

brane. Peritoneal tubercles have little tendency to softening. They are mostly accompanied by a considerable pigmentary deposition.

58. Tuberculosis of the peritoneum produces sometimes perforation of the intestine, which is generally fatal; but in very rare cases, life is maintained by the formation of an artificial anus.

59. The consistence of crude tubercle in the intestines is usually less thick than it is in other organs. No pus is found upon tuberculous intestinal ulcers.

60. The microscopic elements of tubercular ulcers of the intestines, besides broken down tubercle cells, are, cylinder epithelium, broken down granular mucous membrane, and the filaments and bundles of the muscular coat. The young epithelial cells are not to be confounded with pus corpuscles.

61. On the diseased mucous membrane of phthisis are occasionally found polypi, melanotic and tubercular excrescences.

62. In extremely rare cases, tubercles are found deposited between the coats of arteries, an exceedingly important fact for (in favour of) the excretion of tubercle from the blood.

63. Tubercles are also found in the pericardium and heart. An extensive adherence often thus takes place, and a vascular anastomosis of the branches of the coronary artery with those on the surface of the lungs, a remarkable communication between the vessels of the larger and smaller circulations.

64. Tubercles in the cavity of the chest, as well as of the abdomen, can open themselves externally, and thus form fistulae of the lungs and of the intestines.

65. Tubercles and cancer do not exclude one another, or even interfere with their separate march. Both morbid processes can at the same time run through their stages of development in the same person.

HISTORY OF A CASE OF SUSPECTED ABSCESS OF THE TIBIA, OF FORTY YEARS' DURATION.

(Read before the Harveian Society, Dec. 16th, 1843.)

By WILLIAM MACLURE, Esq., Surgeon, London.

A GREAT many opinions have been given by numerous eminent surgeons with respect to this case during the last forty years, and these, of course, have differed very considerably. This discrepancy has arisen as well from the imperfect, though progressive, state of the science of surgery during that long period, as from the obscurity of the symptoms, as exhibited at different times of the patient's life and sufferings. A becoming modesty, therefore, requires me to speak rather doubtfully as to the true nature of the disease which I am about to describe, and the real pathological condition of the parts which have been, and are still, perhaps, its seat.

This obscurity and difficulty of ascertaining the truth may afford ample apology for the mistakes, if any, of the practitioners who have gone before me in the treatment of this case, and I beg leave to plead the same circumstances as an excuse, if I shall be found to have committed any error of judgment either in my diagnosis or treatment of the disease.

The patient, who is an extensive breeder of sheep and black cattle in the Highlands of Scotland, dates the commencement of his sufferings so far back as the year 1805, when he was about four years of age. He belongs to a healthy and robust family, and I am not aware that any strumous tendency was ever developed in any other member of it, should his disease be conjectured to have arisen from that diathesis. He thinks his complaint arose from a sprain which he met with when playing, at the athletic game called *shinty*, with his brothers. From this cause his right ankle became swollen and painful. Surgical advice was obtained for him, not, however, for a day or two after the accident, owing to the great distance at which the medical man resided. Leeches and other remedies were employed, but it would seem with little benefit. Suppuration took place, and an abscess burst near the inner ankle. He was confined to his bed and to the house for nearly a year upon this first occasion. In 1806 he was taken by his father to Edinburgh, in order to obtain the opinion and advice of the then celebrated Mr. John Bell. Here he remained upwards of a year, under the care of that surgeon. He experienced much deep-seated pain in his leg, extending upwards from the ankle to the knee, as if the whole bone was in an inflamed state. Leeches, blisters, lotions of various kinds, and embrocations, were employed with various success. The discharge, however, continued, and some small splinters of bone came out near the internal malleolus, and one, an inch and a half in length, made its exit about three inches below the knee, the cicatrix of the wound caused by which is still visible. After a year's residence in Edinburgh, he returned to the Highlands, with

directions to use sea-bathing. This he did for the next two years, or thereabouts, during which time openings took place in various parts of the limb, whence matter and small pieces of bone were from time to time discharged, attended with much pain locally, and great constitutional irritation, with loss of flesh and other hectic symptoms.

