CLINICAL LECTURE ON ILLUSTRATIONS OF THE LESS COMMON FORMS OF SYPHILITIC DISEASE, THEIR DIAGNOSIS AND TREATMENT.

Delivered in the Western Infirmary of Glasgow

By T. MCCALL ANDERSON, M.D.,

Professor of Clinical Medicine in the University of Glasgow.

GENTLEMEN,—It may be safely affirmed that there is hardly a disease of any organ of the body which may not be more or less closely simulated by syphilis, more especially in its later manifestations. A long experience has convinced me that this circumstance is fraught with grave errors of diagnosis, and is responsible for the death of multitudes of patients every year. These errors are due, in some cases, to an insufficient acquaintance with the endless variety which syphilitic manifestations may assume, but more frequently to the absence of a history of infection, and, above all, to a very prevalent belief that if a patient remains free from symptoms for several years, he is safe from further trouble; whereas I should be inclined almost to go the length of saying that the longer the interval since infection the greater is the likelihood of syphilitic disease of internal organs, unless, of course, the patient has been put through a long continued and full course of antisyphilitic treatment.

Further, it must be borne in mind that it is often the slighter forms of early syphilis which are followed by serious disease in the future, for the simple reason that they are very likely to be imperfectly treated. The poison, not being counteracted, lies latent in the system, ready to burst forth on the first favourable opportunity. And, finally, one must never forget that the disease may be transmitted hereditarily.

The following are a few of the many illustrations which might be given of the less usual forms of syphilitic disease:

On January 16th, 1896, a miner, aged 39, was admitted into the Western Infirmary complaining of headache and of fits. The family and previous personal history were good. In May, 1895, while wrestling in a public-house, he fell, striking his head against the floor. Thereafter he suffered greatly from headaches, which were not localised, and six weeks after the injury he had his first fit, there having been eight in all, occurring at intervals of three or four weeks. The earlier seizures were preceded by an aura sufficiently prolonged to allow of his lying down, and the first one was associated with complete loss of speech for three days. In the first two paroxysms the convulsions were general, but the three following were confined to the right side of the body and face. The last three seizures were unaccompanied by loss of consciousness, and were limited to the arm, while there was only a numb feeling in the face. For a couple of weeks before admission he experienced a loss of power on the right side, especially in the arm. Occasionally, when he walked about, there was some vertigo, the headache persisted, and he had a difficulty in reading, for though he could see the words and say them, he was hardly able to follow the sense, but there was no loss of memory.

On admission it was observed that his expression was heavy and stupid; he spoke slowly and indistinctly, as if he had not only difficulty in getting words to express his ideas, but also in articulating them. There was paresis of the lower part of the right side of the face, and, to a less extent, of the corresponding arm, but not of the leg; also some rigidity of the right elbow, and more marked stiffness of the knee. Sensation was slightly impaired as far as the sense of pain and of temperature were concerned, and all the deep reflexes were exaggerated on this side, while ankle clonus was present on both sides. The superficial reflexes were normal, and the special senses were not impaired. There was well-marked tenderness over a limited area above and behind the left ear.

These symptoms were suspected to be the result of a syphilitic gumma at the seat of the previous injury, for the following reasons:

1. The headache complained of was nocturnal in character.
2. There was extensive scarring of the penis, although attributed by the patient to the removal of gonorrhoeal warts when in a military hospital in India.
3. Under the left knee there was a suspicious-looking, rounded, "tissue-paper" scar.
4. The glands in the groins, in the left posterior triangle of the neck, and above and to the inside of the left elbow, were enlarged.

The treatment consisted of mercurial inunction (5j daily), and on February 10th iodide of potassium was added, at first in 10-grain doses, gradu-

ally increasing to 3j, thrice daily. At first he became steadily worse, and by February 11th his face was practically devoid of expression, and he was quite unable to speak, although he seemed to hear and to understand everything that was said to him. On the evening of that day he became quite rigid, and was unconscious for three or four hours, with slow pulse and almost stertorous breathing. On the following morning his condition was quite altered, and he was able to speak more distinctly than he had done since his admission to hospital. The improvement continued, and by February 24th it was noted that he felt almost quite well, and physical examination failed to detect any abnormality. Slight difficulty of articulation was, however, still noticeable, and the tenderness over the left ear was not gone. He was last seen on March 22nd, by which time all symptoms had completely disappeared.

