MINOR QUERIES IN MEDICAL SCIENCE.

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III.—NERVOUS LESION IN RELATION TO DIPHTHERITIC 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 paralyses 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 paralyses, 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 paralyses.

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