After this, it would appear from the patient's statement, that the discharge from the vicinity of the ankle and the other parts gradually ceased, and there was a diminution of pain for some years, though entire ease was never experienced. In 1813, he was so far recovered that he was able to attend the College of Glasgow; but during his stay there, the discharge, attended with great pain, recommenced from his leg, which frequently, during the winter, prevented his regular attendance on the classes. He studied at Glasgow only one academic session, but went next year to the College of Edinburgh, where his leg remained much in the same state as before. In 1819, he was for a whole summer at Strathfeffer, in Rosshire, where, by the directions of some medical man, he used the sulphurous waters of the place, both internally and externally, but without benefit. At that period there was a good deal of pain, with some discharge. About the year 1825 or 1826, he was suffering so much from his leg, that he came out to Glasgow to consult Mr. John Burns, the professor of surgery in that university. That gentleman recommended aperient medicines, with different lotions and liniments. These had the effect of reducing external inflammation, but did not produce any permanent benefit.

Things went on in this discouraging and miserable way till 1830, when he again resorted to Edinburgh, attracted thither by the then rising reputation of Mr. Liston. This distinguished surgeon recommended him to use a laced-stocking, and camphorated liniment; but no benefit resulted from a protracted employment of these means.

Mr. Burns, of Glasgow, was again, some time after this, had recourse to. The surface of the leg was at that time red and painful; and to remove that state of parts, cooling lotions and aperients were, *more solito*, recommended.

In 1835, our patient betook himself again to Edinburgh, and consulted the late Dr. Aitken, of that city. He continued under the care of that gentleman for about a month. At that period there was a great deal of pain in the course of the tibia, but no discharge. Leeches and blisters, together with cooling lotions, were employed. These had the effect of removing the pain for a time; but after his return home the pain also returned with renewed violence and frequency.

In 1837 our patient again proceeded to Edinburgh, and consulted Dr. Saunders, of that city. This gentleman, like most of his predecessors, merely prescribed refrigerant lotions, to be applied to it when the leg was inflamed and painful.

We now come to the year 1842. In the month of October of that year our patient had occasion to travel from Falkirk cattle-market to the island of Mull. The weather was very cold. After leaving the steam-boat he was obliged to travel over muir and mountain twenty miles in a common cart. In this way he reached his brother's house. About a fortnight afterwards a most violent attack of pain came on; it extended from the shin to the knee, and was attended with great swelling and redness of the surface. He describes his feelings, when his torment was at the greatest, as if the limb had been pierced with a red-hot iron, and kept down with a heavy weight, so that he could not move it without the aid of two or three assistants. The irritative fever ran high, and his sleep, as may be supposed, was much disturbed. The medical man resided at a distance, but came to his aid as soon as circumstances admitted. He applied leeches, blisters, poultices, fomentations, and gave him cooling purgatives, with some blue pill. After the pain had been somewhat mitigated, and the violence of the symptoms subdued, directions were given to rub the knee with an ointment composed of mercurial ointment and the iodide of potassium; iodine was also given internally. Under this treatment, in the course of about six months, our patient got so well as to be enabled to leave Mull, and return to his own house, which is about forty miles distant, on the main land of Argyleshire. It was in April last that this journey was made, the weather being very cold. Soon after the termination of his journey, his pain came on again as violently as before, if not more so. For three weeks he was entirely without sleep. The knee was not so much affected on this last occasion as before, but the skin was more so, there being great swelling and redness in that quarter. There was no discharge whatever on either of the two last occasions; indeed, there has been nothing of the kind for the last twelve or fourteen years, and no exfoliation of bone for thirty years.

