MINOR QUERIES IN MEDICAL SCIENCE.

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III.—NERVOUS LESION IN RELATION TO DIPHThERIC AFFECTIONS.

THE following case will serve to illustrate one form of temporary paralysis arising from diphtheria. The subject has been several years before the profession, but not much known in this country. It appears to be of frequent occurrence in the hospitals of Paris. The journals at the end of last year contained many interesting cases. The following occurred to myself in November 1859, showing a temporary form of this malady, and of this I will give the main features.

CASE IV. John P., aged 43, a brassfounder, a working mechanic, of temperate habits, was attacked in November 1859, with inflammation of the throat of a diphtheritic character. An abscess afterwards formed, from which he soon recovered; but during the progress of the throat affection, he experienced a loss of power in his right leg, so that he could with difficulty make any attempt to walk or stand. At first there were some slight erratic pains in the leg, which soon subsided, leaving only the loss of power. For the relief of this, various means were tried; stimulant liniments, baths, and other measures. The palsy lasted two months in spite of remedies. At last, the sulphate of iron in combination with quinine, and given thrice daily, soon produced marked improvement, and the patient under this treatment recovered fully his power over the limb. In this case the inflammation was violent, the parotids being involved very much.

Amongst the last reported cases of M. Trousseau, as occurring in Paris, was that of a young man, aged 27, who had been attacked with symptoms of paralysis ten days after the commencement of the diphtheritic seizure. In this case some persistent or prolonged affection of the throat existed, accompanied with difficult deglutition. There was also dimness of vision, lasting two months, and gradually increasing numbness in the hands and feet, and loss of power, extending over some five months.

The paralysis in these cases has been sometimes observed to be very local, as in the eye, or the muscles of deglutition. The latter effect has been, moreover, occasionally observed after the operation of tracheotomy in croupal affections. Now, the only attempt, so far as I know, to explain the origin of these cases and the nature of the relation pointed out, has been made by M. Trousseau, who attributes the paralysis to the circulation or presence of a special virus, the "diphtheritic virus." Is this doctrine a reliable one? I think not. In the first place, the purely localised condition of some of these paralysees is a potent argument against it. In the next place, it rests neither on facts which *directly* apply, nor on facts which occur in analogous cases which can be fairly made to apply. The continuance of the paralysis, though more or less transient, often is yet too permanent and too variable to be explained upon the same principle as that on which aconitum, for example, acts upon the sensory nerves of the part to which it is applied; and it is often too local, also, to be explained on the supposition that the poison is absorbed into the blood, unless the affection could be shown to have gone beyond mere paralysis of muscles. In short, I believe it to be only one of a series of paralysees, many of which are well known to the profession. Let us just glance at a few of this series having no connection with diphtheria.

Some time last year I published some cases of paralysis, mostly hemiplegic, which occurred in connexion with renal disease; and Mr. Spencer Wells enumerated in an able lecture many other of these cases previously. Many cases of incomplete paralysis have also occurred in relation with disease of the bladder. My conviction of the origin of these cases is, that they are the direct result of some peripheral affection of spinal nerves, which become sometimes involved in inflammation, or other disease, or may be subject to pressure in connexion with inflamed, hypertrophied, or otherwise diseased organs. It is quite useless to regard these cases as depending on "spinal irritation," which often means nothing at all, or on spinal disease, for of this there is literally no particle of evidence. In one of the most developed of these cases, Dr. Gull, in order to find a cause for the paralysis, searched with the most careful and intense interest, and found the spinal chord quite free

from disease. The case is given in *Guy's Hospital Reports*, vol. iv. of the third series.

Another example of this series occurs in children during the progress of difficult and painful dentition, when the gums are much inflamed and tense, involving portions of the fifth nerve. Several of these cases have occurred to myself, and I cannot doubt that many practitioners have met with similar cases. The paralysis may be hemiplegic, and I have never found it permanent, except in renal disease. I have seen single amaurosis in this relation.

Besides these, I have some cases of paralysis from evident uterine sympathies, in pregnancy, and also during a menstrual period. One of these occurred in a woman of twenty-three, who suffered a complete paralysis of the facial, and also the third nerve. The paralysis appeared complete. The muscles of the face on the affected side were motionless, and the eye on the opposite side was afterwards, for several weeks, affected with a most frightful divergent squint. The attack came on about two days after the commencement of the catamenia, and in several weeks had disappeared.

Affections of organs involving the extremities or branches of spinal nerves may therefore superinduce temporary, or even permanent paralysis; sometimes in parts in the vicinity; sometimes also in parts remote from the seat of disease, or of the cause; while in such cases the spinal marrow may be entirely unaffected, acting only, as it would seem, in some cases as a medium of communication for that influence on which the loss of function depends.

It must be confessed that there is some considerable difficulty in regard to the class of cases in which the paralysis is remote from the supposed seat of the disease. I do not think our present knowledge of nerve-lesion has yet established the principle on which such remote effects are to be explained. Yet effects allied to these are extremely common, not merely in diphtheritic but in other paralysees.

