spinal canal remains obscure; that there is such a connexion there can be no doubt. Horsley⁵ states that of eleven such tumours, there were two with a definite history of trauma. In one at least there were microscopic appearances suggestive of a hæmorrhagic origin. In the present instance, however, such evidence was entirely wanting. From the surgical point of view the final result of this otherwise successful case is most lamentable, for it can scarcely be doubted that this man died from septic infection. All the ordinary precautions that modern surgeons think necessary for success were employed both at the operation and during the after-treatment. The details are too well known to require description, and we cannot put our fingers on any particular point of omission, unless it be that the wound was not sufficiently irrigated during an operation which lasted for nearly an hour and a half. Erysipelas, it is true, had been present in the ward and one case developed a few hours after the operation. The eruption appeared on May 12th, six days after operation, and if the case had been entirely satisfactory before this date we might consider that erysipelas was entirely responsible for the result; but the redness, although it was exactly like that of erysipelas, was confined to the back—the area of operation—and might be looked upon as a septic rash.

Notwithstanding the want of success in this most interesting case we have felt it right to publish it in full in the hope that others may profit by our failure, for it is more than probable that complete recovery would have ensued if the misfortune detailed above had been prevented by greater care in procuring asepsis.

THE THYROID TREATMENT OF MYXŒDEMA ASSOCIATED WITH INSANITY.

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THE literature of the thyroid treatment for myxœdema has grown apace. Although it is within three years of Dr. George Murray's original communication, there is now a vast accumulation of papers which must be referred to by all who wish to be thoroughly conversant with the subject. Up to the present time there have been recorded about 120 cases of myxœdema as having undergone the treatment either by the subcutaneous injection of an extract of the thyroid or by the ingestion of the gland or a preparation therefrom. In all of them the same remarkable improvement has been stated to follow its use. Having so recently gone into the treatment of the disease from a general point of view,¹ I propose in the present instance to limit myself to pointing out what have been the results of this particular treatment when employed for myxœdema associated with insanity. I hope to show that such cases are equally amenable to the thyroid treatment. There is no need to touch on the mental symptoms occurring with the myxœdematous process and almost invariably present in the advanced disease. Such must be familiar to all. Nor do I intend to give the signs or forms of insanity to which these persons are liable. An interesting account of these may be found in Dr. Hack Tuke's recently published "Dictionary of Psychological Medicine," as well as in other works on lunacy. There is no difference in the treatment of a person with myxœdema who is sane and one who is insane. It is identical, and usually the patient can be induced to take the drug without difficulty. Seeing what had been accomplished in the former, there was every reason to suppose that the result would be favourable in the latter. I must own, however, that the change brought about appears to be even more wonderful; but, after all, the physical condition is the disease. It is upon the condition of myxœdema that the mental symptoms depend, and it is in the direction of relieving or curing the primary disease from which the patient suffers that one hopes to restore his or her mental faculties. The mental improvement that has taken place in persons with advanced myxœdema has been what may be shortly expressed as a general

awakening. There is increased mental activity. The patient becomes brighter and more cheerful, memory returns and delusions disappear, and all the special senses become more acute, notably the eyesight and hearing. Included in the recorded cases were twelve in which unmistakable insanity was present, the patients being inmates of lunatic asylums. In all these there was amelioration, and in some complete recovery was said to have occurred; but are we justified in regarding these patients as cured? We cannot do otherwise than judge by the results.

First I will mention that of the seven cases published in which thyroid grafting had been performed one was that of an insane person.² This was unsatisfactory, like the rest. In passing I may state that the patient under Dr. Collins' care³ is at the present time in very good health and mentally sound; recently she has been taking thyroid tabloids. The cases in which myxœdema and insanity coexist may be divided into two classes—those in which the insanity follows on the later stages of myxœdema, and those in which myxœdema develops while the patient is insane. In the former of these the insanity is merely a symptom of the advanced disease. All progressed cases of myxœdema show some mental aberration, which tends towards dementia, usually with delusions, the latter taking the forms of suspicion and persecution. Occasionally actual insanity is present in the form of mania or melancholia, and it becomes necessary to have the patient confined in an asylum. In the second class it is quite different. The cases are of far less frequency and do not occur oftener than would be expected if one considers the presence of the two diseases in the same individual as a mere coincidence. I see no reason why such should not exist: why a morbid process should not occur in the thyroid gland of the insane as well as in any other organ of the body. I think there is a strong reason why these two classes should be separated. In the second class one cannot, I believe, hope to benefit the patient in the same way by giving thyroid extract as may be done in the first. It is possible that by improving the bodily nutrition some effect on the mind may be produced, and even a temporary cure be effected, especially in the case of recurrent insanity, but will such be permanent, even with the continual use of the thyroid? It is scarcely to be expected.