By the usual means—viz., by leeches, blisters, and poultices, applied to a great extent, in the course of about six weeks, the

pain and swelling were gradually reduced, till, about the end of June last, he was so far recovered as to be able to undertake a journey to London, whither he was advised by his friends to proceed in quest of farther surgical advice. He arrived here about the middle of July, and immediately placed himself under my care.

Upon hearing a summary of the foregoing history from the patient himself, it occurred to me that I had read from the pen of Sir Benjamin Brodie an account of certain cases treated by him, which, in their main features, very closely resembled the one now before us. The cases are very well reported in the "Medical Gazette," (vol. ii. p. 70;) but Sir Benjamin (then Mr.) Brodie's own original paper was published in the "Medico-Chirurgical Transactions," (vol. xvii. p. 239.) There are three cases given, one in which amputation was performed, where the true nature of the disease was disclosed by dissection of the limb, and two, in which cures were accomplished by trephining the tibia. In all of these cases the disease had been of very long duration, the paroxysms of pain excessive, all previous treatment ineffectual, and in all of them dark-coloured pus was found imprisoned in the cancellous structure of the bone. It is needless here to enter into greater detail of these cases, as no doubt their remarkable nature, and the celebrity of the surgeon who treated and laid them before the profession, have made them sufficiently well known.

It will, I think, be readily allowed, that the cases referred to bear a striking similitude to the one I have detailed; I had little difficulty, therefore, in stating it as my opinion that the symptoms depended upon a similar cause. But as Sir Benjamin had the merit of first discovering and operating successfully in the disease, it was judged proper to have a consultation with him before doing anything save commencing the use of sarsaparilla, combined with iodide of potassium.

When Mr. M.— arrived in London, and first consulted me, there was very little pain in any part of the limb. The spine of the tibia was in some places irregular, and there were marks of several old sores, particularly a deep cicatrix about three inches below the knee, at the place where the large splinter of bone had come out many years before. The general surface of the leg was discoloured and glistening, but upon measurement (though the contour and thickness of the tibia itself was somewhat abnormal) I did not find that the leg, as a whole, was either thicker or smaller than the other. The thigh of that side was somewhat wasted, and shorter than the other, but this was probably owing to a fracture which it had sustained many years ago. After much walking, the knee was found to swell and be a little painful, and some pain was felt on pressure in the course of the tibia, but these symptoms always went off after a day or two's rest and the use of an embrocation. Both the ankle and knee-joints were quite normal, and seemed never to have been implicated in the disease.

Sir Benjamin Brodie was consulted soon after the patient's arrival in town. After hearing the general history of the case, and observing the state of the leg, I was gratified to find that he came to the same conclusion that I had—viz., that it was a case of chronic abscess in the substance of the tibia, the exact spot being uncertain, but probably situate near the lower end of the bone. As there were no very urgent symptoms, however, then present, we did not advise the employment of the trephine, but preferred waiting till an access of pain should come on, to guide the operator to the seat of the disease, and justify having recourse to an operation. Sarsaparilla and the iodide of potassium had been ordered by me to be taken internally, and these, with Sir Benjamin's approbation, have been continued ever since.

As was before observed, the patient has taken a vast deal of exercise, both in London and Paris, during the last five months, but apparently without detriment to the leg; for although the object of his stay in the South has been to see if any of his violent fits of pain would come on, in order to warrant an operation, still nothing has occurred all that time, in spite of all the fatigue, except the trifling and transitory pain and swelling which I have mentioned. His health continues good, and his leg is so easy, that, if he were secure against the recurrence of his former severe attacks, he would be very well content with his condition, and look forward with little dread or anxiety to the future. It is a remarkable fact, however, in the history of his sufferings, that at the very time he has felt his leg freest from uneasiness, one of his violent paroxysms was surest to be near at hand; and he remarks that he can almost predict an access of pain coming on from the circumstance of the diseased limb's being unusually well, and very closely resembling the sound one in its sensations. Sir Benjamin saw the patient again with me about a month ago, when we thought it proper to suspend the use of the medicine for a month, in order to discover what progress the cure had made, and whether an attack of pain, in the absence of medicine, would come

on, so as to warrant an operation before he returned to Scotland. This accordingly has been done, but no violent pain has occurred. Some slight pains, however, have taken place in the leg, particularly near the lower end of the tibia, and these have led me to resume the medicine, and to establish an issue over the painful part, which is now open, and discharging well: with what ultimate effect remains to be seen.

