exclude other causes, gives probability to the Syphilitic origin and the more youthful the patient, the stronger the probability. Hemiplegia or paraplegia developping in a patient between 20 & 30 years of age apart from injury & without being associated with cardiac disease or Bright's disease is very rarely due to any other cause than to Syphilis. After the age of 45 with the approach of the degenerative period of life, the difficulty of diagnosis is enormously increased. The difficulty lies in assigning the part played by the arterial changes met with at this period of life & which so frequently give rise to cerebral haemorrhage or cerebral softening & which produce a series of symptoms very similar to those met with in the specific disease of the cerebral arteries. Here the diagnosis must be made with great caution. When we meet with nervous symptoms in a man of 50 or 60 years of age, we do not often think of Syphilis as a probable cause, yet we should always bear in mind that it is a possible cause & that though youth is the common period of infection, many are not infected until late in life. Besides very long intervals may elapse between primary infection & the appearance of the nervous symptoms. We must here be guided by a very careful analysis & study of the symptoms. The absence of Coma, the occurence of marked prodromata, a more or less deliberate development of the palsy, apparently healthy vessels & normal heartbeat would render haemorrhage unlikely. In atheromatous softening however we have disease of the vessels developping gradually for a considerable time before the sudden onset of the graver symptoms & causing a series of prodromata very similar to those

met with in Syphilitic disease. Headache however is not very common & as we have seen, this is a very marked prodromal symptom in Syphilis. However we may lay it down as a valuable aid for guidance in diagnosis that after the age of 45 with increase of years the less becomes the probability of a Syphilitic origin & the greater becomes the probability of the symptoms being consequent on Atheromatous changes.

An important aid in diagnosis is the result of treatment. Whenever there is a shadow of a doubt as to the true diagnosis, whenever there is even the slightest probability of a Syphilitic origin, the patient should always get the benefit of the doubt & be put at once upon a short & energetic course of treatment. This often speedily clears up the diagnosis in a most effectual manner by the rapid disappearance of symptoms & cure of the patient or by a great improvement in his condition. But even if treatment have no effect whatever on the symptoms, we cannot positively exclude Syphilis as the cause. The treatment may be ineffective only because it is too late, the symptoms present being due to secondary non-specific degenerative processes consequent on the original specific lesions & these of course cannot be influenced by treatment. In such cases it is useless to prolong the treatment beyond a months. If during this period we find no change, we may rest assured that nothing can be gained by the further use of Mercury or Pot. Iodide.

I have said nothing as to pathological diagnosis, because my observations were purely clinical & I had no opportunity of making any Post mortem examinations. I have therefore confined myself to the question of the Specific or non-specific character of the disease, which for practical purposes is of infinitely greater importance than the further question as to its exact nature.

Chap. IV.

Prognosis.

In reviewing our 24 cases as to the results of treatment, they may be divided into three classes. 1st There were 12 cases in which there was a complete & permanent cure, in which there was complete disappearance of all the symptoms without any relapse. 2d There were 8 cases in which there was great improvement up to a certain point, but in which there was a residuum of permanent symptoms remaining. 3d There were four cases in which after a period of improvement, there was a relapse & further development of fresh symptoms. These results show plainly the two great facts that the prognosis of Syphilitic affections of the brain & Spinal cord is worse than that of Syphilis of any of the other organs of the body, but on the other hand that of all diseases of the nervous system, the Syphilitic affections are the most hopeful & amenable to treatment.

These different results are readily explained by a consideration of the fact that the symptoms observed may be due not only to the original Specific process but also to the effects produced by it on the normal nerve cells & nerve fibres. We know that in all Syphilitic new growths, in Syphilitic meningitis & in all Syphilitic inflammations there is a fibroid transformation, which results in the development of cicatricial tissue, which like all scar tissue undergoes a gradual process of shrinkage. Hence it is only at the earliest period that we can hope for the complete removal of the Specific process without permanent damage to the nerve tissue. When once the process of fibroid transformation has set in, Then we must expect to find some permanent-

interference with function consequent on the actual destruction of nerve tissue & on the compression exercised by the cicatricial tissue on the nerve cells, nerve fibres or nerve roots. The relapses after a period of improvement are mostly due to gradually increasing cicatricial contraction & to secondary degenerations. In Syphilitic disease of the arteries, when thrombosis or embolism has taken place, the symptoms depend on the consequent necrotic softening of that portion of brain tissue deprived of its vascular supply. Here the damaged tissue cannot be influenced by treatment, but a recurrence of the attack may be prevented. But if actual destruction of brain tissue have not yet taken place, if the symptoms be due merely to a diminished amount of blood reaching certain brain areas through the narrowed vessels, then great improvement can be effected under treatment. This general principle was well illustrated by Cases XVIII. XIX. XX. XXI & XXII.

The prognosis is thus necessarily always doubtful because although by energetic treatment we may be confident of putting an end to the specific process, we are quite unable to foretell with any degree of certainty, what amount of permanent damage may be done to the nerve tissue & hence what functional derangements may be permanent. In my own experience the degree of success attending treatment had always a very definite relationship to the period at which it was employed. The cases belonging to the first class were invariably those in which the treatment was begun early, whilst the cases in the second & third classes were those that did not come under my care, until the disease was well advanced. Hence in any given case our prognosis will necessarily depend upon the stage at which it comes under our observation, the earlier the treatment, the more hopeful becomes

our prognosis. In cases coming to us at an early stage, while the specific process is still active & before any great damage has been done to the nerve tissue, we can reasonably hope by energetic treatment to speedily terminate the specific process & thus at the least to improve the condition of the patient, if not always to effect the complete & permanent disappearance of all the symptoms. If we get the case at the earliest stage, before there has been any destruction of nerve tissue & if no cicatricial tissue remain exerting injurious compression on nerve fibres & cells, we may even hope for a complete & permanent cure.

Chaps. V

Treatment.

In the treatment of Syphilitic affections of the nervous system, the early & energetic administration of Mercury or Iodide of Potassium or of both combined is the all important matter. It used to be taught that Mercury was only of use in the early manifestations of Syphilis, in the so called secondary symptoms & that in the later or tertiary manifestations reliance should be placed entirely on Iodide of Potassium. Now while it is true of Iodide of Potassium that the nearer the symptoms are to the primary infection the less likely is it to prove efficient & the greater the lapse of time, the greater the probability of its efficiency, the converse of this does not hold good with regard to Mercury as used to be commonly taught. Mercury is of course specially indicated in the earlier symptoms, but even in the very late tertiary phenomena it is often found to be more effective than the Iodide. This hold especially true in the treatment of nervous Syphilis & in any given case it is impossible to tell which will be more efficient. This can only be learned in each individual case by experience. Hence in the treatment of my cases I have been in the habit of nearly always combining the administration of the two drugs, when both agree with the patient. We sometimes find however that the Iodide upsets the digestion & depresses the health of the patient so much that we are compelled to abandon it and rely on Mercury alone, or for the same reasons we may be compelled to give up Mercury & rely on the Iodide. The all important matter as we have seen in the prognosis is the early treatment & this of course is entirely dependant on an early diagnosis.

The treatment must be energetic. Every week or even every day is of the utmost value, for we wish to destroy the specific process at work, before this has had time to cause any great changes in the nerve structures & so that the residual cicatricial tissue will be as small in amount as possible. Hence it is dangerous to wait & see the result of one drug before giving the other and I invariably combine both & push them, if they agree with the patient. The influence of the Iodide is seen most markedly in the treatment of gummata, which it destroys in the most astonishing way. In case VI, a striking case of meningeal gumma or gummata, the treatment was exclusively confined to the administration of the Iodide, which was pushed to the extent of half an ounce per day. The results were most brilliant, all the many symptoms rapidly & completely disappearing and the patient being completely cured. In all my other cases however I have always combined the administration of the two drugs, my object being that no time should be lost in getting the greatest possible benefit from both. It is a fact often observed in the treatment of nervous Syphilis that some cases not at all influenced by the Iodide will rapidly improve under Mercury & vice versa. Valuable time may be lost by trying the effect of one drug before administering the other & nothing is gained by the single drug treatment, if both agree with the patient. The treatment must be energetic, both drugs being boldly & rapidly pushed. The best method of administering the Mercury in such cases is undoubtedly by inunction, because the patient can be rapidly put under its influence without upsetting his digestive organs. My routine method was to give the patient a warm bath

each day to keep his skin acting well & thereafter a daily inunction of an ointment composed of equal parts of Unguent. Hydrarg. Fort. & Lanoline. The patient began by using one drachm for the first inunctions & daily increasing the amount. My object was to touch the gums rapidly & then gradually diminish the amount of mercury & use it less frequently, every second & then every third day. The mouth was kept scrupulously clean by the repeated use of mouth washes.

With regard to the Iodide of Potassium I am firmly convinced of the uselessness of small doses in the treatment of Nervous disease. In case VI the patient had already been under the small dose treatment without any improvement, but when the drug was pushed, the symptoms disappeared as if by magic. All observers have seen this repeatedly, so that it is a fixed principle to push the drug. My method was to begin with 20 grain doses & gradually increase the dose by the addition of 10 grains until doses of one drachm were reached, & these drachm doses were given three or four times daily. I have found that in the vast majority of cases such large doses cause no great discomfort, in fact not so much as I have observed from the administration of small doses. The best time to give it, I found to be when the stomach was empty about an hour before a meal. The doses were given in some effervescing soda water, as this was found to counteract any tendency to nausea or sickness afterwards. Given in this way & at this time these large doses will as a rule be found to be tolerated well.

How long should treatment be persevered with?

If no improvement be observed in four or five weeks, it should be abandoned, because the patient will only be debilitated by pushing the drugs further. In any case an energetic course of treatment should not be continued longer than from 8 to 12 weeks, when the patient should be put on tonic treatment for some time & then another short course of energetic treatment may be adopted. This I have found the best method of treating Syphilitic nervous affections. It is altogether opposed to the line of treatment advocated so strongly by Mr Jonathan Hutchison, small doses given over a very long period of time, one to two years. But in the treatment of nervous lesions, it must be remembered that the conditions are altogether different from lesions of other tissues or organs of the body. It is only the specific process at work that can be influenced by our specific treatment. Non-specific changes in the nerve cells & nerve fibres consequent on the specific lesion can never be influenced by specific drugs. Hence after 8 to 12 weeks energetic treatment, we find that we have got all the improvement that can be hoped for. The specific process within this period has been completely destroyed & any further symptoms observable are due to secondary changes in the brain or spinal cord which are non-specific in character, though caused by the original specific lesion. Hence to press treatment still further would simply mean to injure the general health of the patient.

Chap. VI.

Appendisc containing the clinical histories of 24 cases.

In this Appendisc I have given simply an accurate clinical history of the 24 cases, which have supplied the material for my Thesis. I have refrained from adding notes or comments of any kind, as my Thesis really consists of these comments arranged in a systematic way and it would thus be a useless repetition to discuss each seperately.

Index to Appendix of Cases.

Case I. Ophthalmoplegia Totalis of right eye.

" II. Ophthalmoplegia Totalis of right eye.

" III. Paralysis of right 6th nerve: internal strabismus of right eye; diplopia; sensory disturbances in left hand & arm; nocturnal headache.

" IV. Epileptiform convulsions at first confined to left side & beginning in left hand: headache: giddiness; amblyopia.

" V. Epileptiform convulsions confined to right side; coma; headache; insomnia; double optic neuritis.

" VI. Epileptiform convulsions; localised intense headache; paresis of left arm & leg; total anaesthesia & analgesia of left limbs but with muscular sense intact; speech disturbances; loss of peripheral vision.

" VII. Marked ataxia of lower limbs; attacks of giddiness; severe shooting pains in arms & legs; flexor spasms; convulsive movements confined to left leg.

" VIII. Sudden & complete loss of hearing; ataxia of lower limbs; distressing noises in the ears; speech disturbances; paresis of upper limbs; great improvement under treatment; relapse & subsequent development of bowel & bladder troubles.