It is by no means an easy matter to separate these classes. A person is certified as insane, and not until some months or years after admission to an asylum is the patient recognised as having myxœdema, and then very probably the disease is fully developed. Now myxœdema is almost invariably a very slowly forming disease, and it may have been a considerable number of years since it commenced; but for some reason or other the idea that the patient was the subject of this condition may never have occurred to those in charge, although the patient may have been seen daily. Suddenly one day it is said without a doubt that it is a case of myxœdema. It is a disease, moreover, which is extremely difficult to diagnose in its early stages or of which to say definitely when it commenced. I will take, for instance, some of the cases of myxœdema with insanity that have been published. The man J. T.—had been in Colney Hatch Asylum⁴ for five years before the myxœdema was recognised, although from the full note made on admission it is clear that the disease was then well marked. The patient under the care of Dr. Woods at Hoxton House was admitted into that asylum in October, 1891, with insanity of nine months' previous duration, which took the form of mania with delusions.⁵ I understand that attention was first drawn to her physical condition by a visit from the Lunacy Commissioners in January, 1893. It was then undoubted. This case shows, too, how a stranger seeing a person for the first time may frequently recognise myxœdema when it has passed unobserved by those in constant attendance. This is of common occurrence. I had an opportunity recently of seeing this patient, and I can say that no one now would recognise her as being myxœdematous—in fact, she no longer has the disease. She was bright and cheerful, with no œdema whatever; she had a beautiful head of black hair and a natural voice; but she was still undoubtedly insane. She was suspicious, and she had a most persistent delusion of being overrun and otherwise annoyed by rats; moreover, she had optical delusions. She had been taking a thyroid mixture for nine months. But the doubt remains whether or not the myxœdema commenced before the onset of the mental symptoms.

⁵ Transactions of the Medico-Chirurgical Society, vol. lxxi., p. 411 (circa).

¹ The Treatment of Myxœdema and Cretinism: being a Review of the Treatment of these Diseases with the Thyroid Gland; with a table of 100 published cases. Journal of Mental Science, July and October, 1893.

² Edinburgh Medical Journal, May, 1892, and Journal of Mental Science, July, 1893.

³ The Medical Pioneer, October, 1892.

⁴ Journal of Mental Science, October, 1893.

⁵ Ibid.

Perhaps after seeing this patient it might be remarked, What is gained by curing the myxœdemata if in the end the patient remains mad? In order to show that this is not the rule I will give some instances. Dr. Ernest Carter reported a case he treated by thyroid injections in Whittingham Asylum.⁶ It was that of a female aged forty-three, who had been insane for five years and whose myxœdema had existed for over four years. At the time of publication the patient did not show complete mental recovery, although her bodily change was very great. This lent support to the view that the insanity preceded the other disease—a doubtful point. I have lately heard from Dr. Carter about this patient, and how she has since progressed. He says: "The supply of fresh thyroids failed for a season after my favourable report. During this time the patient lost ground both mentally and bodily, but did not reach quite her former low level. On Aug. 26th, 1892, a young pig's thyroid was split and the halves inserted in an incision under each breast. As an operation this was successful, as thyroid grafting it proved utterly valueless. On feeding with raw thyroid being introduced the patient was put on a raw beef sandwich every day for six weeks as a check experiment. This gave no results, and she was allowed to continue *in statu quo*. On April 21st, 1893, she took five grains per diem of a dried extract of the thyroid in powders. After five weeks she was found to have lost so much weight that the dose was given on alternate days only and an iron mixture prescribed. Under this she has been steadily improving and is now rather better than I have seen her before in every way. So well, indeed, has she been that it was thought that a fortnight's holiday at home without intermitting the powders would be quite feasible, especially as patient was very anxious to go. The anxiety of her relatives does not appear to be reciprocal, and she remains with us much quieter, though occasionally excited, and without any of the physical characteristics of her former condition."