The history of this case, I think, divides itself into two stages: the first extending over a very long period of this gentleman's life, when the disease consisted probably of an inflammation of the periosteum, in which was implicated the surface of the bone, and afterwards of a necrosis of the latter, to a certain, but not a great depth. This gave rise to the frequent attacks of pain during his boyhood and early manhood; to the abscesses and exfoliations of bone which have occurred during the last forty years. With all deference to the many eminent practitioners who, from time to time, have been consulted—instead of contenting themselves with leeches, blisters, lotions, laced stockings, &c., I humbly think, had one of them made free incisions in the course of the tibia, through the periosteum, down to the bone, so as to relieve tension, and allow the escape of any matter that might have been formed on the surface of the bone, very much good might have been done, and a great deal, if not all, of the after suffering prevented. This would have been treating the disease boldly, scientifically, and after the manner recommended, a very long time ago, by the present venerable Professor Jeffrey, of Glasgow, in what he called "whitlow of the long bones;" and, as I recollect, was frequently practised, with the best results, when I was his pupil, by the late Mr. Alexander, of Glasgow. This gentleman read a valuable paper on the subject so long ago as 1814 or 1815, before the Faculty of physicians and surgeons of that city; in consequence, however, of his early death by typhus fever, it was never published, as it deserved to be. But to return.

The second stage of the disease commenced, perhaps, in October, last year, when the diseased action was set up, or transferred, from the surface of the tibia to its interior. No bone or matter has been discharged from the leg for a great many years, and after the paroxysms have subsided, the surface of the bone appears to be quite healthy, which could hardly be the case had that been the seat of the diseased action. For this reason, and on account of the exact similarity which the case bears to those in which Sir Benjamin Brodie found matter imprisoned in the bone, I think we have now to deal with a case of that kind.

It would be a pleasing contemplation, could we indulge in it, that the iodine and sarsaparilla have so changed the action, and caused the absorption, of the pus, that no more violent attacks of pain shall come on. The long absence of pain which has now been enjoyed, and the great fatigue which the patient has undergone during the last six months, without an attack of pain coming on, are the only grounds we have on which to build such a hope. But it must be confessed that such grounds are not much to be relied on, especially if at any time the patient should be so imprudent as to expose himself to extreme cold, as well as to fatigue and other rough management. In the meantime, it is proposed to do nothing in the way of operation, but to watch the effects of the medicine and the issue.

March 9th, 1844.—Since the date of the foregoing part of this paper, the patient has continued in London, and under treatment. The iodide of potassium, and a solution of the extract of sarsaparilla combined, have been regularly taken, but it is now intended to lay the remedy aside, and permit the patient to return to his own country. He has lingered so long in the South principally from the fear which he entertained, and in which I participated, that the cold and damp climate of the Highlands of Scotland might, during the winter months, be prejudicial to his limb, now happily, for several months last past, completely restored to its natural healthy sensations, appearance, and capability of bearing fatigue, even as much so, he says, as the other.

The issue which was established over the upper part of the tibia on the 5th of December, was kept open till the 3rd of January, and then allowed to heal. So much advantage was derived from this practice, that another one was opened at the lower end of the bone, immediately above the inner ankle, on the 9th of January, and kept discharging till the 13th of February. It was re-opened on the 17th, and has remained running till this date, (9th of March,) when it is to be finally closed.

