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THE DIAGNOSIS AND TREATMENT OF SYPHILITIC AFFECTIONS OF THE NERVOUS SYSTEM.

IN a paper published recently in the JOURNAL,¹ entitled "Is Mercury an Antidote to Syphilis?" I find the following remarks: "Diday, and in this opinion I am inclined to agree with him, considers that modern syphilis, as the present generation sees it, is, in most cases, a mild disease generally curable enough; and adds that but few cases are followed by visceral disease or affections of the nerve-centres. He in no way disapproves of mercury; but recommends it only when severe outbreaks of the disease take place in order to lessen their effects on the health. 'Mild' syphilis he treats without mercury."

But few cases of syphilis are followed by affections of the nerve centres, and mercury is only necessary for severe outbreaks of the disease! As I have reason to believe that these are not only the views of the writer of the paper, but also of a large number of our professional brethren, and as they are almost diametrically opposed to my own experience, it appears to me that the subject which I have selected for discussion is one of great importance in the interests of the community. My view may be stated thus—that just because "mild" syphilis is apt to be treated in a cavalier fashion, and without due care and persistence, disease of the nervous system is very apt to follow in its wake; and that such disease is much more common than is generally supposed. As a basis for the following remarks I have collected twenty-four cases which have occurred recently in my own practice, and of which I have sufficiently accurate records, although they constitute but a fraction of those which have come under my observation.

In order to pave the way for the subsequent discussion, perhaps my best plan is to consider, in a series of propositions, the grounds upon which the syphilitic nature of a lesion of the nervous system may be suspected. Many of these are, of course, familiar to all, but it is necessary to refer to them shortly in order to complete the picture.

1. *A History of the Entrance of the Syphilitic Poison into the System.*—Positive evidence of this is of great value, but negative evidence should not divert us from our suspicion, if, for other reasons, a syphilitic basis is probable. Many patients are ignorant of, or forget their having contracted syphilis (for the initial lesion is often a very trifling matter, and the poison may enter the system in a great variety of ways), while many are loath to admit that they have ever exposed themselves to such infection. The interval, too, which has elapsed since the time of infection is often so long as to put us off our guard, and to render it likely that we may fail to connect the disease of the nervous system with the syphilitic contamination as cause and effect; while, with certain limitations, it may almost be said that the longer the poison has lain dormant in the system the more likely are internal organs to suffer. Of the twenty-four cases above mentioned there were thirteen in which the time of infection was known, and in them the intervals elapsing before the nervous affection set in were $2\frac{1}{2}$, $3\frac{1}{2}$, $4\frac{1}{2}$, 6, 7, 9, 10, 13, 13, 16, 18, 25, and 30 years. We must also bear in mind that diseases of the nervous system may be the result of hereditary syphilis, the history and evidences of which must be carefully inquired into.

2. *The Discovery of other Manifestations of Syphilis.*—In those comparatively infrequent cases of implication of the nervous system in the secondary stage of syphilis, we are pretty sure to find evidences of the disease on the skin, mucous membranes, etc. But as the nervous system generally suffers in the late stages, such evidences are not certain to be found, and, when present, they are usually much less numerous. What we must specially look for now are tubercular eruptions, seriginous ulceration, gummy tumours in the subcutaneous tissues, deep ulceration of

the palate or of one side of the throat, syphilitic disease of the tongue (which must not be confounded with the so-called tylosis linguae), periostitis, enlargement of a testicle, or amyloid disease of internal organs without any other probable cause to account for it.

3. *The Discovery of Traces of bygone Syphilitic Manifestations.*—Amongst these may be mentioned a cicatrix upon the penis, usually slight, and not otherwise satisfactorily accounted for; circular cicatrices on the skin with sharply-defined edges, and often with coppery areolae: these are especially valuable if not situated below the knee; scars at the angles of the mouth or on the palate or fauces; perforation of the septum nasi, atrophy of a testicle or indurations upon the superficial bones, the remains of attacks of periostitis.

The following case, which is of interest in other respects, illustrates the fact that evidences of a syphilitic taint may be very scanty and very readily overlooked. I give it in outline:—

A labourer, aged 40, the father of seven healthy children, came under observation on June 30th, 1885. Six weeks before this he began to experience a gradual loss of power, commencing in the feet and gradually spreading to the legs, inability to micturate, and loss of control over the rectum. He had, too, a feeling of numbness and coldness in the lower extremities, "as if standing in iced water," which gradually deepened into nearly complete anesthesia, and was accompanied by severe pain. In about a fortnight the paralysis had so increased as to prevent him from walking, and he took to his bed. On admission it was found that the paralysis of the lower extremities was almost complete, while sensation was seriously impaired. There was incontinence of urine and faeces, and he had four large and deep sloughing bedsores, one on each ischial tuberosity and two over the sacrum. The only reason for suspecting that the lesion might be syphilitic was that his skin had a dirty earthy tint, and that a scar about the size of a crown piece, white in the centre and with deeply-pigmented edges, was discovered near the left anterior superior spine of the ilium. Treatment was commenced on July 3rd, and consisted of daily inunction of a drachm of Shoemaker's *mercurous* oleate ointment. By July 16th—a fortnight after the treatment was commenced—the anesthesia had, in great measure, disappeared, and he could use his legs much better, the bedsores were nearly healed, the functions of the rectum were restored, but the incontinence of urine remained. From this time he improved steadily, and left the infirmary on November 4th nearly well. On August 1st, 1886, he walked some miles to the hospital to show himself. He was then perfectly well in every respect, except that he had cystitis, and could not retain his water for any time.

4. *The Presence or the History of Pain in the Joints, Bones, or Head.*—This feature is very suspicious if it is markedly worse at night. Indeed it may almost be said that pain which is agonising at night and disappears by day is pathognomonic of syphilis. At the same time the converse does not hold, for syphilitic pain is not always nocturnal in its exacerbations. When such pain is in the head it usually involves only a part of it—oftenest a lateral half—or it may be very localised, in which case it is often accompanied by tenderness on pressure. Sleeplessness is a frequent concomitant of headache, but it often occurs independently of it, and when met with in persons who are not advanced in years, and along with other symptoms pointing in the direction of syphilis, it is a very suspicious symptom. It may be permanent, or there may be intervals of comparative or complete immunity from it.

5. *The Appearance of the Patient.*—The syphilitic subject is very likely to have lost his healthy appearance, and to have a dirty, earthy, sallow complexion, which is all the more marked the longer the poison has remained unchecked in the system. This peculiar form of anemia is not constantly present, but, when pronounced, it is very significant of syphilis to the skilled observer, especially if he knows the patient to have had a clear complexion in earlier years.