It may be fairly acknowledged that the *extremities* of a nerve may be more easily deprived of their function than the middle portion, or the part nearer the origin; and it is very often seen that *recovery* from complete loss of function in a nerve graduates from the origin of such nerve, and that the ultimate ramifications are the last to resume power. The extremities of limbs and of the nerves which supply them are more remote from the volitional power. When these extremities of nerves have only partially lost or only partially regained their functions, their conducting power, whatever that mysterious power may be, is incomplete or impaired, and the remoter parts are perhaps, naturally enough, the most affected, and liable to be faulty.

The principle does not therefore apply exclusively to diphtheritic palsies; but I would suggest, in conclusion, whether some such application of the principle here brought to mind may not affect equally the spinal marrow, and go some way at least to explain the cases in view. Cases of paralysis or anæsthesia, with local lesion of nerves, are evident enough; but in seeking for a solution of lesions remote from the apparent cause, it would be a great mistake not to keep in view one great consideration; namely, that the nervous system is to be viewed as a whole—its sensory and motor agencies united, and, no doubt, supplemented by the sympathetic as well as by, doubtless, the sentimental and intellectual—being in the closest relation. The so-called *sympathies* of one portion of this system with others often remote, are but the shadowing forth of a deep principle of intimate connection, yet to be fully made out.

SPONTANEOUS CURE OF OVARIAN TUMOUR (?).

By JOHN FOX, Esq., Weymouth.

In July 1858, I was requested to see Miss —, aged 22 years, in consultation with Mr. Tayler, of Trowbridge. On inquiry I found that she had observed an increase in her size steadily going on for two years, unaccompanied by pain, or nearly so, and with little or no inconvenience. The catamenia had appeared regularly. When I saw her she presented the appearance of a woman in the eighth month of pregnancy. Mr. Tayler had diagnosed ovarian dropsy. There could be no doubt about the existence of a large quantity of fluid; and, after a careful examination of the abdomen, as well as *per vaginam et rectum*, I coincided with his opinion. In December 1859, she consulted Dr. Robert Lee, in London, by my advice, and he diagnosed the presence of fluid, but whether in the

peritoneal sac, or in an ovarian cyst, was, in his opinion, doubtful. His advice was to do nothing. From that time to the 25th of last July, she gradually increased in size, until it was evident that there could not be less than from thirty to forty pints of fluid. On the morning of the last-named day she suddenly felt considerable pain about midway between the end of the sternum and umbilicus, which she described "as if a person's hand were inside twisting the parts." She then became rather faint and weak. These symptoms soon subsided, and she afterwards took a good deal of exercise, and in the evening took her part in a dance with a few young friends. Suddenly, an urgent desire to empty the bladder was felt, and she passed at least two quarts of fluid, and at the end of about two hours a similar quantity, and so on in greater or less quantities until the following Saturday morning (July 28). She then found all trace of enlargement gone, and the integuments of the abdomen lying in loose folds, as they would do after tapping. I then saw her again, and found her weak but cheerful, and free from pain. She assured me that not a drop of urine had passed involuntarily; that she had perfect control over her bladder, and that the whole of the fluid was limpid and almost odourless. After a careful examination of the abdomen, I could not detect the slightest trace of tumour or even of thickening, and the vagina and uterus appeared to be perfectly healthy. I ordered her the tincture of sesquichloride of iron, and a generous diet with wine, and after a few weeks sent her to see Dr. Lee again. He also failed to detect any tumour or lesion of any kind, after a most careful external and internal examination, and pronounced her to be quite well.

REMARKS. This case suggests several questions. Could it have been an ovarian dropsy finding its way through the Fallopian tube and uterus? I think not; as during the intervals of passing urine she was sure that not a single drop had passed from her. Was the tumour ovarian? and did the cyst give way at the time when she felt the pain and faintness, thus converting the case into one of ascites? If so, could the whole of the fluid have been taken up by the absorbents, and conveyed through the kidneys into the bladder in the short space of between fifty and sixty hours? I think this the most probable explanation; and it agrees with the description of a case mentioned by Dr. Blundell, in which a lady affected with ovarian dropsy had a large discharge from the bladder after striking her abdomen against a stone. When she died, some years afterwards, with retroversion of the uterus, it was found that an ovarian cyst had burst into the peritoneal cavity, and that its contents had been absorbed. Also with a case, No. 20, related by Mr. Beaumont, of Gravesend, in which the ovarian dropsy disappeared after rupture of sac, and passed off by kidneys and bladder. (See *Clinical Memoirs on Abdominal Tumours*, by the late Dr. Bright, page 121.) Whilst Kiwisch, in his chapter on Diseases of the Ovaries, translated by John Clay, mentions rupture of the cyst into the peritoneum, followed by profuse diuresis; and Churchill refers to rupture through the bladder. The patient now wears a belt, and continues in the enjoyment of good health. She has gained flesh and strength, and is able to walk several miles daily.