" IX. Sudden development of Ataxic gait & inability to walk during treatment for Syphilitic Iritis; sensory disturbances in lower limbs.

" X. Headache; sensory disturbances on right side of face & right arm; paralysis of right orbicularis; diplopia; paresis of right arm & right leg; two years later development of paraplegia with total anaesthesia of lower limbs; paralysis of bladder & bowel.

" XI. Giddiness; headache; paralysis of left leg & left side of face; right lateral hemianopia; loss of memory; speech disturbances; melancholia; nervousness.

Indesc. Cont^d

Case XII. Hemicrania: paralysis of right side of face; ptosis of left eye & paralysis of left orbicularis: sensory disturbances in lower limbs: giddiness: failure of memory; speech disturbances: nervousness: melancholia; great improvement under treatment: relapse & ptosis of left eye: further improvement.

XIV. Headache: epileptiform attack: paresis of right arm & leg and right side of face: sensory disturbances; ataxic gait; speech disturbances; great improvement under specific treatment relapse & gradual development of insanity.

XIII. Sensory disturbances in lower limbs: paresis of lower limbs; ataxic gait; giddiness; paralysis of uvula & soft palate; affection of taste; improvement of symptoms under specific treatment but gradual onset of insanity & attempted suicide.

XV. Fits resembling "petit mal": paresis of upper limbs; headache: giddiness; speech disturbances: failure of memory: cervical pain; thickening & tenderness of cervical spines.

XVI. Development of cerebral symptoms shortly after secondaries; white atrophy of left disc & Optic neuritis of right; blindness of left eye: headache; drowsiness: giddiness: insomnia; speech disturbances.

XVII. Amblyopia of left eye & Optic neuritis of both; headache; sensory disturbances in left arm, left leg & left side of face: paresis of left leg.

XVIII. Headache: insomnia: loss of memory & mental failure; peculiar semi-comatose condition lasting several days.

XIX. Giddiness: headache: paresis of lower limbs: failure of memory: mental lethargy: change of manner; insomnia; peculiar eye symptoms.

XX Headache; giddiness: ataxic gait; mental lethargy: speech disturbances: change of manner and bearing.

Index cont^d

Case XXI. Headache ; giddiness ; insomnia ; speech disturbances; loss of memory ; sensory disturbances.

" XXII. Peculiar apoplectiform attack combined with sensory disturbances & subsequent temporary aphasia ; giddiness.

" XXIII. Preataxic stage of Locomotor Ataxia (consequent on Syphilis); gastric & cardiac crises ; no ataxia ; absence of knee jerks & Argyle-Robertson pupil ; subsequent development of the Ataxic gait.

" XXIV. Preataxic stage of Locomotor Ataxia (consequent on Syphilis); atrophy of Optic discs ; absence of knee jerks & Argyle-Robertson pupil ; no ataxia ; giddiness ; lightening pains ; loss of memory.

The only method of arrangement, which I have followed, is grouping together the cases which have a clinical resemblance.

These 24 cases may be roughly divided into 7 groups on a purely clinical basis, according to the most striking symptom or symptoms common to each group.

Group I. Palsies of Oculo-motor nerves.
Cases I. II & III.

Group II. Epileptiform convulsions due to cortical irritation.
Cases IV. V & VI.

Group. III. In which marked ataxia of the lower limbs was the most prominent symptom.
Cases VII. VIII & IX

Index Cont^{d}

Groups IV. In which paralyses & pareses were the most prominent symptoms, including paraplegia, hemiplegia & irregular paralyses & pareses.
Cases. X. XI. XII. XIII. XIV. & XV

Groups. V. In which the retinal changes were the most striking symptom but associated with other symptoms of cerebral disease.
Cases. XVI & XVII.

Groups. VI. In which psychical disturbances were the most prominent feature, illustrating the early stage of Syphilitic disease of the Cerebral vessels. I have included case XXII in this groups as illustrating the peculiar transient attacks often met with in Syphilitic disease of the vessels and important for early diagnosis & effective treatment.
Cases. XVIII. XIX. XX. XXI & XXII.

Groups. VII. Illustrating the pre-ataxic stage of Locomotor Ataxia arising on Syphilis. (Syphilitic Tabes)
Cases. XXIII & XXIV

Group. I.

Palsies of Oculo. Motor nerves.

Case I

Ophthalmoplegia Totalis of right eye; cure of the external but persistence of the internal Ophthalmoplegia.

Catherine Inevoy, aged 52, twice married was admitted on 25 June/88 to hospital with Ophthalmoplegia Totalis of the right eye.

Two years before admission she had married for the second time & her husband gave her Syphilis shortly after marriage. She never observed any sore but had marked secondary symptoms, skin eruption, loss of hair & sore throat. All these symptoms disappeared after 3 months medical treatment. She then remained well until about 6 months before admission, when she first observed a hard lump at the inner angle of the right orbit, which however got less after a few weeks. At this time also the eye became bloodshot & she had pain in moving it. She also suffered from pain in the head, chiefly confined to the right side. The eye always remained bloodshot after this. About 3 weeks before admission the eye began to get prominent & gradually bulged more & more, the lid began to droop & the eyesight to be affected. These symptoms gradually became worse.

The right eye presented a very striking appearance. There was marked exophthalmos of the right globe & ptosis of the right eyelid. The lower half of the bulbar conjunctiva was intensely injected & chemosed. The eyeball seemed to be rotated upwards, so that the lower margin of the cornea was in the position of the normal horizontal axis. The globe was almost perfectly immobile. There was no movement directly upwards, downwards or outwards & only the faintest movement inwards and upwards & inwards, so faint that it was perceptible only on the closest examination. The Iris was widely dilated & immobile, responding neither to light nor to

Case I Cont^d

accommodative effort. There was also paralysis of the Ciliary muscle. The distant vision of the right eye was almost as good as that of the left, but near vision was very imperfect & she could only read J no 20 close at hand. With suitable convex lens however she could read J no 1. With Ophthalmoscope no retinal change was observable. At the outer angle of the lower lid a small solid plaque was felt, which extended backwards along the lower orbital plate.

Here the history of Syphilis was clear & the hard mass felt extending along the outer portion of the lower orbital plate was probably either a gumma or due to Syphilitic periostitis of the orbit. She was at once put upon specific treatment with a rapid improvement of all her symptoms & complete disappearance of most.

The movements of the globe gradually increased in range from day to day, the Ptosis & the conjunctival injection disappeared, the firm plaques at the external angle of the orbit melted away and the globe gradually receded into the socket. She was dismissed on 26 July, after 4 weeks residence in hospital with the external Ophthalmoplegia cured but the internal still existing. The eye was normal in appearance with the exception of the dilated & immobile pupil, no ptosis, no exophthalmos, no conjunctival injection or chemosis, no hemicrania & all the movements of the globe perfect except that of the external rectus, which was still deficient in range. She continued her specific treatment & a month after her dismissal the movement of the external rectus was normal. I saw her six months afterwards & the internal Ophthalmoplegia still persisted, the Iris being dilated & immobile and the Ciliary muscle paralysed.

Case II

Ophthalmoplegia Totalis of Right Eye with complete recovery under specific treatment.

Robert Taylor, aged 39 years, sailor was admitted into hospital on 11 May 84. On admission there was complete paralysis of all the external & internal muscles of the right eyeball & ptosis of the right lid. The eye presented a most peculiar appearance, owing to marked exophthalmos, which was so extreme that the globe appeared to be almost resting on the cheek and though there was complete Ptosis of the right lid, it only very partially concealed the projecting globe. The bulbar conjunctiva was intensely injected. The cornea was anaesthetic & being only partially covered by the drooping lid, there were abrasions of the corneal epithelium. The globe was absolutely immobile. The bulbar conjunctiva was intensely injected. The pupil was widely dilated & immobile, not contracting either to the stimulus of light or to the effort of accomodation. He could only perceive the difference between light & darkness with the eye. Owing to the abrasions of the corneal epithelium it was quite impossible to get a view of the retina. On admission & for two weeks afterwards the patient complained of intense pain confined to the right side of the head, extending from the eyebrow over the vertex to the occiput. This pain was very markedly increased at night.

All these eye symptoms had developed in one week. The earliest symptom being the Ptosis, which was first observed 7 days before admission. He had however for the preceding 6 months suffered continuously from right hemicrania, which was always worst at night.

The diagnosis of a syphilitic origin was founded on the following facts 1. Though no history of secondary symptoms or of chancre could be elicited, he acknowledged

Case II Cont^d

having had "a runner" when 18 years of age. (2) The right hemicrania existed for 6 months before the appearance of the eye symptoms & was characterized by marked nocturnal exacerbations. (3) The presence of a gumma in the neighbourhood of the Sphenoidal fissure exercising pressure on all the structures passing through it was sufficient to account for all the symptoms observed. (4) No other cause was traceable such as Rheumatism or exposure to cold.

The patient was at once put upon specific treatment. Both Mercury & Iodide were given & rapidly pushed. The speedy disappearance of all the symptoms under this line of treatment confirmed the diagnosis of its Syphilitic origin.

The eye being covered with a pad & a few drops of oil put on the cornea daily, the abrasions soon disappeared and I was able to make an Ophthalmoscopic examination, which showed the optic disc to be paler than normal. The headache first disappeared & then the injection of the conjunctiva. Gradually the various movements of the globe returned, increasing in range from day to day. Simultaneously with the increase of movement, there was gradual decrease of the Ptosis & Exophthalmos, until these entirely disappeared. The Iris gradually became more active & sensitive to the stimuli of light & accommodation. He was dismissed on the 19th June after 6 weeks residence in Hospital, the eye normal in appearance, the Iris mobile & active, all of the movements of the globe perfect except the outward movement, being able to rotate the eye outwards only about one half, vision nearly normal. He continued his specific treatment & when I saw him four months afterwards, the movement of the external rectus was completely recovered and the eye was normal.

Case III

Paralysis of right external rectus & internal Strabismus of right eye; diplopia; sensory disturbances in left-hand & arm; nocturnal headache

Jane Rock, aged 43, ~~ha~~ married, had nine children, two of whom (7th & 9th) were still born. I could not elicit from her any history of Syphilis, nor were any traces visible on her body.

The patient came to my out door department on 5th June 89 to consult me about an internal squint of the right eye, which had developed within eight days. During the last 2 years her hair had been coming out very abundantly. During the last few weeks she had suffered much from headache, which was always worst at night. Eight days before she came to me, a neighbour first called her attention to the fact that she was squinting with her right eye. Some days before this her eyes had ached slightly. Since the development of the squint she had suffered from Diplopia. A day or two after the appearance of the squint she began to experience a peculiar numb & tingling sensation in the left hand & arm, just as if the parts were asleep." This peculiar numb feeling had continued ever since.

On examination I found complete paralysis of the right 6th nerve. There was consequently internal strabismus of the right eye & diplopia. The strabismus was most marked, when she looked at an object to the right of the middle line. All the movements of the right were normal except the outward movement. There was no outward range of movement at all, the eye remaining fixed accurately at the middle line, thus showing

Case III. Cont^d

complete paralysis of the external rectus. On Ophthalmoscopic examination the fundus was normal. There was a very marked difference between the reflexes on both sides of the body. The tendon reflexes on the right side were normal. On the left side the tendon reflexes of the arm were exaggerated. The left knee jerk was greatly exaggerated as compared with the right. Front taps contractions could be elicited on the left leg & also marked contraction of the rectus on tapping the tendon, phenomena which were absent on the right. The cutaneous reflexes were completely absent on the left side and were all normal & present on the right. The eye reflexes were normal.

She was put upon specific treatment at once & there was gradual improvement in her symptoms. The external rectus gradually recovered its power, its range of movement gradually increasing. After six weeks treatment the squint & diplopia had disappeared & the outward range of movement was normal. The nocturnal headache & the peculiar sensations in left upper limb also entirely disappeared during treatment. She continued treatment for some time afterwards. I saw the patient last on the 3^d October /89 & she was then in good health & completely free from all symptoms.

Group. II.

Epileptiform Convulsions due to cortical irritation.