But although there is conclusive evidence that the patient has contracted syphilis, or even if he presents unmistakable symptoms of that disease at the time, it does not follow of necessity that the disease of the nervous system is syphilitic; for there is nothing to prevent a syphilitic subject from having a non-syphilitic nervous trouble. The combination may be a mere coincidence, although such cases are far from common, and demand very careful investigation into all their surroundings before concluding that the affection of the nervous system is not specific.

¹ November 27th, 1886. By Dr. Chas R. Drysdale.

6. The Age and Sex of the Patient are very Important.—Syphilitic affections of the nervous system are met with at all ages, but most usually at or before middle life. If, therefore, we are able to exclude other causes of the disease under observation which are common in comparatively young persons, the probability of syphilis is great. Thus, if hemiplegia occurs at the age of 30 or 40, and there is no kidney or heart disease, and no traumatic cause to which it can be traced, and no premature degeneration of the coats of the blood-vessels which are within reach, the suspicion of a syphilitic basis is strong. My experience coincides in this respect with that of Buzzard, who says that, "putting aside cases of injury, hemiplegia or paraplegia occurring in a person between 25 and 45 years of age, which is not associated with Bright's disease, nor due to embolism (from disease of the cardiac valves) is, in at least 19 cases out of 20, the result of syphilis." Again, epileptic convulsions, due to syphilis, very rarely set in under 20, and generally long after that age, while genuine epilepsy, in a large proportion of cases, commences between 10 and 20 years (in 106 out of 172 cases [Reynolds]). Of the twenty-four cases above mentioned the syphilitic nervous affection occurred in nineteen between the ages of 24 and 45, and in the remaining five the patients were 48, 48, 49, 62, and 62 years old. The influence of sex is also well marked, there having been twenty cases in males to four in females, a circumstance which is due mainly to the fact that syphilis is much less frequently contracted by women than by men.

7. The Occupation of the Patient.—Syphilitic affections of the nerve-centres are believed by Lancereaux and others to be much more frequent amongst the members of the learned professions, and those who work with their heads, than amongst the lower classes, and those who work with their hands, owing to the demand for greater exertion of the brain, and I daresay, relatively, they are; but I am not inclined to make much of this from a diagnostic point of view, having encountered so many cases in hospital practice. This probably arises from the greater frequency of syphilis among the working classes, and from the very general absence of careful and prolonged treatment in the earlier stages of the disease.

8. Syphilitic Nervous Lesions are frequently Multiple.—Although often single, they have a great tendency to this characteristic, so much so, that, whenever we meet with symptoms pointing to the existence of two or more separate lesions of the nervous system—for example, paraplegia and paralysis of a cranial nerve—the suspicion of syphilis being at the root of them must be seriously entertained, especially if we are able to exclude such disorders as diphtheritic paralysis, which should not be difficult if we are on our guard. For instance, a gentleman, aged 30, whom I had treated for secondary syphilis in 1879, came to me in January, 1881, on account of diplopia, the result of slight paralysis of the left sixth nerve. Next month he had a typical epileptic convulsion, preceded and followed by nocturnal headache. All these symptoms speedily vanished under the influence of iodide of potassium; but some months later he had an attack of left hemiplegia, for which antisyphilitic treatment, followed by a voyage to Australia, was prescribed. Since then he has remained well, although he has never quite lost a slight limp in walking.

9. The Variability of the Symptoms.—If the symptoms of a brain lesion vary much from time to time, independently of treatment, and without any other obvious cause, the syphilitic basis of them is probable, for we rarely find this—to the same extent at all events—in the case of non-syphilitic affections. The following case illustrates this class very well. A gentleman, aged 38, consulted me on August 31st, 1886. "Between August 3rd and 5th," wrote Dr. Archibald Brown, of Mount Florida, who conducted the treatment, "Mr. A. experienced the first symptom of his illness, a slight difficulty in pronouncing certain words. On August 6th, on landing at Greenock after a sail on the river, he found himself unable to speak; but on arriving at Glasgow the power of speech had returned. For about ten days afterwards he felt an occasional numbness of the left cheek and point of the tongue, and experienced a distinctly metallic taste. On the evening of August 16th he suddenly suffered from a choking sensation, followed by contraction of the left side of the face and loss of speech. He was quite intelligent at the time, but felt some confusion of mind. The power of speech returned in about an hour, but from August 17th to 31st he became speechless four or five times. During all this time he was unable to make the simplest calculations."

² *Clinical Aspects of Syphilitic Nervous Affections.* By Thomas Buzzard, M.D. London: Churchill. 1874.

tions and could not spell words correctly, with the single exception of his own name. On the advice of Dr. Moyes, of Largs, he took iodide of potassium for a week, but derived no benefit from its use."

When I saw him on August 31st there was a little permanent aphasia; he could not write very accurately (for example, when I asked him to write "Fairlie" he wrote "Fairlia," although he knew that he was making a mistake), and he was suffering from severe pain, chiefly in the back of the head, which set in some time after the onset of the aphasia. I suspected that these symptoms had a syphilitic basis on the following grounds: 1. Thirteen years before he had a solitary sore on the penis. 2. I found an ulcerated patch on one leg, the edges of which were perpendicular; it was circular in shape, and the skin around had a coppery colour. 3. There were coppery stains on the legs, and on one arm. 4. The pain in the head was nocturnal in character.

Treatment consisted of the inunction of a drachm of Shoemaker's mercurous oleate ointment daily, and was commenced on August 31st.

On September 4th I saw him with Dr. Brown. For the first two nights the pain in the head was worse, but, for the two nights before his visit it was much relieved. "In a very few days," wrote Dr. Brown, after beginning its use (mercurous oleate ointment), "under my observation, improvement in pronunciation and power of speaking set in. In three weeks all the symptoms had disappeared."

10. In Cerebral Syphilis certain Fundamental Types are very often recognised.—These, according to Heubner, are as follows:—

(a) Psychological disturbances with epilepsy, incomplete paralyses (seldom of the cranial nerves), and a final comatose condition, usually of short duration. This type usually depends upon the presence of a gumma in the subarachnoid space of the convexity of the cortex, which secondarily attacks the brain and leads to softening of the subjacent parts, or upon diffuse gummous meningitis.

(b) Genuine apoplectic attacks, with succeeding hemiplegia, in connection with peculiar somnolent conditions, occurring in often-repeated episodes; frequently phenomena of unilateral irritation, and generally at the same time paralyses of the cerebral nerves. This form is generally due to syphilitic disease of the arteries, leading to their obstruction and to softening of the motor ganglia, especially of the lenticular and caudate nuclei. It is often accompanied by a new growth, commencing in the membranes at the base and extending to a variable depth into the interior of the brain. The peculiar somnolent conditions common in this variety are probably the result of narrowing, without total obstruction, of a large number of arteries, thus making an injurious impression upon the whole brain.