The following case is also of interest:

A gentleman, aged 38, came to me on August 31st, 1886. He experienced the first symptoms of illness on August 3rd, at which time he had 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 ten days thereafter he experienced occasionally a numbness of the left cheek and point of the tongue, and a distinctly metallic taste. On the evening of the 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 the 17th to the 31st he became speechless four or five times. During all this time he was unable to make the slightest calculations, and could not spell words correctly, with the single exception of his own name. When I saw him on August 31st, there was a little permanent aphasia; he could not write very accurately (for example, for Fairlie he wrote Fairlia, although he knew that he was making a mistake), and he was suffering from severe pain, chiefly in the occipital region, which set in some time after the onset of the aphasia.

These symptoms were supposed to have a syphilitic basis for the following reasons:

1. Thirteen years before he had a solitary chancre on the penis.
2. The pain in the head was nocturnal in character.
3. There were coppery stains on the legs and on one arm.
4. There was 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.

Treatment consisted of the inunction of Shoemaker's mercurous oleate ointment (5j daily). For the first two nights the pain in the head was worse, but in a very few days it disappeared, and improvement in pronunciation and power of speaking set in. In three weeks all the symptoms had disappeared.

The next case illustrates an unusual form of hereditary syphilitic affection of the knees, and it is worthy of remark that I have at present under treatment another patient who presents almost identical symptoms.

A boy, aged 7, was brought to me on May 21st, 1895, complaining of pain and swelling of the knee-joints, and of an affection of the eyes of four weeks' duration. Four weeks before admission he complained of pain in his knees, and his mother then found that they were swollen, hot, and tender to manipulation. As the pain increased he began to lie with the legs drawn up. The knees presented a uniform swelling which obscured the natural conformation of the parts, and the relations of the bony prominences. The swelling was of a tense, elastic, and semi-fluctuant character. The patellæ were raised a little from the underlying parts but did not, when tapped, give quite the usual sensation of being floated in a fluid, although there can be little doubt that some was present. There was distinct bulging on both sides of the joints, which was increased in proportion to the amount of flexion. The lower end of the femur and of the head of the tibia were enlarged in both limbs, and there was slight redness and elevation of temperature of the overlying parts. Owing to the swelling and pain experienced the patient was unable to extend the legs, but flexion was not impaired to the same extent. The eyes were the seat of active interstitial keratitis, most advanced in the left. The other organs of the body were healthy. There was a history of syphilis in the mother, and the child, although hitherto able to go about and attend school, had always been rather delicate. He was put upon half-drachm doses of iodide of starch thrice daily, but in ten days this was omitted as the improvement was but slight, and mercurial ointment was rubbed into the knees daily. At the end of three weeks there was great improvement. The legs could be almost fully extended, and the patient could be moved from side to side. The keratitis was taking its usual course, clearing up in the left eye while now at its height in the right. He left the infirmary on September 28th; by this time the cornea had cleared up, and he could walk well though hobbling a little, there being a little bony thickening left.

It is now generally admitted that locomotor ataxy is in most cases preceded by syphilis, and that when the disease is fully developed it will not yield to antisyphilitic treatment. It is otherwise, however, if it is met with in its initial stages, and its syphilitic parentage is recognised, as in the following case:

A gentleman, aged 43, came to me on February 3rd, 1885, suffering from symptoms of four weeks' duration. These consisted of staggering gait, with numbness in the lower extremities, and inability to feel the ground properly when walking. For a week, too, he had experienced numbness in the arms (especially the right) up to the elbows, and limited to the region of distribution of the ulnar nerves (the thumb, index, and corresponding side of the middle fingers escaping). His knees felt slightly stiff, 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 absent. He attributed his illness to going out after sitting in a hot office; but, ten years before I saw him, he had a single chancre 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. By the 7th the numbness of the legs had disappeared, while that of the arms was less pronounced. On that day the ointment was increased to 2 drachms, and he was directed to apply galvanism to the spine for ten minutes daily (ten cells of a Leclanché battery).

On February 19th the following note was taken: "The numbness in the arms has been steadily diminishing, and he now walks well." At the end of March he went to Jersey for a change of air, and, although the weather was bitterly cold, he continued to improve, so much so that when he returned on April 28th he was quite well, a little numbness of the right arm alone remaining. He remains well to this day.

Pains in the head, bones, and joints are exceedingly common in connection with syphilis, but pain in the chest is not usual, and is very likely to be misinterpreted. The following is a case of this kind:

A labourer, aged 49, came under my care on August 19th, 1872, on account of severe pain in the chest. He was very intemperate, but had had no previous ailment with the exception of relapsing fever. The pain in the chest, which was of three weeks' duration, set in suddenly after exposure to cold while perspiring. It extended across the front of the chest and up to the back of the head. It was rheumatic-like in character and very severe, was accompanied by a slight cough, and was aggravated by coughing, drawing a long breath, or lying on the left side. There being no trace of pleurisy and no obvious cause for the pain, it was at first suspected that it might be symptomatic of aneurysm—on the principle of suspecting aneurysm whenever a patient complains of severe and persistent pain in the chest without any obvious cause to account for it. A very careful examination, however, failed to elicit any corroborative evidence of this condition.