Group II

Case. IV

Epileptiform convulsions at first confined to left side & beginning in left hand: headache: giddiness: amblyopia: cured by specific treatment.

Thomas Lake, aged 30 years, was admitted into Hospital on 10 May 1889. He was married 4 years ago but wife has no children. I learned that his wife though living with him was little better than a prostitute.

He had always good health until about two years ago, when he had a large sore on the vertex of his head and sores also on his legs & buttocks. The cicatrices of these sores were still visible on his body. The patient was very dull & stupid and I could not get any history of premonitory symptoms from him. In September 1888 he had his first epileptiform seizure. It came on suddenly while he was working in the fields. It began with a sensory aura in the fingers of the left hand. These fingers felt numb & he had a peculiar tingling sensation in them. The left hand then became clenched, the forearm was violently flexed on the arm, the arm began to move convulsively, then the convulsive movements extended to the left leg & finally he lost consciousness. He learned from those who saw him in his fit, that after he fell down his arms & legs on both sides were convulsed, but in each epileptiform seizure, the convulsive movements were entirely confined to the left side as long as he retained consciousness. He went to work again that same afternoon, although he felt very weak. A week afterwards he had a second fit in the fields confined to his left arm & left leg. About 2 months afterwards (November) he had a third fit, confined to the left side, when he fell out of a cart & was unconscious

Case IV. Cont.d

for about half an hour afterwards. He had other two fits after that, making 5 seizures in all within 5 months, the last one having occured in February. Each fit he said was exactly the same character, always began with sensory aura in the left hand, then convulsive movements of left arm, later convulsive movements of left leg & finally he lost consciousness.

After the last seizure he began to feel very weak in his legs & did not go back to work, because he felt terrified of the fits coming on again & his master would not employ him. He was able to walk about until the beginning of April, when he began to suffer from intense headache. The headache was diffuse, most intense over the vertex & of the most excruciating character at times. It was always much worse at night, so that he never slept during the nighttime. Up till the time of his admission he was tortured night & day by it so that he could not leave his bed. He had also attacks of vomiting at intervals. During the last few months he had suffered from transient attacks of giddiness. During these giddy attacks his sight became dim & everything round about turned dark. These attacks were very transient & soon passed off. For 3 weeks before admission his sight had rapidly become worse until he was almost totally blind, only being able to discern the difference between light & darkness.

He was under specific treatment in the Infirmary for 6 weeks & was dismissed on 29 June 89.

The first few days after admission he was constantly moaning with the pain in his head. He lay with his head between his hands as if he were terrified that it should be moved. The skull was tender to percussion

Case IV. Cont^d

all over the vertex, but was particularly tender at a spot on the posterior half of the vertex & to the right of the middle line. After a few days of treatment the headache gradually disappeared until it left him entirely. He had corneal opacities in both eyes due to disease in early childhood, so that it was quite impossible to get a view of the fundus with the Ophthalmoscope. His eyesight gradually improved & within two weeks he was able to guide himself about the ward. On dismissal it was as good as it had ever been, although from the corneal opacities it was at best very defective. On admission his cutaneous reflexes were all present, but only very faint. The knee jerks were exaggerated & quickened. On dismissal his cutaneous reflexes were all present & very active. He never had any convulsions after his admission & no attacks of giddiness. His general condition improved wonderfully under treatment. On admission he was emaciated, dirty earthy complexion & had a miserable look. Under treatment he gained flesh, becoming quite plump. His complexion lost its sallow hue & became clear & well coloured. The improvement in his appearance was so great, that his friends said he looked like another man. He continued to take small doses of the Iodide. I saw him 10 weeks after his dismissal & he had remained in the best of health & absolutely free from all symptoms. I saw him again on 11th October 3½ months after his dismissal from hospital. He had been working regularly ever since, & had kept in the best of health & been completely free from all symptoms.

Case V

Headache ; insomnia ; Epileptiform convulsions confined to right side ; Coma ; Double Optic Neuritis ; cured by specific treatment.

Margaret Bradley, aged 24 years, was admitted into the Infirmary on 23 April, 1889.

She was married 4 years ago & had 2 abortions at the second months. Subsequently she gave birth to a child at full time, which died three weeks after birth with Syphilis. It had "snuffles" & well marked cutaneous eruptions.

She had suffered much of late with severe pains in the legs always worst at night. Ever since last Christmas she had suffered from excruciating headaches always worst at night & recently she had never slept at night at all. About Christmas time, a sore began to appear on the top of her head, which has been gradually spreading since then, also sores on her face, back & legs. Since then she has had occasional attacks of giddiness & has often felt very drowsy. At Christmas she was under treatment at Newcastle Infirmary for a short time.

For several weeks before the first convulsion the headache & insomnia had been specially severe & the drowsiness was very marked. On wakening on the morning of Wednesday, 10th April /89, she felt a little queer & giddy. She then remembered nothing more until the following morning. When her mother came up to her bedroom she found her unconscious & in convulsions, which were confined to the right side of the body. Her mother said she foamed slightly at the mouth & throughout the day had slight convulsive movements, which were always confined to the right side. Dr Munro, who saw

Case V Cont^d

her on Wednesday shortly after the first convulsive attack said that she was completely unconscious & that her eyes were directed continuously to the left. He saw her on the following day (Thursday) & observed that she could not speak so readily or so fluently as before & that her manner was confused. She had remained completely unconscious from the attack on Wednesday until the following morning. On Friday, 12 April, she felt several threatenings of the attack. She said that before the convulsions came on, she felt giddy, everything going round, she also became blind in the left eye & had a peculiar feeling of numbness in the right leg. Dr Munro at once put her upon large doses of the Iodide, which speedily relieved the headache, the severe pains in the legs & the distressing insomnia.

I saw her on the 14 April, four days after the convulsive attack. She had a large sore on the vertex of the head extending from the occipital protuberance to the forehead as large as one's hand. She had also a sore on the ala of the nose, on one cheek & several large sores on the back. There were nodes on her Tibiae. She felt weak. There was no ataxia, no paralysis or paresis and no abnormalities of sensation. The cutaneous reflexes were completely absent. The knee jerks were quickened & exaggerated. Eye Reflexes were normal.

On 16 April, 6 days after her first attack she had another convulsive attack. Her face was drawn to the right side & the convulsive movements were confined at first to the right arm & right leg and then spread to the other side of the body. She frothed slightly at the mouth. Both eyes were again turned continuously to the left side during the fit. This attack lasted between 10 & 15 minutes & she was unconscious for

Case V. Cont^d

several hours afterwards. On the following day she had several threatenings, experiencing all the premonitory symptoms, but these passed off without her having an actual convulsive attack. The premonitory symptoms were always the same, a peculiar feeling comes over her, giddiness, blindness of left eye & numbness & tingling of the right leg.

On Ophthalmoscopic examination I found Optic neuritis of both eyes but most marked in the right. The right disc was bright pink & the edges not visible, being scarcely distinguishable from the surrounding retina. It was greatly swollen as seen from the marked bend of the vessels. The veins were greatly dilated & tortuous. The same appearances but less in degree were visible in the left disc.

She was at once put upon energetic specific treatment & remained in hospital until 20 June, a period of 8 weeks. After her admission she was free from headache, pains in the limbs, & all symptoms with the exception of a slight abortive attack about one week after admission. She felt giddy, confused & her sight became dimmed, but on lying down for a few minutes, the peculiar sensations passed off & she never had any other similar attacks. There was great improvement in her general health. On admission she was pale, anaemic, earthy coloured & thin, on dismissal she had a clear complexion with rosy cheeks & had become quite plump. All her sores rapidly healed up, but leaving characteristic smooth glistening cicatrices. On dismissal some of her cutaneous reflexes were present, & the Optic neuritis in both eyes was less marked, the discs being much more distinctly defined & more distinguishable from the surrounding Retina. She reported herself to me three months after her dismissal from hospital. She had been in good health ever since, better than she had enjoyed for many years.

Case VI

Epileptiform convulsions: localised intense headache; paresis of left arm & left leg; total anaesthesia & analgesia of left limbs but with muscular sense intact; peripheral vision lost: reflexes abnormal; cured by specific treatment.

William Gray, aged 42 years, married, was admitted into the R. R. Infirmary on 24 June, 1884. His wife had 10 children & no miscarriages. He confessed having had a Gonorrhoea in 1864, but never had a chancre so far as he knew. There were no marks or scars to be found on his body.

In 1864 he began to have epileptic fits. He generally had in each month one severe fit, which confined him to bed for a few days afterwards & also a number of slighter ones, perhaps as many as half a dozen. In 1882 Dr Munro first saw him & from him I got the history of the patient up to the date of admission. Gray had lost one eye previously through an injury & had now become quite blind in the remaining eye. Dr Munro found haemorrhagic patches in the retinae & put him on large doses of the Iodide. Vision rapidly returned & he was working in a fortnight. The fits ever after this diminished in frequency & severity, being sometimes as long as 6 months without a fit. He took the Iodide at irregular intervals after this, whenever he felt out of sorts. In 1886 about Christmas time the fits came on with increasing severity & during one attack he fell to the ground, his head striking a spout. On regaining consciousness it was found that he had lost the power of speech, that there was partial paralysis of the left side of the body & that his mouth was drawn to the left side. He was confined to bed for

Case VI Cont.d

six weeks. Gradually he regained power in his left arm & left leg. Speech returned only slowly & when he returned to work it was so imperfect & the stuttering was so great that he had to keep a man beside him to give the requisite orders. He began work in March 1884 & in the following month (April) his present symptoms began to appear & he was compelled to give up work. Since April the symptoms have gradually got worse & he was admitted into hospital on 24 June/84

Condition on admission. The patient complained of intense pain always confined to one spot, on the vertex of the cranium, a little to the right of the middle line, in the Auriculo-bregmatic line, just over the posterior third of the first Frontal convolution. The pain was severe during the day, but was always increased at night, when it became excruciating. The scalp over the painful area was soft & boggy to the touch & so exquisitely sensitive that the slightest touch caused him to shout aloud with pain. He could not walk in a straight line & walked with difficulty, because he had a constant tendency to stagger & fall backwards. On standing with eyes closed he at once fell backwards & reeled like a drunken man, when he attempted to walk forwards with eyes shut. He spoke with very considerable difficulty, stuttering over almost every word. Each word seemed to be pronounced with a great effort & with peculiar slowness. He had paresis of left arm & left leg, there being a very marked diminution of power in contrasting them with the limbs of the opposite side. The loss of power varied considerably from day to day, some days being much more marked than on others. There was Total anaesthesia & analgesia of left arm & leg, sense of contact & sense of pain being completely absent. There was ataxia of the upper limbs. He could not with eyes shut

Case VI Cont^d

touch his nose with either forefinger missing it by several inches & the same occured when he tried to bring the two forefingers together. His muscular sense was perfect. He was tested with 6 cartridge cases containing weights from 1 to 6 drachms & he arranged them in the order of their weights correctly & rapidly, more rapidly than I could do it. Muscular sense of lower limbs was also tested by weights & found to be intact. There was narrowing of the visual field. Peripheral vision was lost, it being limited to the central part of the field, where it was normal. The knee jerk was normal on right side, but much exaggerated on the left.

He was at once put upon one drachm doses of the Iodide 4 times daily. No mercury was employed in the treatment of this case. For some time before he came in, he had been taking small doses of the Iodide without any result. There was now rapid improvement, the symptoms gradually disappearing. The intense headache disappeared in about a week, after having tortured him for three months. Power & sensation rapidly returned to the left limbs. The gait gradually improved until he was able to walk with eyes closed and without the slightest stagger. When he left the hospital, all his symptoms had disappeared with the exception of loss of peripheral vision & a slight stutter in his speech, which however had greatly improved.

After dismissal he took 15 grains of the Iodide thrice daily for 2 weeks & then stopped it. He went back to work, but his symptoms reappearing, he was readmitted on 7th Sept., 10 weeks after his previous dismissal. I learned that he had been drinking in the interval freely freely.