Now I will take a more acute case and see with what result the treatment was followed—I mean where the insanity came on suddenly in a person who had been myxœdematous for some time. One cannot do better than take the case Dr. Melville Dunlop has published.⁷ It was that of a lady with advanced myxœdema of twelve years' duration, by which she was completely invalidated and where acute mania supervened suddenly so that it was necessary to place her under the care of special mental nurses. A few months later thyroid feeding was commenced. After a four months' course she was *cured* and could not be recognised by her friends. I may mention that there was a strong family history of myxœdema, but insanity was not hereditary. This lady is at the present moment in perfect health, both mentally and physically. Dr. Dunlop has been good enough to write to me concerning her case, which is well worth quoting: "The patient went on steadily improving ever since the treatment by thyroid feeding was commenced. Although I have had a large number of cases of myxœdema under my care, in no case have the results of treatment been more striking than in this lady. When the treatment was begun in October, 1892, she was reduced to the last stage of the disease, and I hardly expected her to live many weeks, the excitement was so intense and her general condition so weak. I had on that account great hesitation in subjecting her to treatment. The improvement, however, was most rapid, and she has never at any time had the least recurrence or relapse of her mental symptoms. She is a remarkably clever woman and is again as intellectually inclined and as active a member of society as she ever was, which is very wonderful, considering the length of time the symptoms had lasted." There is no need for me to comment on such a case, and there can be no two opinions as to the results obtained.

An equally satisfactory case is that reported by Dr. Hamilton Marr from Woodilee Asylum—that of a woman aged fifty-one, whose mental aberration dated from Christmas, 1887, and whose bodily weakness commenced three years previously.⁸ She was subject to attacks of great violence, with intervals of depression and moroseness. She was discharged from the asylum, so Dr. Marr informs me, about the end of September last, *recovered*, after seven months' thyroid feeding with the raw gland and a glycerine extract. Dr. Marr goes on to say that "since that time I have received a letter from her which is well written and well expressed. She

states that she now feels quite well in mind, and her statement is borne out by a medical man who is looking after her. She continues to take the extract, though in smaller doses; one drachm of a glycerine extract (a gland to two ounces) is sufficient for her well-being." Dr. Marr tells me, also, of a case of myxœdema in the Crichton Royal Institution, Dumfries, which is progressing favourably in all respects, and especially mentally, under feeding with thyroid glands. I have said that one could scarcely expect to see the same benefit from the treatment where the insanity was primary and of old standing, and yet see what has been the result in Dr. Claye Shaw's case, which appears to be one of this kind. This was that of a woman thirty-three years of age, who had been the subject of recurrent melancholia for ten years, and who had only shown signs of myxœdema for about four years.⁹ She was discharged from Banstead Asylum as "cured" on July 8th, 1892, after a two months' course of thyroid treatment. My thanks are due to Dr. Shaw for enabling me to state that she remains quite well by occasionally eating a gland or two. What better result could we possibly wish?

The frequency with which myxœdema is now seen is quite astonishing. Can the more ready recognition of the disease entirely account for this? Another case has lately been admitted into Colney Hatch Asylum, making the sixth in this asylum during the last two years and the fifth under the thyroid treatment. She has been treated by my colleague, Dr. Ewart, and is now about to be discharged, having recovered. It would be interesting to know whether other institutions of this nature possess as many cases of myxœdematous insanity. The patient whose photograph was reproduced in the *Journal of Mental Science* remains in very good health, and her mental faculties continue to be clear. It is eighteen months since injections of thyroid extract were commenced, and she is now given a thyroid powder at intervals of two or three weeks.

The effects of the treatment on the thirty cretins that have undergone it are truly remarkable. The failures have been very few, and it may be that in those cases a sufficient quantity of the drug was not given. Dr. Wallis Ord, in his recent paper,¹⁰ has shown that equally large doses of the thyroid can be borne by infants without ill effects as have been employed in the treatment of adults. Where no improvement has taken place the children have usually been what are called semi-cretins.