But, on the other hand, it was ascertained that the pain was nocturnal in character, and that three months before admission he had an indurated chancre on the glans penis. We found further that the inguinal and posterior cervical glands were enlarged, and that the trunk of the body was pervaded by a very distinct and characteristic roseolar rash, and, as the chest pain set in along with the above symptoms, it was concluded that it also was syphilitic in character. A drachm of mercurial ointment was therefore rubbed into the skin daily, and in ten days the chest pain had disappeared, so much so that the patient refused to remain longer in hospital.

Everyone is familiar with the enlargement of the inguinal and other glands as an accompaniment of syphilis and appreciates their significance; but sometimes errors of diagnosis arise owing to peculiarities in the site, accompanying symptoms, or magnitude of these enlargements, as illustrated by the following cases:

A carter, aged 48, came to me on February 2nd, 1880, suffering from paralysis of the left side of the face and a firm tumour in the region of the parotid gland. About six months before that time he observed a dark spot behind the ramus of the jaw. This gradually enlarged, but soon subsided under the influence of iodine externally. Shortly thereafter, however, the swelling began to spread forwards on the face, in the region of the parotid gland, until it attained considerable dimensions, extending from a little behind the ear to half way between it and the nose, its most prominent part being about an inch above the normal level of the cheek. The submaxillary glands were not involved. About three weeks before admission the paralysis of the face set in, slight in degree at first, but gradually increasing until it became complete. At this time, too, he began to suffer from severe neuralgic pain, starting from the right side of the head and extending round to the left, and soon affecting the tumour. His appearance on admission was very striking owing to the complete paralysis of the left facial nerve and the fullness of the cheek from the tumour, the latter being firm, nodulated, and painful. The paralysed muscles responded readily to a feeble continuous but not at all to the faradic current. Hearing was defective on the left side, not the result of disease of the middle ear, but clearly of the pressure of the tumour on the external auditory meatus—a view which was proved conclusively by the restoration of the hearing power coincident with the diminution in the size of the tumour. The pressure of the tumour on the facial nerve also explained the paralysis of the face.

What, then, was the nature of the tumour? One of my surgical colleagues was of opinion that it was malignant, but I hoped that it might be syphilitic, because at the age of 19 he had a sore on the penis which was solitary, and some weeks thereafter he had sore throat. At all events, I determined to give him the benefit of the doubt, and he was put on iodide of potassium (gr. x thrice daily) on February 18th. On the 28th the following note was taken: The pain in the

tumour has rapidly subsided, and there has been a progressive diminution in its size, so that now there is only a broad ridge of transverse thickening midway between the ear and the angle of the jaw. The hearing was quite restored, and the facial paralysis was somewhat improved. He soon after left the infirmary.

But a much more remarkable case is that of a gentleman, aged 35, who was sent to me for an opinion by my friend Dr. Hugh Cunningham, of Dumfries. He first consulted him on January 29th, 1880, on account of an enormous tumour which he had on the right side, extending from the middle of the neck to several inches below the nipple, the cervical and axillary glands being also hypertrophied. More than two years before this time he first noticed a swelling (no doubt of the posterior auricular glands) behind the right ear, which extended gradually down the right side of the neck, and implicated the thoracic and axillary glands. This mass measured 14 inches from its commencement in the posterior triangular space to its termination below the nipple, and transversely 10 inches from the axilla forwards to near the middle line. Its surface was irregular and more or less nodulated, and covered with plexuses of veins, and at its most prominent parts the skin was distinctly reddened. The cervical and axillary glands upon the left side were much enlarged, but not nearly to the same extent, and the right inguinal glands were considerably hypertrophied.

He was under the impression that the tumour on the right side was brought on by carrying about 200 boxes of oranges daily on his right shoulder for a few days each month. He was intemperate in his habits, and thought he had contracted syphilis 6 years before I saw him, but he was a healthy-looking, well-nourished man.

It was supposed to be a case of Hodgkin's disease, but I hoped that it might have a syphilitic basis, and therefore recommended from 10 to 30 gr. of iodide of potassium thrice daily, with abstention from manual labour. The subsequent progress of the case is given in Dr. Cunningham's words:

On March 3rd, a little more than a month after he began to take the iodide, the patient wrote saying that the "bumps were greatly reduced, and that his breast was nearly level again."