The following case belongs to this class. A man, aged 29, a grinder by occupation, was admitted into the Western Infirmary on March 30th, 1882. For six months prior to this time he had been troubled with severe and steadily-increasing headache, which was limited to the left side. Four days before admission he was seized quite suddenly with paralysis of the left arm and leg, so that he was unable to walk, and the day following it was observed that he could not converse, answering "Eh" to every question that was put to him. The day before he came in, however, this symptom had, in great measure, disappeared, although, when he came into the hospital he was in a somnolent condition, had a dazed and stupid look, and answered questions in few words, or sometimes not at all, while the information which he vouchsafed was afterwards found to be quite erroneous. For a day or two, also, before I saw him the paralysis, which was quite complete at first (with the exception of the side of the face which, as usual, was only partially affected), became much less pronounced, so that he could move the arm a little and the leg with considerable freedom. But, on April 8th, nine days after he came under observation, he had an apoplectic seizure and remained unconscious for about a quarter of an hour, during which time there were convulsive movements of the palsied arm and leg. On recovering consciousness it was found that the paralysis was greatly aggravated, he being quite unable to move either arm or leg. The sensation, too, on this side was found to be rather defective as regards touch, pain, and temperature. Thus, when slightly pricked with a needle he thought that the hand was applied, and when hot and cold sponges were used he could discriminate cold but not heat.

The following considerations led me to suspect that the lesion was of a syphilitic nature:—

1. The age of the patient (29), and the absence of any other apparent cause for the symptoms.
2. The hemicrania was markedly nocturnal in character.
3. The skin had an unhealthy, dirty, earthy tint.
4. The inguinal glands, and those on the inner sides of the upper arms near the elbows, were enlarged.
5. A large white scar, about the size of a sixpence, with dark edges, was discovered near the root of the penis, which, on inquiry, was admitted to have resulted from a venereal sore five years before.

The treatment consisted of mercurial inunction (3j daily). This was carried out from April 2nd until June 2nd, with the exception of ten days (April 10th to 20th), when it was omitted through inadvertence.

On June 23rd, when he left the hospital, he was a very different man. The intelligence, which was at first so defective, was perfect; the nocturnal hemicrania had long disappeared; the paralysis of the arm was slight, as he could move it freely in all directions; and the dynamometer, on which at first the left hand made no impression, now registered 35 kilogrammes. The palsy of the leg was also slight, although rather more pronounced than that of the arm, and he walked a little lame and rather stiffly. This last symptom, taken along with the existence of some tremor when the limb was manipulated, and exaggeration of the knee-jerks (ankle clonus was not present), rendered it probable that secondary descending sclerosis had set in. As this lesion, though secondary to the lesion of the brain, is of a non-syphilitic character, it could not be influenced by anti-syphilitic treatment.

(c) Course of the cerebral disease similar to that of dementia paralytica (general paralysis of the insane), but frequently accompanied by epileptiform attacks, nocturnal headache, or implication of cerebral nerves. In this type there are no gross anatomical lesions, and it is supposed by some that repeated hyperæmias, affecting especially the grey cerebral cortex of the anterior lobes, may be the cause of the symptoms. But, in certain cases, there has been found an unusually marked proliferation of nuclei around the capillaries of the cortex, whose walls are thickened, sclerosed, and in a state of fatty degeneration, and which are apt to be obliterated.

When the spinal cord is attacked there is a great tendency for the disease to set in with symptoms of spinal irritation, followed by paralysis, which rapidly increases, and the affection progresses in the form of an acute spinal paralysis.³

The following is a good illustration of syphilitic disease of the cord.

Mrs. F., aged 39, was admitted into the Western Infirmary on December 5th, 1887. Her mother and two brothers died of phthisis, but there was no history of any tendency to nervous affections in the family.

Two years before admission, after having suffered for three months from persistent, painless diarrhoea, she began to complain of numbness and defect of sensation in the left leg, for which she was treated in hospital for a period of five months without material benefit. During her stay there she had retention of urine on several occasions, but was relieved without the use of a catheter, by the application of fomentations. Five months before I saw her the right leg became similarly affected, coincident with which she lost desire for sexual intercourse, and began to experience a feeling as if a cord was tied tightly round her waist. From the commencement of her illness her bowels became very costive, but, if she had diarrhoea, she was quite unable to retain her motions. For three months she had had frequent attacks of lightning pains, usually following the course of the sciatic nerves, but sometimes also shooting down the arms. She complained also of pain and tenderness over the fourth, fifth, and sixth dorsal, and over the twelfth dorsal and first lumbar vertebrae. For at least a year her eyesight had been failing. Drs. Reid and Wallace reported as follows with regard to the eyes:

"Both nerves are pale, retinal vessels congested; nothing pathognomonic of disease; vision of right eye normal, that of left rather defective, reduced about one-fourth. With glasses can see large type with left eye."—Dr. Reid.

"Both visual fields, as taken by the perimeter, are very much contracted, especially that for the left eye, which is irregular in outline, and not concentric like the right. There is a central scotoma in both, the scotoma being nearly proportionate to the area of the visual fields."—Dr. Wallace.

The left (first affected leg) was somewhat more wasted than the right, and she was quite unable to stand. Sensation was completely lost all over the body with the exception of the head and neck, and the reflexes, superficial and deep, were totally abolished.

On January 6th, 1888, it was noted that the disease had further progressed. The girdle sensation was felt higher up in the chest, and the anaesthesia extended to the lower half of the face.

On January 12th the girdle sensation was felt on a level with the clavicles, and the anaesthesia extended as far as the temples.

On January 17th the anaesthesia was universal, and dysphagia was so great that on one occasion she was nearly suffocated, and was only saved by the removal of a piece of meat which had lodged at the top of the larynx. At this time she was shown to the class, and her condition, shortly, was as follows: Lightning pains some time gone, after two powders of antipyrin (xv grains); paraplegia absolute, except that she could move the toes of the right foot slightly; anaesthesia universal and complete; unable to tie a knot or lift a pin, or to read small print; girdle sensation on a level with clavicles, reflexes absent, sexual power gone; micturition and defaecation difficult; dysphagia very marked, so much so that she was nourished, for the most part, *per rectum*.

February 5th, 1888.

VISUAL FIELDS OF DR. ANDERSON'S CASE.