He had no paralysis of left arm or left leg,

Case VI cont^d

but presented all his other symptoms, though less in intensity & degree than before. He had headache localised in the same spot, the same affection of speech, anaesthesia & analgesia of left leg & arm, but these only in a partial degree, ataxic gait especially manifested when he closed his eyes & loss of peripheral vision. He was again put on one drachm dose of the Iodide four times daily & was dismissed on 31st Oct. /87 after five week's treatment, with complete disappearance of every symptom, except peripheral loss of vision & a very slight occasional stutter.

I saw the patient twelve months afterwards. He had been working continuously ever since his dismissal & had been entirely free from symptoms of any kind. He expressed himself as never having felt better in his life.

Group. III.

In which marked Ataxia of the lower limbs was the most striking symptom.

Group III

Case VII

Attacks of Giddiness: severe shooting pains in arms & legs: marked ataxia of lower limbs: complete analgesia of legs & arms: flexor spasms; convulsive movements confined to left leg: cured by specific treatment.

Evan Jones, Seaman, aged 39, married first came under my observation in 9 Nov. 188 with ataxia of the lower limbs. He had a chancre in 1879, 9 years before. He says the only symptom he had after it, was about 12 months after the chancre a very sore tongue from which he suffered from three months. On his chest & back however there were numerous small white glistening cicatrices. I have also had his wife under treatment for Syphilitic ulcers of the Tongue, during the time he was under treatment in the Infirmary. His wife has had no childrens & no miscarriages. He had no medical treatment for the chancre.

Since the beginning of 1888 he had been subject to attacks of giddiness, when his head seemed to go round & everything turned dark. He had to clutch at things to keep himself from falling till the attack passed off. These attacks lasted only a very short time. In July 188 he began to suffer from shooting pains in the arms & legs. These were very severe & were always much worse at night. He had suffered from them until he came under my observation. About the beginning of August he began to be unsteady in his legs & this has gradually been becoming worse.

I first saw him on 9 Nov 188 at his own house. He complained greatly of the shooting pains in the arms & legs, markedly nocturnal in character, also of attacks of giddiness. There was marked ataxia of lower limbs. He fell at once, when he closed his eyes. When he walked with eyes open, he did not-

Case VII Cont'd

stagger, but seemed to have the greatest difficulty in raising the legs to make a step & put them down in a peculiar helpless hesitating way. He said he did not feel giddy in trying to walk, but simply felt loss of proper control over his legs. He said he felt the floor quite well with them. There was some weakness of grasp in both hands, but no loss of power in lower limbs. Sensation was normal. Knee jerks were absent & cutaneous reflexes active.

I put him on drachm doses of Liq. Hydrarg. Perchlor. & twenty grain doses of the Iodide three times daily, & treated him as an outpatient. He improved during the first two weeks, becoming freer from pain & able to walk better. Then he became worse than ever & I admitted him into the Infirmary on 9 Decr. 1888.

Condition on admission. The pains in both arms & legs had been troubling him of late. They were always worst at night & he kept the ward awake with his shouting during the first few nights. He described the pains as different from the shooting pains, which he previously had, as more like severe cramps, coming in paroxysms gradually increasing in intensity till they had reached their maximum & then gradually dying away. I relieved him every night with hypodermics of Morphia. A few nights after admission he had very peculiar convulsive movements of the left leg, which lasted for about two hours. It jumped so violently that it kicked the clothes off & he had to sit up in bed & hold it down. The men in the ward were greatly amused & watched it during the two hours. His walking was better than it had previously been. He walked from his house to the Infirmary a distance of quarter of a mile & when I first saw him, he could scarcely walk across the room. He had difficulty in beginning to walk owing to marked

Case VII Cont^d

flexor spasm which however vanished after two or three minutes walking, & then he walked fairly well. The flexor spasm prevented him from fully extending the limbs & bent them with a peculiar rapid jerk. He could not stand with eyes closed & staggered at once when he tried to walk with eyes shut. There was no thickening or tenderness over vertebral spines & no increased sensitiveness to hot sponge. There was no impairment of power in arms or legs. Sense of Touch, of Temperature & muscular sense as also electro-muscular irritability & sensibility were normal in both upper & lower limbs. Both continuous & interrupted currents were used in testing them. There was total analgesia of both legs. He had no sense of pain on the strongest excitement, only experiencing a sense of contact. In the arms the analgesia was not complete, the sense of pain being felt only on the strongest excitement & then only very slightly indeed. Reflexes. The knee jerks were completely absent. The cutaneous reflexes were markedly exaggerated, the slightest touch caused the most vigorous contraction. The cutaneous reflexes all along the muscles of the back as high as the Scapulæ were also abnormally active. The eye reflexes were normal. He complained of difficulty in emptying his bladder, having to strain some time before the urine would come & then it came only in a feeble stream. There was no stricture. His bowels were regular. There was no impairment of sexual power.

He was at once put upon a very vigorous course of treatment, which was continued for 7 weeks, & he was dismissed on 29th January 1889. After two weeks of treatment there was a very decided improvement & this continued steadily until his dismissal. The excruciating pains first disappeared, although he had occasional twinges of them till shortly before his dismissal. The analgesia completely disappeared,

Case VII Cont^d

In both arms & legs the sense of pain first returned in the parts nearest the trunk & gradually but slowly extended to the extremity of the limb, so that the foot in one case & the hand in the other was the last point at which it was deficient. His gait & the control over his legs were markedly improved and he could walk in the grounds for hours at a time. In the dark or whenever he closed his eyes, he began to stagger. With eyes open he could walk perfectly straight. He had regained complete control over his bladder. He felt as well as ever he did, only his legs felt weak & he was soon tired. The knee jerks were still absent & the cutaneous reflexes still exaggerated but not so markedly as before. I saw him again 6 months after dismissal about the end of July 189 . He had kept well ever since & completely free from symptoms. He still complained of his legs feeling weak & being easily tired. The day before I saw him however, he had walked a distance of six miles.

Case VIII

Sudden & complete loss of hearing: ataxic gait; distressing noises in the ears: speech disturbances; paresis of upper limbs: abnormal reflexes: great improvement under treatment: relapses & subsequent appearance of bowel & bladder troubles; always improved by treatment.

Samuel Rhodes, aged 32, unmarried was admitted into the Infirmary on 17 Nov. 1887 with symptoms of nervous disease. In 1880 he contracted Syphilis having had a chancre & the usual secondaries, cutaneous eruptions, sore throat & loss of hair. The attacks was a mild one & he was not under any medical treatment. One year after this (1881) & while he was suffering from large foul ulcers on both legs, his deafness came on. He went to bed with his hearing all right & when his sister called him in the following morning, he did not answer and it was found that he was completely deaf. Two days after this he went to Leeds Infirmary, where he was an inpatient for 4 weeks. The ulcers on his legs disappeared under treatment, but there was no improvement in his hearing. He never suffered from any sores or eruptions since.

With the exception of the deafness he was in pretty good health up till about 12 months before his admission (Nov. 186). His sister saw him one night coming staggering home, holding on by the wall & thinking he was drunk, she assisted him home. After getting home he told her that he had had a fit & could not understand how he could not walk straight. Previously to this he had not complained to his sisters of any bad symptoms. He then complained greatly of ringing & buzzing in the ears, which was so bad for several weeks, that he scarcely ever slept at night. Since then he had had frequent attacks of giddiness combined with ringing in the ears. The

Case VIII. Cont^d

two symptoms increased or diminished in intensity together. The attacks of giddiness were sometimes so severe that he had to sit down on the street, till once they passed off. During the month before admission his walking was so bad that he had been confined to bed during most of that time & the noises in his ears were so distressing that he had threatened to ~~commit~~ commit suicide.

Condition on admission (17 Nov/87). I found the patient was absolutely deaf. On testing carefully with the tuning fork, he could only feel the vibrations of the fork, when in contact with the cranial bones. He complained greatly of noises in the ears. These were elaborate in character sometimes like bells ringing, sometimes a loud buzzing & sometimes like a steam whistle blowing. They were not always present, but sometimes they were very distressing. He complained of constant giddiness, which however varied in degree, sometimes being so bad that he fell down or had to clutch at something for support. He could not walk along a straight line with eyes open & put his feet down in a peculiar hesitating way. He could not stand with feet together & eyes closed & could not walk at all with eyes closed. He said that he used to walk pretty well during the day time but staggered badly at night. When speaking, he stammered a good deal, suddenly stopping short as if he had lost the word, then after a pause, getting hold of it & going on until he came to another sudden pause. There was no loss of power in the legs, but distinct loss of power in both arms as evidenced by his exceedingly weak grasp. There were no abnormalities of sensation. The cutaneous reflexes were entirely absent. The knee jerks were quickened & exaggerated especially in the right leg. Front taps contraction was present in both legs. The eye reflexes were normal.

Case VIII Cont^d

He was at once put upon vigorous specific treatment & was dismissed after 5 weeks' treatment on 21 Decr. 1887 with all his symptoms much improved, so that he was able to go back to his old occupation that of a painter. The distressing noises in his ears had almost vanished & but rarely troubled him. His speech was very much improved. The grasp of both hand was now strong & powerful. The greatest improvement was in his gait. On admission he could scarcely walk at all without support, but now with his eyes open he could walk very steadily along a straight line. He still staggered however on closing them. His hearing & reflexes were the same as on admission.

He continued to take Pot. Iod. & Leg. Hydrarg. Perchlor. for 2 months after going out, but somewhat irregularly. He said that he always felt better after taking it regularly & walked better.

He again came under my observation at the out-patient room on 5 Nov 1888 about one year after his dismissal from hospital. He had been able to work steadily at his employment up till a few weeks before I saw him, but recently he had been becoming worse. The noises in his ears now troubled him but rarely & then only very slightly. His speech was still abnormal though greatly better than when he first came under observation. His gait was steady with eyes open & in good light, but he staggered like a drunken man with eyes closed or in the dark. The grasp of both hands was strong & powerful. He had still occasional attacks of giddiness. Recently he had attacks of what he called weakness in both legs & especially in the left leg. These attacks came on suddenly so that he fell on his knees & was powerless to rise for some minutes & even on rising for some time afterwards he felt a difficulty in moving his legs. During these attacks

Case VIII Cont^d

his legs felt dead & numb with a peculiar prickling sensation. In bed his legs felt cold & numb, just as if they were asleep. He had had for some weeks incontinence of urine. It was always dribbling away from him. Recently also he was greatly troubled with obstinate constipation going 9 & 10 days without his bowels being moved. When the desire to defaecate came on however, he could not retain it for a moment & must relieve himself at once even on the street. His penis never became erect & his testicles had been becoming atrophied. All his cutaneous reflexes were absent. Both knee jerks were greatly exaggerated & elicited on gently tapping the tendons of the Recti. Front tap contraction on both legs: contraction of the recti on tapping the patella downwards: Spinal Irritation & exaggeration of Tendo Achilles reflex. The eye reflexes were normal.

I admitted him into Hospital again & gave him a vigorous course of treatment for 6 weeks, dismissing him on 20 Dec /88. On dismissal his condition was greatly improved. His gait was steady, although he still staggered slightly with eyes closed. He was free from the attacks of giddiness & peculiar sensations. He had regained in a great degree the power over his bladder & bowel. He has continued ever since at intervals to take short courses of the Iodide & Mercury, & has been able continuously to follow his employment. I saw him last in August 1889, 8 months after his dismissal & found his condition still slightly improving.

Case IX

Development of nervous symptoms during treatment for Specific Iritis; staggering gait & inability to walk; peculiar sensations in lower limbs; reflexes abnormal; cured by specific treatment.

James Slee, aged 48 years, unmarried, first came under my observation as an out-door patient in October 1884 with severe specific iritis, coppery rash, sore throat & loss of hair. The iritis was very severe & he was under treatment for 3 months. He was treated with Hydrarg. c. Creta & the treatment was continued for a considerable time after this.