In order to give the patient every possible chance of recovery, I proposed, on the 22nd of January, whilst the second issue was discharging, to sprinkle half a grain of the acetate of morphia, combined with a grain of powdered sugar, on the raw surface, morning and evening. This practice was continued till the 13th of February; and again, in the case of the third issue, from its commencement till its termination. It was adopted in consequence of what occurred at the debate upon the first part of this paper, on

the 16th of December. My friend Dr. Macintyre threw out the idea that, after all, the case may have been one of *neuralgia*; and he supported his opinion by some ingenious, though I did not think conclusive arguments. The exfoliation of bone at an early part of the history of the case, and the swelling, heat, and redness, which have always attended the violent attacks of pain, seemed to me to militate much against such an idea. Notwithstanding this consideration, however, as an issue was open, and as I, in common with the rest of the profession, entertain a very high respect for Dr. Macintyre's experience and judgment, I acted upon it so far as to give my patient the benefit of the endermic use of morphine, which I had seen, in my own practice, to be very serviceable in long-standing neuralgia of the leg. One patient, more particularly, was cured by me, some years ago, of an obstinate and most severe neuralgia of one of his legs by this method, and I did not think myself justified in omitting it in the present instance, though the two cases had nothing in common except the violent pain, and though it was proceeding on a principle somewhat different from, but by no means contrary to, that on which the other parts of the treatment had been conducted. Some time after this, Dr. Macintyre was invited to visit the patient, and he entirely approved of my proceedings, and was of opinion that a cure had been effected.

April 18th.—This morning Mr. M— left London for Scotland in good health. His leg is perfectly well, giving him no pain or uneasiness.

I have purposely delayed publishing this interesting and gratifying case till now, that it might be seen how far time would sanction the hopes entertained of a permanent cure. So far as three months' residence in the Highlands, together with much fatigue undergone during that time, can give such a sanction, the result is in the highest degree satisfactory. Mr. M— remains perfectly well. I conclude with one other remark. If my diagnosis was correct in this case,—and the probability is that it was so, both from the symptoms and from the high authority of Sir Benjamin Brodie,—and if a permanent cure has been accomplished, then another triumph has been added to the many which a long and patiently continued course of the iodide of potassium has achieved over many of the worst and most obstinate forms of disease; and this is of no mean consequence, since the only alternative in the case before us was a painful surgical operation.

Harley-street, July 24, 1844.

ON THE TREATMENT OF HYDROCELE.

By J. ADAMS, Esq. Assistant-Surgeon to the London Hospital.

I WISH, through the medium of *THE LANCET*, to recommend for trial a very simple method of treating hydrocele, with the view to effect a radical cure. I have tried it in one instance, and the success is such as to warrant an extended trial of its efficacy. It has the advantages of great simplicity and entire freedom from danger. The case in which I applied it was one of hydrocele, after the operation by incision had but partially effected a cure; and some time after the operation, a collection of fluid occurred at the back part of the testis, the gland being pushed forward by the irregular distention of the sac, in consequence of the partial obliteration of the cavity. Having drawn off the fluid with a moderate-sized trocar, I introduced through the canula a camel's hair brush, dipped in a strong tincture of iodine, and carefully painted the interior of the sac with this fluid. It was succeeded by the ordinary train of symptoms, and at the present time there is every indication of complete success. The operation was performed about seven weeks since.

31, New Broad Street, Oct. 24, 1844.

ACCIDENTAL POISONING WITH ARSENIC, SUCCESSFULLY

TREATED WITH THE HYDRATED PER-OXIDE OF IRON.

By J. J. KELSO, M.D. Lisburn.