Explanation of Plate.—The accompanying diagrams show the field of vision, A and B having been taken on December 7th, 1887, and C and D on February 5th, 1888. The outer line shows the shape and extent of the normal field; the inner line gives the proportional size and shape of the visual field in this case. The shaded portions in the centre mark the positions of a central scotoma. The vertical and horizontal lines would, if drawn so as to intersect, cut one another at the central point of the field—that is, at that point which corresponds to the macula. The blind spot indicating the situation of the optic nerve lies slightly to the temporal side of the field, corresponding to the nasal side of the retina. The fields are greatly contracted, especially those of the left eye, although a decided improvement is evident in those of the later date. A central scotoma for all colours is present in A, B, and D, while the small shaded area in C is a scotoma for red and green, but not for white. It corresponds exactly with the position of the blind spot.—W. W.

The family history might have led to the suspicion that the spinal disease was of a strumous character, but I was inclined to believe that it was syphilitic, for the following reasons:

1. She had a pallid and earthy complexion.
2. Before and for three years after her marriage (at the age of 23), she enjoyed exceptionally good health. She then became pregnant, and had an abortion, without any obvious cause, at the fourth month, and was much weakened by hæmorrhage. Two months after this she again became pregnant, and again aborted at the fourth month. Twelve months thereafter she was delivered

³ For further particulars see *Cyclopædia of the Practice of Medicine*, edited by Dr. H. von Ziemssen. Article by Heubner, vol. xli, p. 293.

of an apparently healthy child at the full term. It is further worthy of note that her husband, being a soldier, was separated from her, and returned shortly before the first pregnancy set in, although, as far as she knew, he was in good health.

3. During the whole period of her first pregnancy, she had very severe headache, which was nocturnal in character.

Antisyphilitic treatment was commenced on January 17th, 1888, and consisted of iodide of potassium, 10 grains thrice daily.

On January 21st, four days after the treatment was commenced, she was found to be much improved. She looked better, and felt less languid. Power was returning to the lower extremities, especially to the right limb. The anaesthesia was nearly gone from the head, neck, and trunk, as far as the waist, and from the upper arms. The dysphagia was quite a subordinate symptom, and the girdle sensation had sunk to the level of the breasts. She could now tie a knot and lift a pin. It is worth noting, also, that, coincidentally with the diminution of the anaesthesia, the tenderness over the fourth, fifth, and sixth dorsal spines temporarily reappeared. She continued steadily to improve, and, when she was again shown to the class, on February 6th, twenty days after the treatment was commenced, the following was her condition: Her general health was much improved, and she had a much more healthy colour. She could move her legs freely in bed, and could walk with slight assistance. The anaesthesia was gone, except from the feet, where, especially on the soles, sensation was still much blunted. The dysphagia and girdle sensation had also disappeared, as well as the spinal tenderness. She could now read small print, and the improvement in the eyesight is further shown by the accompanying diagrams. Her bowels were now regular, and urination was much more natural, but the knee-jerks were still absent.

11. *Eye Symptoms.*—A careful examination of the eye and its appendages frequently helps us to the diagnosis of a syphilitic nervous affection, or, at least, arouses the suspicion that the patient is tainted with syphilis, for the two propositions are not identical.⁴

While any or all of the nerves supplying the muscles of the eyeball may be affected (ophthalmoplegia externa, and interna), the third and sixth are those which are most frequently implicated in syphilitic disease, especially that branch of the oculomotor for the supply of the internal rectus muscle; and nuclear paralysis of the sixth nerve, with conjugate deviation of the eyeball, is of more diagnostic importance, as far as syphilis is concerned, than peripheral paralysis of that nerve. The cornea and iris are the structures of the eyeball which are most frequently the seat of syphilitic affections. An intestinal inflammation of the cornea, accompanied by dulness of hearing and faulty development of the teeth, as pointed out by Hutchinson, may be regarded as distinct evidence of heredo-syphilis. More than 30 per cent. of all cases of iritis are said to be of syphilitic origin. It occurs usually during the secondary stage of the disease, and is generally symmetrical. When it is accompanied by the development of minute gummata along the margin of the pupil, or in the substance of the iris, it is pathognomonic of syphilis, and occurs, as a rule, at the close of the secondary or beginning of the tertiary stage of the disease. When the iritis extends to the choroid (irido-choroiditis), or when the whole of the uveal tract is simultaneously affected, associated with opacities in the vitreous, the disease probably has a very deep hold upon the system, and sooner or later symptoms of lesions in other organs, as the brain or spinal cord, may be expected to occur. On account of the intimate nutritive and anatomical relations of the choroid with the retina and optic nerve, these structures are often implicated, giving rise to dimness of vision, with atrophic patches in the choroid in the region of the macula, or at the periphery of the fundus. This form of inflammation occasionally ends in atrophy of the eyeball, and is of far more serious import than choroiditis disseminata, of which about one-half of the cases are said to be syphilitic.

Affections of the retina and optic nerve are comparatively rare apart from affections of the choroid; but in some cases of syphilis the patient complains of central dimness of vision, and in such cases the ophthalmoscope reveals a general mistiness of the whole retina, with veiling of the optic-nerve entrance. Such cases of retinitis usually implicate both eyes—the one after the other—are generally transitory, and are characterised by the fact that it is usually the central region which is most affected. The optic nerve may be affected in various ways (neuro-retinitis, neuritis,

atrophy), but the appearances presented on ophthalmoscopic examination do not present any characteristic features to distinguish them from those which accompany non-syphilitic affections of the brain or cord, or of their membranes.

12. *Syphilitic Affections of the Nervous System are generally unaccompanied by Syphilitic Affections of the other Viscera, and vice versa*—a circumstance which should be borne in mind, lest erroneous inferences might be drawn. Of the twenty-four cases already referred to, there was not a single one in which there was clinical evidence of the implication of any other internal organ.

13. *The Results of Treatment.*—In all cases in which there is a suspicion of the syphilitic basis of an affection of the nervous system we should give the patient the benefit of the doubt and put him upon anti-syphilitic treatment. If the symptoms unmistakably yield, our suspicion becomes a certainty, although the converse does not always hold good. A syphilitic lesion, even although we succeed in removing it by treatment, may have so compressed and damaged the tissues in which it was imbedded as to preclude the possibility of a complete restoration to health. Syphilitic disease of the coats of the blood-vessels, too, may lead to their occlusion, and to softening of the parts supplied by them, which cannot, of course, be influenced by mercury or iodide. Hence hemiplegia setting in suddenly is much less likely to be cured than when the symptoms develop gradually. In like manner hemiplegia, which is followed by descending degeneration of the lateral column of the cord, which is a non-syphilitic lesion, cannot entirely be recovered from.