He was admitted into the Infirmary on 9 May 1888 for a relapse of the iritis, there having been adhesions left from the first attack & was at once put under specific treatment. Five days after admission he found on getting out of bed that he could not walk properly. He felt rather unwell during the day & his walking gradually became worse. This became so bad in a few days that he had to stay in bed, because he could not walk at all, without someone supporting him. I examined him carefully three days after the appearance of the first symptoms. I found he could not walk at all except when supported. His gait was most peculiar exactly like a man leaping off the ground or trying to walk on some very elastic surface. He had a constant tendency to fall backwards. Whenever he put his foot to the ground, there was violent dorsal flexion of the foot & the thigh was violently flexed on the body. His steps seemed to be a series of leaps. Evidently the peculiar gait was due to the marked increase of myotatic irritability & these violent flexions or extensions of the limb, were simply

Case IX Cont.d

a series of exaggerated paradoxical contractions. He felt a peculiar numb tingling sensation in both legs & feet. He did not feel the floor properly but felt just as "if he were walking on india-rubber" as he himself expressed it. There was no appreciable loss of power in the lower limbs. The sensations of touch, pain & temperature and the muscular sense were normal. Reflexes: the cutaneous reflexes were all absent. Both knee jerks were quickened & exaggerated. Front Tap contraction was present in both legs. Feebe Clonus on tapping the patella downwards. Marked ankle clonus & Spinal Fespidation were also present. In short all the signs of heightened neyotatic irritability.

The specific treatment was pushed more energetically than before. The dose of the Iodide was trebled being increased to one drachm three times daily. There was a rapid improvement in his symptoms & he was dismissed on the 29th May, 15 days after the nervous symptoms set in. He could then both stand & walk steadily with his eyes closed. His gait was perfectly normal, the dorsal flexion already described had gradually become less, until it had entirely disappeared. The numbness & tingling of the legs had gone. He said however that he had not the proper feeling of the floor still in walking. His cutaneous reflexes were still absent & his knee jerks exaggerated but not so markedly as before. No front tap contraction or spinal Fespidation present. The treatment was continued for another month. I saw him about a year afterwards & he had kept completely free from all nervous symptoms. He walked as well as ever he did & had recovered the proper feeling of the ground in walking.

Group IV.

In which paralyses & paresis were the most prominent symptoms, including paraplegia, hemiplegia & irregular paralyses & paresis.

Case X

Headache: sensory disturbances in right side of face & right arm: paralysis of right orbicularis: diplopia: paresis of right arm & right leg: two years after this and three weeks after confinement paraplegia with total anaesthesia of lower limbs: paralysis of bladder & bowel: cured by specific treatment.

Mrs Longstaff, aged 36 years, married, was admitted into the N.R. Infirmary on 9th May, 1888, suffering from paraplegia.

In 1884 she was treated by her medical attendant for slight secondary syphilis. Her husband was also under treatment about the same time. Two years after this in 1886 she came to her medical attendant complaining of head symptoms. She complained greatly of headache & peculiar numb sensations in her right cheek & right arm. She spoke in a peculiar drawling & hesitating manner. She had paralysis of the right orbicularis, so that she could not close the right eye. She complained of diplopia. There was considerable loss of power of the right arm. She improved rapidly under specific treatment, the numbness, pain & diplopia disappearing after 3 or 4 weeks treatment. During the time she was under treatment, she began to complain of a feeling of numbness & loss of power in the right leg, which disappeared on pushing the treatment. This history was given to me by her medical attendant.

She became pregnant & gave birth to a healthy child on 16th March 1888. About 3 weeks after her confinement, she began to complain of pain in the back, in the lumbo-sacral region. The pain used to leave her entirely during the day, but became excruciating at night. Paralysis of the lower limbs rapidly developed & became complete in about two weeks. It developed

Case X Cont^d

first in the right leg & then in the left.

She was admitted into the R. R. Infirmary on 9th May 1888. There was total paraplegia & almost complete anaesthesia of both legs which felt as if dead. Both legs lay helpless in the bed & she could not move them even in the slightest degree. Both sense of touch & sense of pain were almost completely lost in both limbs. She complained greatly of a burning & constricting sensation in a line extending round the body just above the pelvic brim. Her bladder was paralysed & her urine had to be drawn off with the catheter. She had obstinate constipation. She had only very slight control over the rectum. When she felt faeces in the rectum she could not retain them any time, but was compelled to empty the bowel at once. Knee jerks were present in both legs & there was slight ankle clonus.

She was at once put upon Specific treatment which was rapidly pushed. Her improvement was steady & continuous, movement & sensation gradually coming back to both limbs and bladder & rectum gradually regaining power. She was dismissed on 16th June, after about six weeks treatment, when she could walk about the ward with the help of a couple of sticks. Sense of touch & sense of pain had returned but were still somewhat blunted. Paralysis of bladder & rectum had entirely disappeared.

Her specific treatment was continued at home for some time. I saw her on 9th November, 5 months after her dismissal & found her able to walk pretty well but with a slight dragging gait. She told me she could walk several miles with the help of a stick, but as a rule soon got tired. Her bladder & rectum were normal and she had not had any trouble with them for some time.

Case XI

Attacks of giddiness: Headache; paralysis of left leg & left side of face: right lateral homonymous hemianopsia; loss of memory: melancholia: nervousness: abnormal reflexes: speech disturbances.

Lucy Capel, aged 49 years, married, first came to me on 23 Nov 188 complaining of failure of eye sight, of inability to see anything to her right hand side without turning her head round to the right. She was thus constantly running against people in the street. I found her suffering from right lateral homonymous hemianopsia & this led me to further examination & discovery of her other nervous symptoms.

She was married in 1845 & had one child 12 months after marriage, which died two days after birth. It was prematurely born about the 6th month. She never had another. On both legs there were several very suspicious looking scars distinctly coppery in tint.

Two years ago (1886) she began to suffer from headache, which was always worse at night. She also about the same time became subject to sudden attacks of giddiness. In December, 1884, she had what she called a fit", one morning on coming out of bed. When she put her feet to the floor, she could not raise her left leg. It felt quite dead & powerless. Her mouth was drawn towards the right side. She felt very giddy, went back to bed & sent for the doctor. For several days before "the fit", she felt so stupid & drowsy that she could scarcely keep awake & could not get through with her household duties. Since this attack the headaches with marked nocturnal exacerbations had been becoming worse & also the attacks of giddiness. She scarcely ever slept at night for the headache. Her memory had

Case XI Cont^d

become very much impaired of late. Now it was so bad that she had great difficulty in doing her household work, she forgot where she put things, she could remember nothing from one half hour to another & she could not remember the locality of any street, even those most familiar to her. She had often been running up against people & things to her right hand. This called attention to her failure of vision, for which she consulted me. Since the head symptoms appeared her hair had been coming out in handfuls. She had been very depressed & melancholy of late and much more nervous & irritable than she used to be. She had that dull, stupid, wretched look peculiar to cerebral Syphilis & the characteristic dirty earthy complexion. There was evident blunting & sluggishness of the intellectual processes. You had generally to ask the same question several times & then she answered only after some time and with peculiar slowness & deliberation. During the last three months her speech had become much affected. Both the patient herself & her neighbours had noticed her stammering & often coming to a sudden stop, because "she couldn't get the word out". All her cutaneous reflexes were completely absent, while both her knee jerks were quickened & exaggerated. On examining her visual fields I found right lateral homonymous hemianopsia. The right half of each field of vision was entirely absent. She could see nothing until it was in a straight line with the centre of the cornea or to its left. The left half of each field was normal. This implied affection of left half of each retina & therefore some affection of the left optic tract beyond the Chiasma or of the visual centre in the left half of the brain. No change in the fundus was observable on Ophthalmoscopic examination.

Case XI Cont^d.

She was at once put upon specific treatment & continued it for 3 months until the end of February, 1884. At that time all her symptoms had greatly improved. Her headaches & attacks of giddiness had completely left her. Her memory was now greatly improved almost as good as it had ever been. Her hair had ceased to come out & was now much thicker. She had lost her nervous feelings & was now bright & cheerful. She now answered questions intelligently & at once and spoke much more fluently. Her complexion was much better, the dusky earthy tint having disappeared. The hemianopsia was distinctly less, a small part of each right visual field being now restored, but the greater part of it was still absent. Reflexes as before with the addition of a faint right & left epigastric cutaneous reflex being now visible. I saw her 3 months later at the beginning of June 1884 & found that the improvement was permanent & that she had been free from all bad symptoms. There was a still further improvement as regards the Hemianopsia, which was not now complete, about ¼" part of each right half of the visual fields being now recovered. The outer three fourths of ~~each~~ the right half of each field of vision was still entirely absent.

Case XII

Hemicrania: paralysis of right side of the face: ptosis of left eye & paralysis of left orbicularis: sensory disturbances in lower limbs: attacks of giddiness: failure of memory: speech disturbances: nervousness & melancholia: great improvement under treatment: relapse & ptosis of right eye: further improvement under treatment:

Jane Arnold, aged 44, married, first came under my observation about 4 Nov. /88. She was married 22 years ago. She had one miscarriage 15 months after marriage & 4 other children, of whom the 3d & 4th died in early infancy. Her 3d child had spots all over its body & "snuffled" through its nose and gradually wasted away. Her husband was a ship carpenter & went long voyages to sea.

For the last six years she had suffered intensely from right hemicrania, but shortly before her "stroke" the pain extended to the other side. One day in April /88 her daughter noticed at dinner that her mouth was drawn over to the left side & that her left eyelid went rapidly up & down. In the evening there was drooping of the left lid & she found that she could not close her left eye. Since then she had been greatly troubled with headache & also with peculiar tingling sensations in her legs. During the last few years her memory had been becoming worse & now it was very bad. She was constantly forgetting where she had placed things. Whenever she got a little excited, she could not speak properly, could not get the proper word out: and she had observed this only recently. She had frequent attacks of giddiness of a transient character. She had a dirty earthy complexion & a peculiar nervous startled look. She said that she felt terrified at every sound & afraid to meet people, so that her life was quite miserable.

Case XII cont^d

There was smoothing of the folds on the right side of the face, the right naso-labial fold being almost obliterated. The mouth was drawn to the left side only when she spoke or whistled, in repose there was no deviation. There was marked ptosis of the left eye & paralysis of the left orbicularis, so that she was not able to close the left eye. Left knee jerk was absent, right could not be elicited, as the right knee joint was ankylosed. The cutaneous reflexes were completely absent on the right side & only very faint on the left. The eye reflexes were normal.

I put her on vigorous specific treatment for about 8 weeks till the end of December with very marked benefit. She said at the end of that period that she had not felt so well for many years. She had lost her wretched look & now seemed bright & cheerful. The headache from which she had suffered so much had entirely disappeared. The attacks of giddiness had left her. She had got rid of her nervousness & melancholia and now felt hopeful & cheerful. She had lost her dirty sallow complexion & her skin was now clear & well coloured. Her speech was improved. The ptosis of the left eye had disappeared, but smoothing of the folds of the right side of the face was still observable & also twisting of the mouth to the left side, when she spoke or whistled. The patient then disappeared from observation for 2 months & reappeared with a fractured arm. I then observed that she had ptosis of the right eyelid. She said that on New Years day her mouth was very much drawn to the left & that her daughter observed the drooping of the right lid. Since then she had suffered again from headache, giddiness, tingling in the legs, loss of memory & speech disturbances, but much less in degree than when under treatment before. I continued her treatment for other two months with marked improvement of all the symptoms as before & disappearance of the Ptosis. I saw her 7 months afterwards & she continued well & free from all symptoms.

Case XIII

Sensory disturbances in lower limbs : attacks of giddiness : paresis of lower limbs ; staggering gait ; paralysis of uvula & soft palate : affection of taste ; exaggerated reflexes : improvement of symptoms under specific treatment, but gradual onset of insanity & attempted suicide.