THOUGH a wide-spread scepticism regarding the efficacy of the hydrated peroxide or sesquioxide of iron, as an antidote to poisoning with arsenic, most undoubtedly, and—considering the number of different substances that have successively been proposed for this purpose, only to be rejected each in turn as utterly valueless—not unnaturally, obtains; still, from repeated experiments, both of a physiological and chemical nature, and more especially from actual experience of the preparation in cases of poisoning in the human subject, its power of converting the white oxide of this metal into an insoluble compound—the arsenite of iron—and

thereby rendering it innocuous in its effects, as well in man as in the lower animals, seems at present to be pretty well established, and very generally admitted by many members of the profession—and, among others, by Christison* and Pereira,† on whose authority we are accustomed, not without sufficient reason, to repose. It may not, perhaps, be too much to affirm, that on the whole a growing faith in favour of the counteracting influence of the rust of iron, either in the state of magna or dry powder, in instances where arsenic has been ingested in poisonous doses, at least under certain conditions, and to a certain extent, is evidently and very reasonably beginning to manifest itself. Be this as it may, the following case presents, I am strongly inclined to think, a very striking exemplification of the good effects of the remedy.

Mary C—, a fine, healthy, intelligent little girl, of about eight years of age, swallowed, on the 18th of May last, a quantity of arsenic—or at least what then was believed to be such—which had been designedly mixed with some oatmeal, and set aside in a particular place, for the purpose of poisoning rats.

The facts of this very interesting case are briefly as follow:—C—, the child's father, it appeared, purchased on the preceding evening, at an apothecary's shop in Lisburn, a pennyworth of white arsenic, in powder, which I have every reason to believe might have amounted in quantity to upwards of an ounce at least. This, indeed, is admitted by the gentleman himself who vended the article, and whose recollection of the transaction, when questioned on the subject, enabled him besides to verify the still more important fact of the substance itself being arsenic—the white oxide, of course, of the shops. On reaching home, he took of the substance thus procured, as near as he could estimate, rather more than the one-half, and having mixed it with more than double its bulk of dry oatmeal, he distributed it equally on two pieces of broken crockery, which he placed, at bedtime, in separate places, in an apartment of the house, for the purpose of destroying the rats, with which it is, it appears, infested. The operation, he says, was performed in the presence of his wife and the girl in question, in common with two or three others of the more advanced members of the family. He further particularly states his having, at the time, distinctly and repeatedly mentioned in the presence—and hearing, of course—of the family group, who were closely congregated in witnessing the interesting procedure around him, the fact of the powder which he was commixing being very poisonous in its character, and that its object was for the destruction of rats. However that may be, his wife, in the morning, took up, for the sake of greater security, both pieces of crockery containing the mixture indicated, or rather, the portions that remained unconsumed by the vermin, which she says was considerable. One of these she very properly placed in a spot beyond the possibility of reach by any of the children, while the other, quite unaccountably, she left in a place that was easily accessible by almost all. The consequence was, that not long after, our little patient, in her rambles, came upon the dish containing the residue of the poisonous mixture, and, in forgetfulness or ignorance of what it really was, at once consumed the entire contents.

This occurred at about eleven o'clock A.M., and in rather less than an hour and a half after, I saw her. Her mother, who seemed in great distress, informed me that the first intimation she had of the startling fact of the child having eaten the poisonous compound, was its commencing to vomit on being presented with some food. She immediately had recourse, she further stated, to the popular remedy of melted butter, which she administered in considerable quantity. This had the effect of exciting rather free vomiting, which had been repeated, it appears, two or three times. Her symptoms then were these:—Marked listlessness and indisposition to reply to questions; pulse about 120, weak, and rather unequal, with occasional indications of fluttering; respiration not irregular, but rather slow, and imperfectly performed; and a feeling of sickness or nausea, with an inclination every now and then to vomit. When asked if she had any feeling of heat or pain in the throat or stomach, she gave me distinctly to understand that she experienced, in some degree, both of these sensations. The pain in the epigastric region was evidently increased on the application of the hand, as she then became fearful, and complained of the procedure. The pupil of either eye, but especially the right one, was rather remarkably, and, in cases of this kind, I believe, unusually, influenced. Alternate dilatations and contractions, in rather rapid and extreme degree, were observed to occur; these were evidently still further increased on the presentation of a lighted candle, or the tip of the forefinger motioning to and fro. There was no other derangement of function deserving mention, vital, physical, or mental.