Treatment.—Whenever we suspect that a nervous affection is of a syphilitic nature, we should attack it at once with anti-syphilitic remedies, and just as energetically as if we were absolutely certain of our diagnosis. A faltering hand under such circumstances is fatal. A very prevalent belief with regard to the treatment of syphilis is that mercury is the remedy in the early, and the iodides in the late stages. Now I quite admit that iodine is most useful in the latter, and that mercury is very useful in the former; but at the same time I hold that some of the most brilliant results are achieved by mercury in old-standing cases of syphilis, and sometimes after iodide of potassium has failed. It may turn out, however, when we have had experience of the employment of heroic doses of the iodide (even to the extent of two ounces per day), which have proved successful and innocuous in the treatment of some cases of psoriasis, that more uniformly good results may be obtained from it. Our rule should be to begin with moderate doses—say ten grains thrice daily—and steadily to increase the dose, either until the symptoms yield or until the medicine begins to disagree.

Mercury may be given in a great variety of ways, which need not be enumerated; but I have a decided preference for mercurial inunctions, or for subcutaneous injections, as we thus attain speedy and excellent results, while avoiding derangement of the digestive organs.

For inunction the mercurial ointment of the *Pharmacopæia*, or Shoemaker's 50 per cent. mercurous oleate ointment, may be used. The only objection to these preparations is their dirtiness, but in the case of the latter this difficulty may to a certain extent be overcome by preparing it without heat. In this way we obtain an ointment which, when freshly prepared, has a faint lavender tint. It should generally be continued for months after the symptoms have yielded, and those who keep their teeth and gums scrupulously clean are much less liable to salivation.

The subcutaneous injection of the perchloride of mercury has one great objection, namely, that it may induce painful indurations or even abscesses. Various mixtures have been devised with the view of overcoming this obstacle, but none of those which I have tried possess any marked superiority over a simple solution of 4 grains in an ounce of distilled water, of which 15 to 30 minims (gr. $\frac{1}{4}$ to gr. $\frac{1}{2}$) may be injected daily. With the view of preventing the occurrence of inflammatory reaction the following procedure, in whole or in part, may be adopted. The skin is first frozen with ether spray or with a small piece of smooth ice, the surface of which is sprinkled with salt and applied for a couple of minutes with the aid of a folded handkerchief. One-eighth of a grain of sulphate of morphine is then injected deeply into the cellular tissue of the hip or other insensitive part, or where there is much subcutaneous fat; the syringe is then detached from the cannula, and filled with the sublimate solution, and in two or three minutes it is again attached to the cannula, and the solution is injected. Thereafter a lump of ice is kept applied to the part until all uneasiness has subsided. The rapidity

⁴ For the information which follows I am much indebted to my colleague, Dr. Thomas Reid, as well as to Dr. Freeland Fergus.

with which syphilitic manifestations sometimes disappear, as well as the small quantity which requires to be used, as compared with the internal administration of the drug, is sometimes very astonishing.

I conclude with a short note of a case which is of interest in connection with the relation of locomotor ataxy to syphilis, and which seems to raise the question whether the futility of anti-syphilitic treatment in the majority of cases with undoubted syphilitic antecedents may not be due to our not seeing our patients in an early stage of the disease.

A gentleman, aged 43, consulted me on February 3rd, 1885. His symptoms only dated back four weeks. These consisted of well-marked staggering gait, with numbness of the lower extremities, and inability to feel the ground properly when walking. For a week, too, numbness of the arms (especially on the right side) as far up as the elbows, and limited to the region of distribution of the ulnar nerves, had been complained of. His knees felt slightly stiff, he said, and he suffered from a feeling of tightness across the stomach and of much flatulence, especially after food, and at times he had a feeling as of a band across the abdomen. The knee-jerks were entirely absent.

He attributed his symptoms to going into the open air after sitting in a hot office all day. But ten years before I saw him he had a single sore on the penis, followed by blotches on the skin and pains in the bones, which, however, did not trouble him long, and for which he was only treated for a short time.

Treatment was commenced on February 4th, a drachm of mercurial ointment being rubbed into the skin daily. On the 7th the numbness of the legs was gone, and that of the arms a little diminished. On this day the dose of the ointment was doubled, and he was directed to apply 10 cells of a Leclanché battery to the spine daily. On the 19th, the following note was taken: "The numbness in the arms has steadily diminished, and he now walks well. After the use of 2 drachms of the ointment for three days it was omitted for three days owing to slight salivation, and afterwards, for a few days, only one drachm was employed." At this date, however, it was increased to one drachm and a half.

At the end of March he went for a change to Jersey, where, although the weather was bitterly cold, he steadily improved. On his return on April 28th he was quite well, except that there was still slight numbness in the right arm. This gentleman continues well.

Professor GRAINGER STEWART spoke in high terms of the very able and lucid statement which the President had just given, and said that he would confine his remarks to a demonstration of a case which he considered so rare as to warrant its being exhibited to members of the Association. The patient was a woman, aged 58, a hawker by trade. She had been fairly healthy until about twenty years ago, but since that time had never been well. The illness began with an attack of what she calls rheumatic fever, but that illness lasted for six months, was not attended by swelling of joints or copious perspiration, and in its course she had ptosis of the right eyelid, and lost the sight of the right eye. From this and other circumstances it seemed necessary to conclude that the illness was really syphilitic, and at the time of demonstration the patient showed several nervous symptoms, but was otherwise free from disease. She complained of giddiness, and of uneasy feelings of coldness and tightness in the leg, had complete anosmia and blindness of the right eye, and loss of sensibility in some parts of the body. Ophthalmoscopic examination showed staphyloma posticum on both sides, with some degree of atrophy of the disc. Hearing and taste were normal. There was some paralysis of the left leg, and nearly complete immobility of the eyeball. But the main interest turned upon peculiar symptoms of the nature of a fit, which were demonstrated before the Section. These fits consisted in sudden loss of consciousness with slight spasm of the glottis, and prolonged inspiratory effort, with violent turning upwards and inwards of the left eye, this condition lasting for about thirty seconds, and terminating with somewhat noisy respiration. The attacks arose only from closing the eyelids, darkening a room, or bringing an object; never varied in their character; were never produced by any other cause than of one, namely, interference with vision. It had lasted now for many years, and the patient's mental condition remained unimpaired.—Dr. DAVID DRUMMOND congratulated the Section and Dr. McCall Anderson upon the very able address with which the discussion had been initiated. He thought they might glance for a moment at the morbid conditions in the brain, the result of