James McBrine, aged 44 years, married, was admitted 20 Jany /89 suffering from paresis of lower limbs. He had a chancre when 20 years of age but I could elicit no history of secondaries from him. Several white glistening cicatrices were observable however on his abdomen, arms & legs. He was never under medical treatment for the chancre. His wife had had 5 children & no miscarriages but his second child had Hutchison's teeth well marked. ~~Taken~~ About the end of 1887 he began to suffer from coldness of the feet & legs and occasional attacks of numbness & tingling in the lower limbs "like pins & needles." In July /88 he began to have occasional attacks of giddiness, which came on suddenly & then passed away. About the same time his right leg began to feel weak & he used to drag it in walking. The left leg began to be weak in Nov. /88 & about the middle of December he was compelled to give up his work, as he was unable to get about. He never had any darting pains in his legs, but only the occasional attacks of numbness & tingling.

Condition on admission. He walked very badly with a staggering gait though not the peculiar gait of Locomotor Ataxia. He dragged the right leg & on bringing it forward did not bend the knee at all. He could stand with feet close together & eyes open or shut. There was marked loss of power in flexors & extensors of both legs but most markedly in the right. Walking caused him a great effort. He could only walk the length

Case XIII cont^d

of the ward at one time & even that with great difficulty. His right arm had been amputated & the grasp of the left arm was fairly strong, though he felt it much weaker than it used to be. Sense of touch, pain, temperature & muscular sense were normal. Electric reactions were normal. The Uvula was drawn to the left side & on deep inspiration it was drawn still further to the left. The soft palate on the right side was much less sensitive than on the left. He could feel a Touch on the right side, but it excited no reflex spasm, as the slightest touch did on the left side. The sense of taste was less acute on the right side of the tongue than on the left. He could taste the difference between salt & sugar only after a considerable interval, whereas on the left side of the tongue he could tell the difference at once. The sense of smell was normal on both sides. Bladder, Bowel & sexual power were normal. The Cutaneous reflexes were all absent. The knee jerks were quickened & markedly exaggerated, especially the right. Knee Jerk was elicited on slightly tapping tendon of Rectus: marked Rectus contraction on tapping Patellae downwards; tendo Achilles reflex exaggerated: front tap contraction, ankle clonus & spinal trepidations present on both legs but most marked on right. Tendon reflexes of left arm were greatly exaggerated. Thus every symptom was present of a very heightened condition of myotatic irritability. The eye reflexes were normal.

He was at once subjected to vigorous specific treatment by injection & the administration of large doses of the Iodide. There was a rapid improvement & on 18th July, after 4 weeks treatment, he was able to walk about all day in the grounds without feeling very tired, though he still dragged the right leg slightly. The Uvula was normal. Both sides of the palate were equally sensitive as also both sides of the tongue. Both limbs had gained very markedly in power.

Case XIII Cont^d

He walked quite firmly & steadily with eyes open, but staggered whenever he closed them. He had had no attacks of giddiness for some time. The sensory disturbances in the lower limbs had disappeared. The myotatic irritability was still increased but not so markedly as on admission, when the very slightest tap produced the most vigorous contractions. He continued to improve up till the beginning of March, 6 weeks after his admission, when psychical symptoms manifested themselves, which gradually got worse. He began to get moody & melancholy, but at times he was gay, cheerful & hopeful. He was either at the one extreme or the other. Gradually however the Melancholia became more constant & pronounced. He would occasionally burst into fits of crying & began to suffer from delusions. He ran away from the Infirmary on 7th April (10 weeks after admission) & on the following day attempted to commit suicide at home by cutting his throat. He was removed to a lunatic asylum. During all this time there was a continuous improvement as regards the recovery of power in the limbs & ability to walk firmly & steadily. During the last months whilst the mental symptoms were developing, he complained greatly of distressing sensations confined entirely to the right side of the trunk (not arm or leg), which he described as "crawling, creeping & tearing" but not a distinct pain. These were always much worst at night. I examined the reflexes a few days before he left the Infirmary & found a great diminution in the myotatic irritability. The knee jerks were still quickened & exaggerated, but there was no reflex contraction, no front lip contraction & no ankle clonus. The arm tendon reflexes were not so exaggerated as before. The cutaneous reflexes were still absent.

Case XIV

Headache; convulsions; paresis of right arm & leg and right side of face; sensory disturbances; ataxia; speech disturbances; reflexes abnormal; improvement under specific treatment; relapse & gradual development of insanity.

John Fulthorpe, aged 48 years, married, had a chancre & suppurating bubo when 18 years of age. About 7 months afterwards he had a very bad sore throat and his hair came out abundantly for some time, whenever he used to comb it, but he never observed any cutaneous rash. His eyes too at this time felt very dim, but were never painful. Evidently the chancre was syphilitic with a mild attack of secondaries. He never went to a doctor about it & all the symptoms gradually passed away.

He first came under my observation as an out-patient in November 1879 suffering from nodes on the sternum & ribs. They were distributed in a peculiar manner. One about the size of half a hen's egg was situated on the upper part of the sternum & a few on the ribs in front on the right & left sides of the chest. On the lower ribs on the left side behind he had several smaller ones & one on the crest of the left Ilium near the Sacro-Iliac Synchondrosis. He never had any pain in them & they were not at all sensitive to pressure. They had began about 12 months before & in spite of all kinds of treatment had been steadily growing. During the last 4 years he had suffered greatly from pains in his joints & bones, which always got worse "when he got warm in bed". During the last three months, he had also suffered much from severe headache, which was always worst at night.

I put him at once on mild specific treatment, (℞ Liq. Hydrg. Perchlor. & Pot. Iodid. ȝ 10 ter die). The nodes steadily diminished in size & at the end of

Case XIV cont^d.

3 months treatment had entirely disappeared. The nocturnal pains in the bones & the nocturnal headache also disappeared, his general health improved greatly & the patient expressed himself as feeling greatly benefited by the treatment. Unfortunately my attention was entirely directed to the nodes & I have no doubt that the severe headache was due to cerebral changes & that symptoms would have been observed at that time, had I looked for them. With the disappearance of the nodes the treatment was stopped.

He again came to the Infirmary 3 months afterwards & was admitted on Wednesday 16 May / 88 with the following history. For about a week previously he had suffered from his old headaches & a feeling of great drowsiness. On Monday, 14 May, he suffered very much from headache & drowsiness and on the evening of that day whilst at work he staggered & would have fallen to the ground, had not his comrades caught hold of him. He was not unconscious. He had convulsive movements of right arm & right leg & twitchings of right side of face for some minutes afterwards. He also felt a peculiar tingling in these parts, like needles & pins going through them. When his companions raised him up, they noticed that his mouth was twisted towards the left side. He was able to walk home from his work but with difficulty, his right arm & leg feeling very weak.

He was admitted two days after this attack in the following condition. The angle of the mouth was slightly pulled towards the left side & the right naso-labial fold was almost obliterated. There was no deviation of tongue or palate. There was marked loss of power in right arm & right leg, especially in right arm, the grasp of which was very feeble. He dragged the right leg slightly on walking. He walked with a slight stagger & with difficulty along a straight line & the uncertainness of gait was greatly increased, when he closed his eyes. He complained of

Case XIV Cont^d

peculiar numb tingling sensations in right side of face, right arm & leg, exactly he said "as if the parts were asleep. He had great pain in the head, increased at night time. His speech was very indistinct. He slurred the syllables, as if he were speaking with something in his mouth. His cutaneous reflexes were completely absent. Both knee jerks were exaggerated, but most markedly the right. Front tap contraction could be elicited in the right leg.

He was at once put upon energetic Specific treatment & was dismissed from hospital on 8 June, after 4 weeks treatment with disappearance of nearly all his symptoms. He could walk without the slightest stagger even with eyes closed. Peculiar sensations in face & limbs had disappeared. There was no headache. Power of right arm & leg were regained. His speech was greatly improved. His mouth was still pulled to the left side & his reflexes were still abnormal, though not so markedly so, as on admission. He was to continue taking 20 grains of the Iodide, thrice daily.

He went back to work, but had another fit on June 22^d (14 days after dismissal), when he was readmitted. Whilst at work he suddenly felt giddy & fell to the ground. He was never unconscious, but felt so confused & giddy afterwards, that he came straight to the Infirmary. His speech was worse than after his first attack. He spoke very indistinctly with a great effort & occasionally stopped abruptly. It was with great difficulty that he could give me an account of what had happened. He seemed very much confused & had evidently great difficulty in recalling the facts. He reeled like a drunken man & could scarcely walk without support. He dragged the right leg & the grasp of the right hand was as weak as that of a child. The power of both arm & leg varied in a very remarkable manner from day to day. He had the "needle & pins" sensations in right arm & leg, but

Case XIV cont^d.

not in the face. He complained again of headache.

He was at once put upon vigorous treatment by mercurial inunction & large doses of the Iodide, half an ounce daily. He was dismissed after 6 weeks treatment on 5th August. Most of the symptoms gradually improved. The headache & peculiar sensations disappeared. He regained power in the arm & leg. He could walk steadily along a straight line with his eyes shut & without dragging the limb. Speech improved somewhat, but he still spoke slowly & hesitatingly. All that could be seen of the facial paralysis was smoothing of the right naso-labial fold. But as these symptoms improved, his mental condition got gradually worse. His memory became so bad that he could scarcely remember anything. He became melancholy, would sit by himself & not associate with the other patients in the ward. He then began to have numerous delusions & one of these was that the rest of the patients were forming all kinds of plots against him to rob him of his dinners, to prevent him from sleeping & so on. I sent for his friends & told them that he must be removed from the Infirmary, as he was becoming insane. I learned that his mental condition rapidly became worse & he was sent to the Redgefield Asylum.

Case XV

Headache; giddiness: fits resembling "petit mal"; failure of memory: speech disturbances: cervical pain; thickening & tenderness of cervical spines: paresis of upper limbs: reflexes abnormal.

James McCullagh, aged 40 years, unmarried, was admitted into hospital 18 July 89 with a peculiar combination of nervous symptoms.

In 1884, 5 years ago, he had a chancre followed by lumps in the groin & was never treated for it. Shortly after this he had, what he calls an attack of Rheumatism, which laid him off work for 6 months. There was no swelling of joints, but pains in the joints & bones, which were almost most severe at night.

During the last two years he had suffered much from headaches, which had been specially bad during the last 3 months. These were almost worst at night & kept him from sleeping. During the last 12 months he has had almost every day peculiar seizures resembling attacks of "petit mal". He described them as coming on with a very peculiar sensation, when he felt helpless for a few seconds & could not move or do anything, until the peculiar sensation had passed away. He had also had recently occasional attacks of giddiness, coming on suddenly & passing off suddenly. His memory had been failing him recently & had become very unreliable during the last six months. He stammered & hesitated very much in speaking & he said this had been becoming much worse. He pronounced words very indistinctly, as if speaking with something in his mouth. There was marked smoothing of the folds on the right side of the face, the right naso-labial fold being almost obliterated. There was no ataxia. He could walk backwards & forwards in a straight line

Case XV cont^d

with eyes shut. His most prominent symptom had appeared only during the last three months, severe pain in the cervical region. It was most intense just along both Sterno. Mastoids, but especially the right & radiated up behind the ear & down to the shoulder. It was very much worse at night. He could not move the head from side to side, nor bend it. He carried the head in that peculiar way that one sees in disease of the cervical spine, never twisting the vertebrae at all, but moving the whole body with the movements of the head. On examining the spines of the cervical vertebrae, I found very distinct thickening along the spines of the last four & on tapping the spines I found extreme tenderness in this same region, so that the slightest tap made him cry out. There was marked paresis of the upper limbs, the grasp of both hands being very feeble. The cutaneous reflexes were all absent with the exception of both Cremasteric, which were well marked. Both knee jerks were nearly absent, being only very faintly observable. The eye reflexes were normal. Sense of touch, pain, temperature & muscular sense were all normal.

He was at once put upon specific treatment & there was a continuous improvement in his condition up till 28th March, when he was dismissed after six weeks' treatment. The headache & cervical pain first disappeared. On dismissal the thickening & tenderness of the cervical spines had gone & he could rotate & bend his head freely without any discomfort. The pain in the cervical region along the sterno-mastoids, behind the ear & radiating to the shoulder had completely disappeared & he had only a very slight occasional headache. The grasp of both hands was now firm & strong, whereas on admission it was like that of a child. His memory & speech had greatly improved.