The thyroid treatment has now passed beyond the experimental stage—it is an established fact; but it has been clearly proved that the thyroid must in one form or other be continued indefinitely, or at least until some better means of transplantation have been devised. After all, what is it for a person to take a daily dose of a few minims or grains of the drug, or it may be a little larger quantity at a longer interval? The prolonged use of the thyroid in this way is known to be harmless, for there are persons now in excellent health who have taken it on and off for nearly three years. To my mind it is, indeed, cruel to see persons who have been restored to mental and bodily health allowed to relapse into their myxœdematous condition solely for the want of the continued use of the drug. In conclusion, I would say to all those who are now treating patients, or in future propose to do so, Do not commence to give the thyroid unless you are prepared to persevere with it.

⁹ Brit. Med. Jour., Aug. 27th, 1892.

¹⁰ THE LANCET, Nov. 4th, 1893.

INSTITUTE OF CERTIFICATED SANITARY INSPECTORS.

At a general meeting of the members of this institute, held at the Parkes Museum on Jan. 31st, Mr. Wynter Blyth, president, being in the chair, it was unanimously resolved that a representation be made to the President of the Local Government Board with a view of ensuring consideration in the Local Government (England and Wales) Bill of certain matters which the members of the society have at heart. These matters may be summarised as follows:—1. That the term "inspector of nuisances" be abolished through the provinces and that "sanitary inspector" be used in place thereof. 2. That in the interest of public health it is advisable that permanency of office and some provision for the superannuation of sanitary inspectors be made. 3. That a clearer definition be given of the position and duties of such officers than that contained in the general orders of the Local Government Board.

⁶ Brit. Med. Jour., April 16th, 1892.

⁷ Edinburgh Medical Journal, May, 1893. Case 2.

⁸ Glasgow Medical Journal, August, 1893.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

PERFORATION OF BOTH PLEURÆ; IMMEDIATE CLOSURE OF THE WOUNDS; RECOVERY.

(Under the care of Mr. BILTON POLLARD.)

WOUNDS of the pleura by a fragment of a broken rib are very frequently met with in surgical practice, but penetrating wounds of the pleura without any injury to the other contents of the thorax are very rare. Mr. Pollard's case is of considerable interest, not only from the fact that both pleural cavities were opened and yet the child recovered, but also from the observations made as to the behaviour of unwounded and healthy lung when free access of air is permitted to the pleura. When in cases of double empyema incisions have been made into both collections a fatal result always ensues unless there are already adhesions to prevent collapse of the lungs. The chief indications for primary treatment are to arrest hæmorrhage, to secure perfect rest, to render the wound antiseptic, and to remove foreign bodies and the torn and lacerated edges of the wound (for not only may these have dirt ground into them, but they might slough in consequence of the damage received and prevent primary healing). The extent of the wound must be gauged rather by the history of the injury, the anatomical conformation of the part, and physical examination than by probing. The treatment of the complications of these wounds, especially the treatment of hæmorrhage, has undergone much improvement of late years, and there are many cases now on record of recovery of the wound of the lung due to gunshot &c. which appear almost marvellous when compared with the results formerly obtained.

A strong healthy boy aged two years and seven months was, on Aug. 10th last about 6.40 P.M., playing on a sofa near an open window on the top storey of the house when he accidentally fell out, and after a descent of thirty-five feet became impaled on the corner of the area railings. He was immediately lifted off by a passer-by and carried directly to the hospital—a distance of from 200 to 300 yards. He was very collapsed and his radial pulse was almost imperceptible. Air was rushing in and out of both pleural cavities with a loud gurgling noise. Blood was spurting from a wound in the left side of the thorax and was trickling continuously from a wound in the right side. Both wounds were at once covered with a gauze and wool dressing in order to limit the entrance of air into the pleuræ as much as possible. An enema of warm brandy-and-water was administered, and the child was wrapped in a warm blanket. Mr. Pollard decided to close the wounds. The operation was commenced at 8 P.M. No anæsthetic was given. The wound in the left side of the thorax was three inches long and extended nearly horizontally outwards from a point about two inches from the spine opposite the seventh and eighth ribs, both of which were broken in at least two places. The wound in the right side of the chest was two inches and a half long, and extended nearly horizontally outwards from a point two inches outside the border of the sternum; it penetrated into the fifth intercostal space. No ribs were broken. There was another wound two inches and a half in length which exposed the lower part of the sacrum and the rectum in the ischio-rectal fossa, but both of them were uninjured. The temporary pads were first removed from the left side, those on the right side being carefully supported against the chest. At the instant of removal three fingers were inserted into the wound as far as the knuckles. The lung was found to be retracted, and almost the whole of its costal surface could be explored with the fingers; it was uninjured. Some blood-clot was removed from the pleural cavity, and as the hand was withdrawn the lung was forced into the wound during an expiratory effort. The bleeding referred to above