syphilis, the diagnosis and treatment of which they proposed to consider. He briefly enumerated and described the changes he had met with, and placed them in the following order in point of frequency—meningeal thickening and cloudiness, most frequent at the base; arterial disease, which might be either widely distributed or very local, and he laid particular stress upon the manner in which the Sylvian artery is encroached upon by gummatous inflammation; and tumours. As regards the diagnosis, time would only permit of a reference to a few of the symptoms. Headache he had not found to be so common an accompaniment of syphilis of the brain as was generally supposed. When present it was often worse at night, causing insomnia, and was generally borne with but a scant degree of fortitude, irritability being a marked feature. Cases were next detailed illustrating the absence of headache even when the disease was of the nature of tumour, and two cases of tumour of the medulla were specially referred to, as well as three cases in which the lesion was presumably cortical; in one there was aphasia and local spasm affecting the right facial muscles; in the next Jacksonian epilepsy beginning in the right thumb and extending to the arm, face, and leg; and in the third there was a similar group of spasmodic phenomena commencing in the left side of the face and implicating the arm of same side. In none of these was headache a noticeable symptom. The diagnosis of syphilitic vascular lesions was considered, and the great difficulty attending this, in some cases, was emphasised. The points in favour of syphilis, apart from the history of infection, were occurrence of neuralgia before the attack, especially in a wide area of the fifth nerve, youth, and absence of cardiac, renal, and general vascular disease; marked evidence of thrombosis. As regarded treatment, he believed in large doses of iodide of potassium, but frequently found it necessary to combine mercury with the iodide. He was, however, a little afraid that in some cases the big doses of iodide aided in determining a thrombosis in an already damaged vessel, just as the salt appeared to induce clotting in an aneurysmal sac.—Dr. ROSS, in commenting upon the marvellously interesting case presented by Dr. Grainger Stewart to the meeting, said that he could not, from his own experience, supply a parallel to it. The lesions were probably multiple, but the fact that blindness existed on one side, with complete paralysis of all the motor-ocular nerves and a restriction of the field of vision on the other, seemed to indicate that the lesion was situated at the optic foramen and sphenoidal fissure, and continued to the optic commissure. These symptoms were found in other recorded cases in association with polyuria, a symptom which was present in a marked degree in this case. In opposition to this view might be adduced the fact that, although the blindness of the right eye had existed for many years, yet the optic atrophy was of recent date, and was not complete even at present; and instead of a temporal hemianopsia, which was usually present in a local deposit, the defect in this case appeared to be a concentric diminution of the field of vision. It was therefore probable that a cortical lesion existed in addition to a basal one. With regard to the types of disease described by Dr. Anderson, Dr. ROSS believed that these depended upon the fact that syphilis became deposited at particular parts of the nervous system in preference to others. The following seats of selection might be mentioned:—1. The cortical area of the middle cerebral artery, giving rise to Jacksonian epilepsy, in which loss of consciousness was either absent or came on at a late period of the seizure. 2. The cortical area of the anterior cerebral artery, in which the cerebral symptoms were ushered in by prolonged somnolence, and in which the spasms present were slight and supervened at a late period. 3. The subarachnoid, the interpeduncular space at the base of the brain. In these cases the symptoms were ushered in by irritation, followed by paralysis of the cerebral nerves. As the deposit extended, the vessels passing into the anterior perforated space were involved and became occluded, giving rise to softening in the basal ganglia, with hemiplegia in one or in both sides. If the disease advanced without being checked by treatment, the patient passed into a somnolent condition, with paralysis of one or both lower extremities, and incontinence of urine and feces. This condition might last for weeks under energetic treatment, and would prove fatal if its nature were unrecognized. 4. The subarachnoid space at the posterior borders of the pons, or in the grey matter of the inferior part of the pons. In this case the disease was ushered in by paralysis of the sixth and seventh nerves, while more or less of unilateral deafness was sometimes present. Cases of this kind were frequently accompanied by a tendency to fall towards the side of the brain, caused

by interference with the transverse or cerebellar fibres of the pons. Labio-glossolaryngeal paralysis was also, of course, frequently of syphilitic origin. 5. The cervical region of the spinal cord, usually high up, opposite the atlas and axis. Congenital syphilis often gave rise to this variety. 6. The most frequent site of spinal syphilis in the adult was the junction of the dorsal and lumbar regions. The symptoms were often ushered in by paralytic incontinence of the bladder and by impotence. Dr. Ross mentioned two cases he had seen of absolute and persistent impotence, with no other symptom except a transient anaesthesia of the scrotum and perineum and slight exaggeration of the patellar tendon reflexes. In some cases the lesion was deposited at a lower level of the cord on the one side than on the other, so that atrophy of the quadriceps muscle with loss of the patellar tendon reflex might be present on one side, while on the other side the nutrition of the muscle was retained and the tendon reflex exaggerated. 7. The cranial nerves were more liable to be affected in their peripheral course than the spinal. When the spinal nerves were primarily affected, the disease was liable to become diffused, and to invade most of the nerves of the body as a multiple peripheral neuritis. Dr. Ross believed that the remarkable case of paralysis, with complete anaesthesia, described by the President, was an example, not of spinal syphilis, but of the universal paralysis described by Dr. Buzzard, and which was now admitted by him to have been multiple peripheral neuritis.—Dr. CLOUSTON said: In regard to the mental relations of brain syphilis there are four chief forms; all mean a heredity towards mental or nervous disease. 1. Where we have a short delirium during the secondary stage of syphilis. 2. An acute delirious mania during the formation of a rapidly forming syphiloma in the cortex in the region of the vertex anteriorly, with a rapidly progressive softening passing upwards against the line of physiological activity. The patient dies within three weeks of the incidence of the attack. 3. The most common form of mental syphilis is due to a subtle syphilitic arteritis. The mental symptoms are immorality, sudden impulsiveness, insane suspicions, gradually going on to dementia, accompanied by convulsions and paralysis, but with no cephalalgia or eye symptoms. This form is curable by mercury and iodides, if early treatment is resorted to. 4. Mental symptoms of all kinds result from syphilis of the bones, membranes, and packing tissues generally, which depend for their character on the *locus in quo*. I do not agree with Hughlings Jackson that the cells and fibres of the brain cortex are not liable directly to be affected by the syphilitic poison, but the proofs of this would be too much for this discussion.—Dr. ALEX. ROBERTSON said: As bearing on the prospects of treatment, it is worthy of observation that the spinal cord, together with its prolongation within the skull, seems more disposed to suffer from the degenerative effects of syphilis than the brain proper; at least the degenerations of the elements of nerve-tissue, which are now regarded as among the sequelae rather than direct results of the disease. Thus there does not appear to be any disease of the brain of syphilitic origin which corresponds to locomotor ataxy. General paralysis resembles it in the anatomical changes which it induces, and may, indeed, develop out of it, or be associated with it, but the causation is different, as a rule, in the two cases. The diagnosis of the nature of the disease resolves itself into the diagnosis of syphilis. As illustrating the risk of relying implicitly on patients' statements, I may mention a case that occurred in my experience this summer. A middle-aged man came into the infirmary with nervous symptoms suggestive of syphilis; he, however, denied ever having the disease. Not being satisfied, I drew back the foreskin, and found a well-marked cicatrix of a chancre. He then remembered he had a venereal illness when a lad. With respect to the diagnosis of the seat of lesion when intra-cranial, if the disease is at the base of the brain and involves certain nerves, or motor and sensory strands connecting the cerebrum with the spinal cord, or perhaps both, the diagnosis is usually easy, for there is impairment or loss of function of the parts affected, and this is indicated by the symptoms. So also, should the lesion happen to be in the motor region of the cortex, there are localising indications in the form of Jacksonian epilepsy or monoplegia. But should it be situated in front or behind the motor zone, there is in general little assurance of its position, though when it involves the temporo-sphenoidal convolutions, the angular gyrus, or the occipital lobe, there may be localising symptoms. Whether such indications be present or not, general systematic percussion of the skull by the finger will sometimes assist in the diagnosis. I should wish to insist on this, as I