Case XV cont^d.

The smoothing of the right side of the face was not nearly so marked. The "fits" still troubled him, but not so frequently, days passing without his having one. His reflexes were normal, the cutaneous being all present & active and his knee jerks well marked.

Groups. V.

In which the retinal changes were the most striking symptoms, but associated with other symptoms of cerebral disease.

Group V

Case XVI

Cerebral symptoms shortly after secondaries; white atrophy of left disc & optic neuritis of right; blindness of left eye: headache; drowsiness; giddiness; insomnia; speech disturbances: great improvement under specific treatment.

Annie Vaughan, aged 28, unmarried was admitted into hospital on 22 April /89 with blindness of left eye. She had never had a primary sore that she knew of, but had had a creamy vaginal discharge for some months before her secondary symptoms appeared. About the middle of last January she was covered all over with scarlet spots, had sore throat & hair came out freely. She maintains that on the same day that she first noticed the rash, she lost the sight of her left eye. For several days before this, she had observed peculiar flashing appearances in both eyes, like squibs dazzling before them & this especially in the left. In fact it was this which made her test the left eye, when she found that she could not see with it at all. She could only distinguish with it between light & darkness and see the shadows of objects passing dimly before it. For several days before loosing the sight of the eye, she had continuous headache diffused all over the head & felt peculiarly drowsy & heavy. Ever since then she has suffered from this diffuse headache & this peculiar drowsiness. She had also recently suffered from distressing insomnia. She has had occasional attacks of giddiness, so that she had often to hold on to something to keep herself from falling, until the transient attack passed off. She had observed herself of late stammering very often & having great difficulty occasionally in getting out the proper words, which she never used to do before. She had also felt very nervous of late, being easily excited & startled by the slightest thing.

Case XVI cont^d

There was no loss of power in the limbs nor any abnormalities of sensation. The reflexes were all normal. On ophthalmoscopic examination of the left eye, I found the disc porcelain white & the vessels reduced to mere threads, well marked white atrophy. The retina at the macula lutea & in its neighbourhood was dark & cloudy, "veiled", so that the details could not be seen. In the right eye I found the optic disc bright pink, the upper margin blurred, the whole disc swollen, & the veins greatly dilated & tortuous, a well marked papillitis. The vision of the right eye however was normal.

She was under specific treatment for 8 weeks & was dismissed on 18 June/84 with disappearance of all her symptoms except the blindness of the left eye. The headache, the attacks of giddiness, the distressing insomnia, the speech disturbances & nervous feelings all speedily passed away under treatment & did not return. Her general condition was also greatly improved. She was pale & anaemic on admission, on dismissal she had gained flesh & had a good healthy colour. The condition of the left eye was not at all improved, but the right disc was paler & margins better defined than before but still not quite normal in appearance. I saw the patient again three months afterwards & found that she had remained well during the interval, but was totally blind with left eye.

Case XVII

Severe headache : sensory disturbances in left arm, left leg & left side of face : paresis of left leg ; amblyopia of left eye & optic neuritis of both : reflexes abnormal : cured by specific treatment.

Elizabeth Batley, aged 24 years, unmarried, was admitted into the Infirmary on 16 Dec. / 88 with amblyopia of left eye & nervous symptoms.

I could elicit no history of syphilis from her & there were no traces on her body, but as she had been a prostitute for some time, this was not of much importance.

For the last 8 or 9 months she had suffered greatly from severe headache, which was generally worst at night & kept her from sleeping. About 4 months ago, she felt a peculiar numb stinging sensation on the left side of chin & face, and when she put her hand up to rub it, she was surprised that she could not feel the contact of her hand at all. Feeling gradually returned to the part, but ever since then she has had a peculiar numb, tingling sensation there. A few weeks before admission, she began to experience peculiar sensations in the left arm & left leg, a feeling of numbness, tingling & sometimes pains like cramps. She sometimes also experienced difficulty in moving the left leg, which felt weak & useless and she required to drag it occasionally. Sometimes in going up stairs she had very great difficulty, when her left leg felt bad. It varied however & some days she could walk very well. About 5 weeks ago she began to perceive that she could not see so well with the left eye & she also began to feel some pain in it. The sight gradually got worse, until now she could only see very large objects dimly & when these are very close at hand. She could not-

Case XVII cont'd

read the largest type J 20 (Jaeger's type) & could only tell the number of fingers with difficulty, when there were held close to her eye. Vision of the right eye was normal. On ophthalmoscopic examination I found well marked Optic neuritis of left eye, blurring of the edges of the disc, swelling of the papilla & the veins dilated & tortuous. There was papillitis of right eye also present but much less in intensity & degree. Her cutaneous reflexes were completely absent. Her knee jerks were greatly quickened & exaggerated and could be elicited with the gentlest tap.

She was dismissed from hospital on 13 January/84 after 3 weeks energetic treatment with disappearance of nearly all her symptoms, feeling as she expressed it "like another woman". The sight of the left eye was nearly normal. She was free from headache & slept well at night. The peculiar sensory disturbances had disappeared & she walked without dragging the left leg. Her cutaneous reflexes were present & active, but her knee jerks were still quickened & exaggerated, though not so markedly as on admission. On examination I found a slight degree of Optic neuritis still present on both eyes.

Group. VI.

In which psychical disturbances were the most prominent
feature, illustrating the early stage of Syphilitic Disease
of the cerebral vessels. I have included case XXII
in this group as illustrating the peculiar transient attacks
often met with in Syphilitic disease of the vessels and
important for early diagnosis & effective treatment.

Case XVIII

Headache ; insomnia ; loss of memory & mental failure : peculiar semi-comatose condition lasting several days ;

Edward Thomas, aged 34, unmarried, a seaman, was admitted into the Infirmary on 25th Jany./88. He had had several chancres & there were several scars on his penis, but I could not elicit any history of secondary symptoms. For several months before admission he had suffered intensely from headache always worst at night & many nights so bad that he had to walk the floor all night. He had also recently suffered from insomnia, so that even when free from headache he could not sleep. His memory had been gradually failing him, so that if he went out to do anything or go anywhere, he would forget what he was to do or where he was to go. All these symptoms were greatly intensified just shortly before admission & his landlady advised him to go to the Infirmary, as she thought he was going "out of his mind". He had set out in the morning for the Infirmary but his landlady met him accidentally at night, wandering aimlessly about in the streets like a man asleep & not knowing where he was going : She brought him to the Infirmary that night in a cab.

He lay in bed without moving, with eyes closed, uttering an occasional groan & putting his hands to his head. He was not unconscious. He could be roused by shaking him & shouting loudly. He would answer a question, but often drop over again as if asleep in the middle of his answer. On shouting to him & asking him what was the matter, he always put his hands to his head & said Oh! my head! my head! He was evidently in a condition of deep stupor, out of which he could be momentarily

Case XVIII cont^d

roused by shaking him & shouting to him. He was roused however only for a few seconds & would again lapse into his semi-comatose condition. There were no symptoms of paralysis, no alteration of pupils, urine normal & with his penile scars & his previous history got from his landlady, I had little hesitation in forming the diagnosis of ~~the~~ Syphilitic disease of the Cerebral vessels. He would swallow fluids, on rousing him & putting the cup to his lips & then would fall back again.

He was at once put upon most energetic treatment- half an ounce of the Iodide per diem, & double the usual quantity of Mercurial ointment- was rubbed in daily. He remained in pretty much the same condition for three days, when he began to have longer intervals of consciousness, was more easily roused & answered questions more intelligently & more at lengths. After this there was a daily improvement in his condition & ten days afterwards the drowsiness had completely left him & he was able to walk about the ward. His intelligence however was still blunted, his memory was still defective & he had still occasional headaches. I continued his treatment for 4 weeks more & he was dismissed on 7th February 188 entirely free from all symptoms. I kept him under close observation for two months longer at the out patient room & continued his treatment. At the end of that period he felt so well again that he joined his ship.

Case XIX

Attacks of Giddiness; headache; paresis of lower limbs; failure of memory; mental lethargy: change of manner; insomnia: peculiar eye symptoms; abnormal reflexes.

Henry Gills, aged 33 years, unmarried was admitted into hospital on 22d February 1889. He had a chancre in 1884 & slight secondaries afterwards, but was treated for neither. He entered the army in 1879 & in 1882 had a cutaneous eruption, when he was treated for Syphilis by the army surgeons. There were cicatrices visible on his chest, abdomen, arms & legs. Shortly after this in 1883 he began to have pains in the legs & was very easily fatigued. On the march he used to be quite knocked up, long before the other men. The pains had not been so severe of late, but the weakness in the legs had been increasing. During the last few years he had suffered from occasional attacks of giddiness & frontal headache, which was always worst at night. His memory had been gradually getting worse, so that he was constantly forgetting things. He had suffered greatly from insomnia recently & many nights had never slept at all.

Condition on admission. The patient had a peculiar dull, expressionless & vacant look, which I have frequently remarked in cerebral syphilis. His intelligence seemed blunted & all his mental processes sluggish & lethargic. When you asked him a question, he looked at you in a vacant way for a considerable time & then answered in a slow hesitating vacant way, like a man speaking in his sleep. He had a cutaneous eruption, dry & scaly patches, on his arms, legs & body. The cutaneous reflexes were all absent with the exception of both Epigastrics & left abdominal, which were

Case XIX cont^d.

very faint. The knee jerks were quickened & exaggerated as also the Tendo Achilles reflexes. Front tap contraction was present on the right leg only. Eye reflexes were abnormal. The light reflex was very faint & very sluggish. The accomodation reflex was present but so very faint that it could only be seen on very careful observation. There was slight lateral nystagmus on convergence of both eyes. There was a peculiar paralysis of left internal rectus seen only on strong convergence, when an external squint of the left eye became manifest. On strong convergence of both eyes, the left deviated outwards beyond the middle line, while the right remained strongly converged. On making him fix with the left eye in a position of strong convergence & covering right, there was secondary deviation of the right eye. On examining him in the usual way with coloured glasses there was no diplopia, but on applying Pinaud's method for detecting slight paralyses of convergence, it was made manifest. I covered one eye with a coloured glass & the other with a prism base upwards thus seperating the two images. I then found crossed diplopia, which was not increased when the candle was moved laterally either to right or to left. There was no defect of the internal rectus in the lateral movements of the eye. The patient told me that of late his eyes soon got very tired in reading, so that he could read only for a very short time. There was no error of refraction, but the paralyses of convergence explained this very satisfactorily.

Gill's mother told me that since he came back from India 3 years ago, he had never been like the same man. His whole manner & bearing were different from what they used to be. She had noticed this peculiar sluggish & lethargic mental condition, for he used to be bright & intelligent. Since then too he had been

Case XIX cont^d

constantly complaining of headache, of sleeplessness, of pains in the legs & arms and all over his body.

He was at once subjected to vigorous specific treatment, mineline & the administration of the Iodide. The improvement was remarkable, after he had been under treatment for a few weeks & when he was dismissed on 14th April after 4 weeks treatment, he said he never felt better in his life. He had lost his dull earthy complexion, & his skin was now clear & well coloured. He had no headache, no pains in the legs & no giddiness. He slept well every night. His memory was greatly improved. He could walk about all day without feeling tired. The most striking change was in his manner & demeanour. He no longer conducted himself like a man in a dream, but was bright, sharp & quick, answering questions at once & intelligently. His cutaneous reflexes were all present. His knee jerks were still quickened & exaggerated, but there was no front tap contraction. The eye reflexes to light & accommodation were now active & well marked. The lateral nystagmus on convergence & paresis of the left internal rectus manifest on convergence had entirely disappeared. I saw him five months later & learned that he had been in good health ever since his dismissal from hospital & entirely free from all symptoms.

Case XX

Nocturnal Headache; attacks of giddiness; ataxia; mental lethargy; speech disturbances; change of manner & bearing:

James Bell, aged 45 years, unmarried, was admitted into the Infirmary on 2d October 1888 complaining of cerebral symptoms. He had a bad chancre 15 years ago, which had left a cicatrix on his penis, but I could not elicit from him any history of secondary symptoms.