On April 14th he presented himself for inspection at my request. I then found that the posterior auricular glands on the right side had disappeared. The large tumour was not a quarter of its former size, and the skin covering it had resumed its natural appearance. The glands of which it was composed were now quite separate and distinct, very hard and painless. The enlarged inguinal glands had disappeared, while the cervical glands on the left side of the neck were not larger than field beans, and those in the axilla scarcely the bulk of an almond.

On July 15th, Dr. C. wrote me as follows: "You will be glad to hear that A. W.'s tumours have almost entirely disappeared. Scarcely a vestige of any of them now exists."

The last case to which I refer is the most remarkable of all, especially in reference to the absolute completeness of the recovery.

A timekeeper, aged 42, was admitted on January 8th, 1894, suffering from loss of power and numbness of the lower extremities, with severe pain in the legs below the knees, of three weeks' duration. He stated that he had all along been very healthy, with the exception of an attack of pleurodynia of a few days' duration in 1889, and he had always been very temperate. For some weeks before the onset of the threatening symptoms he had a severe cold, which he neglected. But about three weeks before I saw him it became worse, and he had to take to bed, when he was found to be suffering from pneumonia. Two days thereafter he began to suffer from pain in the legs, and the following day, on attempting to get out of bed, he fell at full length upon the floor. He was lifted into bed and then it was found that the lower extremities were completely paralysed, and he complained of numbness in them. Soon after this his bladder began to trouble him; he had difficulty of micturition, sometimes amounting to retention, and pain across the epigastrium. His bowels were constipated at first, but they soon became loose, and then he lost control over the sphincter and passed all his motions in bed. About a week after the onset of the symptoms several bedsores formed over the sacral region.

On examination it was found that the lower extremities were absolutely paralysed, only a slight degree of movement of the toes being possible. Anæsthesia was absolute and extended nearly to the umbilicus. He had a sensation of tingling in the feet, and to a less extent in the hands also. The knee jerks were quite absent. He said that there was no loss of power in the arms, but the dynamometer registered only 10 kilos in either hand. The bladder was overdistended, and the urine was therefore removed by catheter. The pains in the legs were constant and severe, but more intense at some times than at others; they were worst in the feet, but had no shooting character.

I suspected that these symptoms were due to syphilis, for the following reasons:

1. Twenty years ago, after exposure to infection, he had a "very trifling" affection of the penis, the precise nature of which he could not define, and for which he was treated by

internal remedies for a fortnight only and "cured." No secondary manifestations were noticed.

2. The pains in the legs were markedly worse at night, and he also had occasionally slight nocturnal headache.

3. He married in 1881 at the age of 30. The following record gives the issue of his wife's pregnancies:

(a) Six months' child, stillborn, March, 1882.

(b) Seven months' child, stillborn; rash on trunk.

(c) Eight months' child; said to have been dead for 2 weeks before birth.

(d) Six months' child, stillborn.

(e) Female child, at full time, apparently healthy; is now 5 years old, and is in the Royal Infirmary with disease of the ulna and tibia.

(f) Miscarriage at two or three months.

(g) Male child, apparently healthy; died a fortnight after birth of "collapse of lungs."

(h) Miscarriage at 2nd month in 1893.

The condition of the patient, then, before treatment was as follows:—Paraplegia absolute (only slight movement of toes), anæsthesia complete, nearly up to umbilicus. Constant and severe pains in the legs and feet; absence of knee-jerks; paresis of the upper extremities; retention of urine; incontinence of feces; four large, deep bedsores over the sacral region, so that it would be difficult to find a more unpromising case for treatment.

He was put upon a water bed, the bladder and bowels were attended to, and the bedsores dressed with boracic powder. Daily inunction of 3j of mercurial ointment was commenced on January 9th, and for some time antipyrin (gr. xv) was given every evening on account of the pain in the legs.

A fortnight thereafter he could draw up his legs in bed, and every day further recovery was observed: the anæsthesia also was less marked, and gradually disappeared. By January 28th the retention of urine and incontinence of feces had passed away, and the antipyrin was stopped because the pains in the legs were gone.

The bedsores healed rapidly, and were quite cicatrised about the same time. On February 10th he was able to rise and walk a short distance in the ward, and after time massage was added to the other treatment. He could walk a longer distance every day, although his legs were tremulous at first. By February 28th the grasp of the hands was much stronger, the dynamometer registering 36 kilos in the right and 30 in the left hand, as compared with 10 kilos on admission. He left the infirmary on March 13th, and before leaving he was shown at a meeting of the Glasgow Pathological and Clinical Society. His recovery was perfect. He could walk as well as ever he did, and the knee-jerks even had returned.