doubt if its value as a method of examination is sufficiently appreciated. Further, it is particularly in syphilis that it is of use, as within the head this disease, in its grosser manifestations, is almost always a surface one, originating in the membranes. We may by percussion transmit sufficient force to irritate a circumscribed superficial morbid part, which is usually hyper-sensitive, so that the patient may become conscious of distinct pain at the spot, though unaware of it in a definite situation previously. Wherever there is reason to suspect the presence of local superficial disease within the skull, this aid to diagnosis should not be omitted. With respect to treatment, I suppose we are all pretty much agreed that in cases of recent and gross lesion mercury and iodide of potassium are our sovereign remedies. These medicines are, however, of little or no use in the degenerations of syphilis, such as those of locomotor ataxy. Local treatment is sometimes of much value in intracranial lesions. I have prescribed as many as ten fly blisters in succession over a painful part of the head, to which I had been guided by percussion of the skull, and been assured that pain had thereby been removed, and that epileptoid fits had all but ceased, though neither had previously yielded to long protracted constitutional treatment.—Dr. DRYSDALE said that the clinical study of cerebral syphilis was quite recent. In 1858 he saw a case of syphilitic aphasia, which at that time was not recognised to be syphilitic. Nowadays epilepsy, insanity, and almost all other diseases of the brain and spinal cord seemed to be considered as capable of being caused by syphilis, and three-fourths of the motor oculi palsies were due to the disease. The cerebral symptoms might come on a few months after the occurrence of infection, and might be postponed for thirty years. One man he had seen had hemiplegia with aphasia four months after the occurrence of the chancre. Another gentleman had his first attack twenty years after the same event. As a rule the seizures came on between three and fifteen years. He was not inclined to think that any prognosis could be given as to the classes of cases in which it might occur. After enumerating various cases of epilepsy and other symptoms of cerebral syphilis which he had witnessed in his practice, he urged that treatment should be active, inunction carefully used, and large doses of iodide of potassium should be used at once. The prognosis, however, of cerebral syphilis was, he said, gloomy, for even when the patient was cured of one attack, he often died eventually from a relapse.—Dr. SINCLAIR COGHILL said that his object in taking part in the discussion was to bring forward the details of a case of syphilis illustrating several important points in the pathology, but principally interesting in connection with the therapeutics, of the subject. The patient, aged 22, was infected while reading for his degree at the university, and within eighteen months the disease had attained its extreme development. He had a supposed intolerance of the iodide, and was treated, under Mr. Hutchinson's direction, with mercury. When Dr. Coghill saw him he was covered with the most severe eruption of rupia. Dr. Coghill had ever seen. The whole muscular system was in a state of tremor, probably mercurial, even during sleep. He was aphasic, suffering from dementia, which ultimately developed into furious mania, demanding restraint and forcible feeding. The functions of the sphincter were suspended. The symptoms were in the beginning almost identical with those of delirium tremens, and seemed to show that the seat of the lesion was the vascular and meningeal structures. At first iodide was combined with mercury, but the patient continuing without improvement, Dr. Coghill determined to avail himself of the fact that when small doses of the iodide disagree, larger ones are tolerated. At first ten grains three times a day were given, but six drachms and a half a day were gradually reached. He was under treatment from November, 1885, to June, 1887. In 189 days he took 635 drachms of iodide of potash. For a week at a time, on six occasions, he took six drachms and a half a day. Again and again Dr. Coghill hesitated to continue these large doses, and suspended them, but was driven as often to return to them. Attempts were made to alleviate the condition with the bromides and with chloral hydrate, but the symptoms were not only not influenced, but they caused most alarming depression, leading to their abandonment. The result of the treatment was ultimately entirely successful, and the patient remained quite well.—Dr. OSWALD ZIEBSEN, of Wiesbaden, said the syphilitic diseases of the nervous system had really not such a bad prognosis as it would appear after this discussion. A large number of cases of tabes dorsalis, hemiplegia, and aphasia, had recovered, some of them to that degree that they still served as officers in our