TRINITY COLLEGE, DUBLIN. The Board of Trinity College has, by a decree of the 9th November, adopted the principle of periodical examinations of candidates for degrees and licences in medicine and surgery, to be made compulsory in and after the year 1863, allowing students in the interval the option of presenting themselves or not at the preliminary examination. The examinations will in future be two in number, one (the preliminary) in anatomy and physiology, botany and materia medica, and chemistry, theoretical and practical, with chemical physics, to be held at the close of the second year of medical study; and the other, in the same subjects, and under the same regulations as heretofore, after the full curriculum has been completed. It is also announced that two medical scholarships of £20 per annum, tenable for two years, will be given annually to the best answerers at the preliminary examination. In addition, two exhibitions will be given by the University professor. (*Dublin Hospital Gazette*.)

SULPHURIC ACID AS A REMEDY FOR TENIA. Dr. Darrach states that several cases have occurred to him in which sulphuric acid has proved completely efficacious in the destruction of tape worm. He orders:—Acid. sulph. aromatic. ʒj, to one pint and a half of water, directing the patient to drink of it as often as he can until it has been all taken. (*American Journal of Medical Science*.)

Transactions of Branches.

SOUTH-MIDLAND BRANCH.

SEVERE URTICARIA, PRODUCED BY SOME OF THE SETACEOUS LARVÆ.

By T. HERBERT BARKER, M.D.Lond., F.R.C.S., President of the Branch.

[Read at Newport Pagnell, October 12th, 1860.]

In the evening of the 30th of June last, I was sent for to a young lady who was said to be suffering from a sudden and serious eruption upon the neck and face. I found my patient labouring under a severe form of urticaria, which completely covered the face, forehead, and neck. Indeed, except at the margin of the eruption, in the region of the clavicles, and about the shoulders, the entire surface was covered with one wheal or raised circle, of a pale colour, tumefied, and hard. The itching was intense and almost unbearable. The paleness of the eruption, diffused over all the features, unaccompanied with the slightest streak of redness, except about the clavicles and shoulders, together with the general tumefaction of the surface, gave a very singular and unusual appearance. The lower limits of the eruption were very irregular and patchy. The margin of the wheal referred to was an irregular line extending anteriorly from one shoulder to the other, along the line of the clavicles and upper border of the sternum; below this were insulated pale wheals, surrounded by margins of intense redness. The upper wheals, being larger and more irregular, were shaded off into smaller and more regular-shaped patches mingling with the healthy surface. At this visit, the tumefaction had not closed the eyelids.

After a careful examination of the condition of my patient, my attention was directed to the cause of this singularly acute development of urticaria; and I gleaned from the patient herself, and from her mother, the following history. At three o'clock P.M., she had left home in perfect health, for a walk in the country. During this walk, she had picked up by the hedge-side several specimens—a handful—of hairy caterpillars; and it is worthy of remark, that she wore a pair of thread gloves. As she was returning home, between four and five o'clock, she rubbed the side of the nose and the chin with one of her hands; and immediately afterwards the most intense itching commenced in these parts, and rapidly extended over the face, neck, and scalp. The itching was so severe that she was compelled to rub the face, neck, and scalp, with some violence. From time to time she took off her bonnet, and very considerably disarranged her hair. Soon after five o'clock, she reached home, when her appearance somewhat alarmed her mother, who immediately sent for me.

After hearing this statement, I had no doubt that the eruptive attack depended upon handling the creatures which she had collected by the hedge-side. This was also the impression of the mother, who had thrown away the caterpillars. The hands and arms were not affected. A lotion of solution of the diacetate of lead was prescribed; and the surface was directed to be constantly bathed with it warm, by means of a sponge. An aperient powder and a cooling saline mixture were also prescribed.

At nine o'clock in the evening, I saw my patient again. The tumefaction about the nose had increased, and she could not open the eyelids. The eruption had not extended superficially. The pulse was quick. The itching was relieved during the application of the warm lotion. The use of this was ordered to be continued freely during the night.

On July 1st, at 10 A.M., I found that she had had but little sleep during the night. The itching was only subdued by the constant and vigilant application of the lotion. The tumefaction was now considerable; the surface very pale, hard, and tense; and she was unable to open her eyes. The redness at the lower boundary of the eruption was as vivid as ever. The pulse was still quick; the tongue furred; there were thirst and loss of appetite. The bowels had acted freely. I ordered a farinaceous diet, and continuance of the saline medicine.

At 8 P.M., I saw her again. She had slept for a short time during the afternoon. The tumefaction was still considerable, and she was unable to open the eyelids; but the surface appeared to be somewhat less tense, and the lower marginal redness less vivid. The itching was somewhat less. The medicine and application were continued.