Did time permit I might give you many other illustrations of the curious vagaries of syphilis, but I have said enough, I trust, to put you upon your guard, and to point the moral that in cases of a suspicious nature, it is well to give the patient the benefit of the doubt by inaugurating an energetic course of antisyphilitic treatment.

AN ADDRESS

ON THE SPREAD OF ENTERIC FEVER BY MEANS OF SEWAGE-CONTAMINATED SHELLFISH.¹

By ARTHUR NEWSHOLME, M.D.LOND., M.R.C.P.,
Medical Officer of Health for Brighton.

SOME months ago an intelligent clergyman expressed surprise that with so many doctors there was any disease left. I made the obvious retort that it was even more surprising that with so many clergymen, sinners still abounded. The two cases are of course only comparable in so far as sin and disease are both caused by aberrations from the path of duty over which the individual or the community could exercise control. But the clergyman's remark is interesting, as illustrative of the lack of appreciation by even the educated laity of the difficulties connected with the prevention of disease. Even given a

known cause, how long before its practical removal is attempted, as witness the present almost complete lack of supervision in this country over the distribution and consumption of milk from tuberculous cows! But in too many instances our knowledge of the causation of disease is still most imperfect; and then our preventive measures must necessarily be empirical and uncertain.

Take such a disease as enteric fever. It is certain that this is caused by the inhalation, or probably oftener the swallowing, of a specific micro-organism. That this is most commonly conveyed by means of milk or water which has become specifically contaminated is well known. That the effluvia from defective drains sometimes cause it appears highly probable; though I doubt whether—having regard to the consideration that defective drains are extremely common and cases of enteric fever comparatively rare—it would be possible to satisfy the searcher after truth with a strongly logical mind that the relationship of cause and effect between bad drains and cases of enteric fever had been clearly established in any given cases.

When an outbreak of enteric fever comprising a considerable number of cases within a short time is being investigated, it is usually comparatively easy to discover the facts common to all. When, however, single cases are being investigated, the task is more difficult, and one has frequently to be contented with a lower degree of probability as to causation. I may perhaps be allowed to instance my own case.

On December 31st, 1895, I came home with headache and general *malaise*. Next morning I found that my temperature was over 102°, and I then passed through a well-marked attack of enteric fever followed by a relapse. How had this been acquired? I live in a house the sanitary condition of which is perfect to all tests. In the same house live three adults and two youths, who have remained perfectly well, notwithstanding the fact that I was nursed at my own home. In consequence of the information furnished by the Infectious Disease (Notification) Act, I am able to state that there were no other notified cases of enteric fever in connection with the milk supply to my household, and that there were no cases in the same neighbourhood, and therefore not the slightest reason to suppose that any accidental contamination of water mains had occurred.

The circumstances differentiating me from the rest of my household were as follows: On December 23rd and 24th, I was asked to see two patients at two different addresses, who were possibly suffering from enteric fever, but about whose cases the medical attendant had some doubt. Both of these patients, who were found to have enteric fever, were carefully examined by me, but there was not, so far as I remember, any faecal smearing of bed or body linen.

On December 23rd I examined a patient at the Borough Isolation Hospital, who had just been admitted for supposed enteric fever. He had acute peritonitis, which might or might not be due to perforation of the bowel in enteric fever. He died the same night, and next day I made a necropsy. There was general purulent peritonitis and a large number of typhoid ulcers, one of which had perforated. While removing the intestines from the abdominal cavity, they slipped back, and my face was splashed by the purulent and feculent contents of the peritoneum. Some of the material may have entered the nostrils or mouth, but I did not perceive this. I washed my face almost immediately afterwards. The first symptoms of enteric fever began eight days later. Had it been acquired at the necropsy or in visiting the enteric patients at their own homes? Few will hesitate in agreeing with me that the former was the cause, although a very rare one; but it is impossible to satisfy the objections which might be raised to this supposition by the critic. The matter must be left as it stands.

So, also, when we investigate small groups of cases of enteric fever occurring over a long period. Not only are we met with the difficulties necessarily associated with paucity of data, but we have also to choose between several possible origins of disease. Then comes the difficult determination of probability. Nothing is certain as to causation. It is all a question of probability, the degree of which varies infinitely between zero and infinity, between impossibility and certainty. The only certain point in the causation of disease

¹ Read at the Congress of the Sanitary Institute, Newcastle, Sept. 1896.