had ceased. The edges of the wound were now pinched up (just at the moment when as much air as possible had been expelled by expiration) and clamped between the thumbs and fingers of both hands, one at either end of the wound, in such a manner that, whilst the opening into the thorax was completely closed, the actual edges of the wound in the skin and subcutaneous tissues projected well beyond the fingers. Whilst held in this position all bruised shreds of tissue were cut away and the edges of the wound, after being disinfected, were brought into accurate apposition by means of silk sutures. An antiseptic dressing was applied and held firmly against the wound whilst the wound in the right side of the chest was being dealt with in a similar manner to that just described. Finally, the wound over the sacrum was disinfected, sutured, and dressed with wool and collodion. The child was very collapsed, and showed but little evidence of pain during the operation. Two drachms of brandy were administered by the mouth before he was removed to the ward. At 11 P.M. the boy was conscious and his feet were getting warmer. His lips were decidedly blue. The respiration was 68 per minute and the pulse 164. Half a drachm of brandy was ordered to be given every two hours. The child slept at short intervals during the night. On the following morning the shock had completely passed off. The respiration was 70 per minute and very shallow; the pulse was 166 per minute and very feeble. Liquid nourishment was readily taken. On the second day after the accident the child was much brighter, but his temperature, which had been steadily rising, was 103° F. On the third day the wounds were dressed, and both chest wounds were found to be healing without inflammation. During expiration the lung beneath the wound on the left side of the chest protruded beneath the skin opposite an area of 2×3 inches, but the union of the wound was firm enough to prevent its edges being forced apart. Such air as had been unavoidably left in the pleural cavities had been absorbed and pleuritic friction was audible for some distance around each wound. The edges of the wound in the sacral region were inflamed. The stitches were removed and the wound was torn open and left to granulate. The chest wounds were dressed again on the seventh day and found to be united and free from inflammation. The frequency of the respiration had fallen to 50 per minute and the dusky pallor of the child's lips had given place to a healthy tint. The frequency of the pulse and respiration diminished and the temperature fell gradually. On the eleventh day the respiration was 36, the pulse 116, and the temperature from 100.4° to 101°. Effusion had taken place in the right pleural cavity, and in the sitting position the fluid reached as high as the angle of the scapula. On the twelfth day the first symptoms of measles appeared. There was some bronchitis and the child coughed frequently; but neither of the chest wounds suffered. The rash had entirely disappeared on the twenty-sixth day. The respiration had by this time fallen to 21 and the pulse to 94. By the thirty-first day all bulging at the site of the wounds had ceased, and the broken ribs appeared to be firmly united. The chest was resonant to the bases of the lungs on both sides. The temperature had been about normal since the seventeenth day after the accident and the fifth day after the onset of measles. The patient was discharged on the thirty-third day after the accident. He was seen about four months later and was then found to be quite well.

Remarks by Mr. BILTON POLLARD.—Paradoxical as the statement may appear to be, the little patient whose aerial adventure and its consequences are above described was fortunate in alighting on the spikes of the area railings, for, if he had missed them and had fallen on the pavement with the momentum gained by a descent of thirty-five feet, it is inconceivable that he could have survived. It was at first rather difficult to explain the position of the wounds, for one, the largest and most severe, involved the left side of the chest near the spine, whilst the other implicated the right side near the sternum. The boy is described as having revolved two or three times in his descent, and as having struck the corner of the railings where there is a larger and more prominent spike. He appears to have alighted on this spike, which penetrated the back of the left side of his chest, and then the force of his descent appears to have rotated him about this point until the front of the right side of his chest struck the next spike, which was smaller or less prominent. That the boy escaped immediate death from asphyxia may be explained thus. The wounds were so free and of such a shape that the air escaped from the pleural cavities during expiration as readily as it entered during inspiration, and that