army, rode on horseback, got married, and even had the pleasure of becoming *patresfamilias*. The difference of the prognosis appeared to be founded on the different treatment. He not alone agreed with Professor Anderson that the treatment should be strong, he went farther, it should be as strong as the patient could stand it, these diseases being as obstinate as they were interesting. Mercury being a poison, we always had to deal with the possibility of giving too much; for this reason the inunction treatment alone was useful. If we saw dysentery or stomatitis coming on, the mercurial ointment could be easily washed away, and the further absorption of mercury was stopped at once; all other applications, particularly the injections, did not allow this. He often applied daily doses of ten to fifteen grains, the ointment having the strength of two parts mercury and one part lanolin or vaseline. Besides this, the treatment ought to be of long standing, two to three months, in order to have really some assurance for the future.—Dr. BYROM BRAMWELL said he agreed in the main with the propositions which the President had laid down in his admirable paper for the diagnosis of syphilitic lesions of the nervous system. Personally he attached great importance to the variable, anomalous, and multiple character of syphilitic nerve lesions; to the fact that in the case of "coarse" cerebral or spinal lesions, syphilitic lesions were so generally superficial, involving the membranes or nerve-trunks; to the age and sex of the patient; to the muddy anemic complexion to which the President had pointedly alluded. He agreed with the President in thinking that brain syphilis was at least as prevalent in hospital patients and uneducated persons as in the upper classes. He thought that one explanation of this frequency was probably to be found in the fact that the working classes were more exposed to head-injury, which were, in his opinion, even more important exciting causes of cerebral syphilis than intellectual strain or overwork. He agreed with Dr. Ross as to the great diagnostic value of headache, though he fully admitted with Dr. Clouston that where the lesion affected the smaller vessels alone and did not involve the membranes, headache might be entirely absent. In this connection he directed attention to the relationship of syphilis to general paralysis of the insane. For his own part he was disposed to think that this relationship was analogous to that of syphilis to locomotor ataxy. He agreed with those who thought that in many cases syphilis was an important factor in the production of cerebral paralysis, and that some cases which presented all the typical symptoms of general paralysis of the insane, which, in short, everyone would diagnose as general paralysis of the insane, materially improved, and in exceptional cases got quite well under vigorous anti-syphilitic treatment. He agreed with Dr. Robertson as to the great diagnostic value, in some cases, of skull percussion. He briefly alluded to the fact that sensory Jacksonian epilepsy was apparently so very rare as compared with motor Jacksonian epilepsy, and mentioned a case which he had recently recorded, and in which *post-mortem* examination had subsequently shown the presence of an old syphilitic cicatrix on the outer surface of the tip of the occipital lobe. With regard to treatment, he thoroughly agreed with the speakers who had advocated the administration of large doses of iodide of potassium. One might almost as well give water as administer five- or ten-grain doses of iodide of potassium in many cases of cerebral syphilis. Personally, he was in the habit of giving twenty, thirty, or even sixty grains several times a day; and he agreed with the President in thinking that in many cases in which the iodide alone was unable to effect a cure, improvement occurred upon the addition of mercury. He emphasised the importance of continuing the administration of the iodide for long periods of time. He had been much disappointed with the relapses which not infrequently occurred after a complete cure has apparently been effected. He also referred to cases such as Professor Grainger Stewart had mentioned, in which a cicatrix remained after a syphilitic lesion, and continued to act as a local source of irritation and discharge. Everyone would, he supposed, agree that in cases of epilepsy due to such a cause, in which the cicatrix could be accurately localised, the cicatrix should, if possible, be removed by operative procedure. The surgical treatment of old syphilitic deposits had recently been considered by Dr. Seguin, of New York, with whose views Dr. Bramwell agreed.—Dr. STRETCH DOWSE remarked that all disease, whether syphilitic or otherwise, should be studied from three main points of view, namely, the anatomical, the seat of lesion; the physiological, the alteration of function; the pathological, the changes, and derangements, and degeneration of the

nutritive processes. Gross syphilitic changes, whether in the brain or spinal cord, were diagnosed by the disorderly groupings and eccentric association of objective signs and subjective symptoms; in fact, nothing was more indicative of syphilis than the "absence of definition." The influence of syphilis upon the nervous system might be (1) essentially dynamic and metabolic, (2) vaso-motor, (3) purely motor, (4) purely sensory, (5) sensori-motor, (6) motor-psychical, (7) sensori-psychical, (8) sensori-motor-psychical. Dr. Dowse gave practical instances of what he considered to be illustrative of these different types of diseased states owing to syphilis, and he especially advised, in the later syphilitic manifestations, the administration of drachm doses of iodide of potassium three times a day, diluted and dissolved in a tumbler of water, to be taken immediately before a meal.

Dr. WILLIAM MOORE (Dublin) sent the following notes on Syphilitic Paralysis and its Treatment:—Case I. Syphilis followed by sore throat, rheumatism, cervico-dorsal neuralgia, paraplegia, recovery. Treatment, five-grain doses of iodide of potassium, with one-sixteenth of a grain of strychnine, three times a day. Electro-galvanism applied along the spine. After one month's treatment, recovery complete. Case II. Syphilis followed by secondary symptoms, iritis, convulsions, and hemiplegia. Treatment, a combination of iodide and bromide of potassium. Recovery. Case III. Syphilis followed by eruption, headache, hemiplegia, convulsions. Treatment, iodide of potassium alone. Recovery. Case IV. Repeated syphilitic attacks, followed by secondary symptoms, rheumatism, occasional diplopia, opisthotonos, loss of muscular control, progressive motor ataxy. Treatment, which extended over three months, was the iodide and bromide of potassium, with partially satisfactory results. Case V. Mixed paralysis. A girl, aged 23, contracted syphilis; this was followed by buboes, sore throat; no cutaneous eruption; afterwards, pain in the knee-joint. Had a "fit," was completely unconscious, followed by loss of power of left leg; subsequently lost the power of right arm. On admission into hospital, visible deformity of the face, with loss of power of right arm and right leg; deafness; loss of taste; headache; pain at the nape of neck; facial paralysis of right side; drooping of the left angle of the mouth; partial ptosis of left eyelid; a permanently dilated condition of the right pupil; loss of power of the sixth nerve, with double divergent strabismus. Has double vision, giddiness when placed in the erect position, and, on placing the heels together, reels and staggers. There is partial aphasia, complete loss of taste. No appreciable difference in the temperature on either side of the head; no sugar or albumen in the urine. Pulse 88 in the recumbent, 98 in the erect position. No history of paralysis in her family. Treatment, five grains of Plummer's pill and eight grains each of iodide and bromide of potassium three times a day. In cases of syphilitic gummata, one-sixteenth of a grain of red iodide of mercury, or the green iodide of mercury, may be given with advantage; or a combination of mercury and iodide of potassium, or the addition of bromide of potassium, as in this instance, on account of the epileptiform seizures which occurred. This treatment was attended with satisfactory results.

REQUESTS AND DONATIONS.—The Salford and Pendleton Royal Hospital and Dispensary has received £1,396 3s. 8d. under the will of Mr. J. Worrall Walker.—The Surgical Aid Society has received £1,000 under the will of Mr. E. Boustead, of Clapham.—Miss Annie Lowther, of Moresby House, near Whitehaven, bequeathed £1,000 to the Whitehaven and West Cumberland Infirmary.—Mr. Gustavus Lambart Basset, of Telidy, bequeathed out of the "residue" of his estate, upon certain contingencies, £600 to the Miners' Hospital at Redruth, £300 to the Women's Hospital at Redruth, and the remainder upon trust for St. George's Hospital, Hyde Park Corner.—Mr. Joseph Sherwood, of Westbourne Terrace, Hyde Park, bequeathed £200 to King's College Hospital, £200 to St. Michael's Convalescent Home at Westgate-on-Sea, and £100 each to the Earlswood Asylum for Idiots, the Metropolitan Convalescent Institution, the City of London Truss Society, and the Seaside Convalescent Home at Seaford.—Mr. John Hibbert, of Braywick Lodge, Maidenhead, bequeathed £100 to the Windsor Infirmary.—The Halifax Infirmary has received £78 8s. 5d. from the Hebden Bridge Musical Festival Committee.—Lord Herschell has given £50 to University College Hospital.