About 2 years ago he began to suffer from headache, which had gradually been becoming worse. The pain was not localised but diffused all over the vertex & was always very much worse at night. About 12 months ago he became subject to attacks of giddiness, which had recently been becoming more frequent & more severe. The attacks came on at intervals, when he reeled like a drunken man & had to hold on to something to keep himself from falling, until they passed off. He could walk in a straight line with his eyes open, but with eyes closed he staggered very much. He also staggered, whenever he turned round rapidly. He had a peculiar dull lethargic look & evidently his mind was in the same lethargic condition, for although he answered all questions intelligently, he did so with peculiar slowness & deliberation, as if he were half asleep. He spoke in a slow hesitating manner with an occasional stutter & prolonged pause, before he could get out the proper word. His sister with whom he had always lived said that during the last few months, she had observed a great change in his aspect & in his manner. He had become extremely irritable & difficult to manage. He looked so different & was

Case XX cont'd.

so changed in his manner that she, fearing "there was something wrong with his head", had urged him to come & see me. She had also observed that of late he spoke differently from what he used to do. His cutaneous & eye reflexes were normal. His knee jerks were sluggish & very slight. There was no paralysis nor abnormalities of sensation.

The presence of a chancre 15 yrs before & the groups of symptoms with the clinical history strongly suggested a specific origin & Syphilitic disease of the cerebral vessels would fully explain all his symptoms. I therefore put him under specific treatment & his great & rapid improvement confirmed the diagnosis.

After 6 weeks treatment, he was dismissed from the Infirmary on 16 Dec. 188. He was then completely free from his distressing headaches & attacks of giddiness. He could now walk with eyes closed in a straight line & turn rapidly without staggering. The change in his appearance & manner was very striking. He had lost his dull stupid expression & now looked bright & intelligent. He answered questions at once; without the long pauses which used to intervene between question & answer and he spoke more rapidly & fluently. His mental processes evidently now occupied a much shorter space of time than before. He continued his specific treatment for some time as an out patient & when I saw him six months later, the improvement was permanent, having had no recurrence of his symptoms.

Case XXI

I

Headache ; attacks of giddiness : insomnia ; Speech disturbances : failure of memory ; sensory disturbances ; reflexes abnormal ;

Maggie Menteith, aged 36 years, married. She had had six miscarriages all about the 3d month. She was married in 1880 & in 1883 her husband gave her Syphilis. She had the usual secondary symptoms, cutaneous eruption, sore throat & loss of hair. She was under medical treatment for some time.

The patient came to the out patient room of the Infirmary on 3 Sept. 188. Her head symptoms had began about 3 years before & had gradually been getting worse. She suffered greatly from headache, which was always worst at night & sometimes for nights in succession she never slept. She had occasional attacks of giddiness, which caused her to stagger & steady herself by holding on to something, till they passed off. Sometimes also she had great difficulties with her speech, "couldn't get her words to come properly" & spoke slowly & hesitatingly. Her husband used to notice this difficulty of speech & sometimes laughed at her, when she came to a sudden stop in the course of conversation. Her memory also had been gradually getting worse, until now it was so bad that she forgot nearly everything & her mental condition was so dull & confused that she had the greatest difficulty in performing her ordinary household duties, always forgetting where she had put things. She had also had occasional peculiar numb feelings in the right arm & right leg, as if these parts were asleep. She felt extremely nervous & easily startled. Her skin had an unhealthy earthy tint & she looked dull, confused & miserable. There was no ataxia. The right knee jerk was very faint & slow,

Case XXI cont'd

whilst the left was quickened & exaggerated.

She was under specific treatment continuously for 8 weeks up till 30 Oct. /88. Her condition was then so much improved that she felt, as she expressed it, like another woman. For the last month she had been quite free from the distressing headache & the attacks of giddiness. The sensory disturbances in the limbs had disappeared. Her speech was greatly improved, speaking more fluently & rapidly and without the sudden stoppages. Her memory had greatly improved so that she could do her household work in half the time & was not constantly forgetting where she had placed things. She had lost the dull earthy colour & her complexion was now clear & well coloured. She had lost her wretched look and seemed bright & cheerful. I continued her treatment for another month. I saw her 6 months afterwards (April /89) & found that the improvement was permanent & that she had had no recurrence of the symptoms.

Case XXII

Peculiar apoplectiform attacks combined with sensory disturbance & subsequent temporary aphasia; attacks of giddiness; reflexes abnormal.

J. Y. —, aged 60, married, had a chancre 8 years ago, followed by slight secondaries, rash, loss of hair & sore throat. He was under medical treatment for two months & was salivated with Mercury. About a year ago, he was very much troubled with pains in the right leg, which were always worst at night. He was put upon a short course of the Iodide, when the pain completely disappeared. For several months before the attacks he had been subject to transient attacks of giddiness: During these giddy attacks he became quite blind. They were so transient that he did not think much about them. He had used alcohol freely during the last few years, but had found that during the last 12 months he could only take about a fourth of what he used to do. It affected him much more rapidly than it used to do.

On 9th August 189 while stooping to lace his boot he experienced a most peculiar sensation in his head. His head felt as if it were rapidly swelling & was just about to burst. His own voice & the voices of those round about sounded indistinct & as if coming from a distance. The sensation in his head was a most peculiar one & difficult to describe, but he felt so much alarmed about it, that he went straight off & consulted his medical man. On the road to the Doctor's house he felt a peculiar numb tingling sensation in the thumb & two adjacent fingers of the right hand. He described it as if the parts were asleep, but this passed off after a little & did not

Case XXII cont^d

recur. When he got home again, he found that he could not recall the names of simple objects & this was constantly coming to a stop, when he tried to express himself. He would stammer & try to recall the word. When his wife supplied it, he could at once repeat it. He lay down in bed for a few hours & when he got up, he found that he spoke very much better, although coming to an occasional stop. His speech was normal 24 hours afterwards.

His cutaneous reflexes on the right side were active & normal. The left side presented a marked contrast, they being so faint as to be scarcely observable & the left cremasteric was altogether lost. Both knee jerks were quickened & exaggerated, being elicited by the gentlest tap. Violent contraction of Rectus on tapping patella downwards, but no front tap contractions. Eye reflexes normal. There was no loss of power & no abnormalities of sensation. On percussion of the skull there was a small tender area about the size of a two shilling piece, a little above the occipital protuberance & slightly to the right of it.

He was at once put on energetic treatment, which was continued until the end of September /89, nearly two months. He had another peculiar attack about a week after the first one. He suddenly became giddy, his eyes became dim & he had the same peculiar feelings in his head, but this passed off in a few minutes. After the two months treatment all his symptoms had disappeared. He had no further attacks of giddiness, no sensory disturbance, the tender area on the skull had disappeared & all his reflexes were now normal.

Group. VII.

Illustrating the pre-ataxic stage of Syphilitic Tabes.

Case XXIII

The pre-ataxic stage of Locomotor Ataxia; symptoms appearing seven years after primary Syphilis; gastric & cardiac crises; no ataxia; reflexes abnormal; Argyle-Robertson pupil; subsequent development of ataxia.

Mr R. —, aged 29 years, married was seen by me along with a medical friend on 18 Dec./88 during a severe gastric crisis.

He had a chancre & mild secondary symptoms in 1879 & was under medical treatment for some time. He married in 1881 & his wife has had only one child (Healthy) & no miscarriages. His wife told me that ever since she knew him, he suffered from "rheumatic" pains in the arms, hands & legs & that these were always worst "when he got warm in bed." During the last four years they had been becoming worse & were treated by his family medical attendant as Rheumatism.

In the summer of 1886 he began to have severe paroxysmal attacks of pain in the Epigastric & Cardiac regions, which were treated by the family medical man as severe attacks of "Dyspepsia". Recently he consulted Dr Dreschfeld of Manchester, who having treated his chancre at once recognized the true nature of the pains.

When I saw him (18 Dec./88) it was during one of these severe paroxysms of pain in the Cardiac region & along the lower border of the left ribs. There was no vomiting, but he generally vomited in these attacks. He had a peculiar earthy pallor. He had no ataxia & could walk forwards & backwards steadily with eyes closed. His knee jerks were completely absent. His cutaneous reflexes were completely absent on the left side, while on the right they were irregular. The right

Case XXIII Cont^d

cremasteric was gone, the right Ilio. inguinal slight, the right abdominal & epigastric greatly exaggerated, the slightest possible touch producing vigorous contractions. There were no abnormalities of sensation. The right pupil was larger than the left, which was reduced to a pin point. There was no light reflex whatever & in accomodation a very slight contraction was visible, but only very sluggish & so faint as to require very careful observation to detect it.

He was not under my care but his medical attendant at once adopted vigorous specific treatment. I saw him 4 days afterwards. He was out of bed & free from pain. He felt perfectly well, only a little weak, as he always did after these attacks. The pupillary & other reflex symptoms were just the same as before. He shortly afterwards left the district & I doubt whether he kept on with his specific treatment. In March three months afterwards, my medical friend informed me that he had seen the patient again & examined him carefully. His gait was then ataxic & very distinctly so when he was tested with his eyes closed.

Case XXIV

Atrophy of optic discs; Argyle-Robertson Pupil; loss of knee jerks; no ataxia; attacks of giddiness; lightening pains; loss of memory.

Wm. Wilds, aged 31 years, married, ~~has~~ has a family of 3 children, all alive & healthy. 7 years ago (1882) he had a chancre & mild secondaries afterwards. He was treated for the chancre & secondaries but only very irregularly & never had any thorough or systematic course of treatment. During the last year or two he has suffered from shooting pains in the legs & from occasional attacks of giddiness combined with dimness of sight. The attacks of giddiness & dimness of sight were only very transient. Of late these attacks & the shooting pains have been becoming much worse. Of late his memory has been becoming worse, until now it was entirely unreliable. He was constantly forgetting where he had placed things & this was becoming so bad, that he found it difficult to get on with his daily work.

He came to consult me on the 20th August /89, about his eyesight, which had gradually been failing him & now it was very bad indeed. With right eye distant vision was $\frac{6}{60}$ & he could only read No. 14 of Jaeger's test types. With left eye distant vision was $\frac{6}{24}$ & he could read No. 4 of Jaeger's types. On Ophthalmoscopic examination I found optic atrophy of both eyes, incipient in the left, but well marked in the right. The right disc was porcelain white & the vessels reduced to mere threads. There was contraction of both visual fields, but most marked in the right, where peripheral vision was lost & only central vision retained. In the left eye there was

Case XXIV cont^d

slight loss of peripheral vision. He came to see me simply about his eyesight, but on further examination I soon elicited the presence of grave symptoms pointing to the pre-ataxic stage of Syphilitic Tabes. On examining the eye reflexes, I found the reaction to light quite lost, whilst the pupil contracted actively on accommodation. The knee jerks of both legs were lost. The cutaneous reflexes were all active & present. There were no abnormalities of sensation & no impairment of power. There was no ataxia, even on the application of the most delicate tests with eyes closed.

I at once put him on energetic specific treatment & he is still undergoing the course. He says that he now (16th) feels much better than when he came to me. He is free from the shooting pains, he has had no attacks of giddiness recently & his memory is very much improved. His right eye remains the same but with the left there is a slight though distinct improvement, distant vision being now $\frac{6}{18}$ & he is able to read No. 2 of Jaeger's Types. The eye reflexes & knee jerks remain the same. There is no development of Ataxia. I shall continue the treatment for some time longer in the hope of checking the further progress of the disease, encouraged by the distinct improvement already made.

Note. I have added these two cases to my appendix as illustrative of the pre-ataxic stage of Locomotor Ataxia consequent on Syphilis (Syphilitic Tabes) because I believe that early & energetic treatment in the pre-ataxic stage of Syphilitic Tabes often prevents the further development. In case XXIII ataxia did develop, but the patient did not go on with his treatment regularly. Case XXIV so far is very hopeful as a distinct improvement has already been effected.