

Original Communications.

SOME REMARKS ON THE CAUSATION OF NON-ORGANIC PARALYSIS.

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In a paper on the physiology of the spinal cord and brain, in the *Journal de la Physiologie*, Dr. Brown-Séquard adduces some important facts, which go to show that irritation of sensitive or excito-motor nerves produces, for a variable time, a diminution of the vital properties and functions of the part of the spinal cord to which they proceed. Two of the most striking are the following:—4. The application of a ligature on the hilus of one of the kidneys, or suprarenal capsules, or, in other terms, the irritation of the nerves of these organs, determines very often the same effects as section of a lateral half of the spinal cord. 6. If, after having rapidly exposed the cord in the dorsal region, without having produced paralysis or anæsthesia of the posterior limbs, we excite the posterior roots of a pair of nerves on both sides, we observe immediately paralysis and anæsthesia in the posterior limbs; and if we irritate several pairs, these results increase in proportion to the number of pairs irritated and the degree of irritation.

In a preceding paragraph, Dr. Brown-Séquard states his intention to demonstrate "that it is by a reflex action on the blood-vessels of the nervous centres that irritation of centripetal nerves (sensitive or excito-motor) determines the alterations of nutrition, as the result of which are produced very often paralysis, anæsthesia, and different forms of convulsive affections (hysteria, epilepsy, catalepsy, chorea, tetanus, cramps, contractions, tremblings, etc.)"

Now, as the paralysis from irritation of centripetal nerves is said to occur immediately, it seems to me difficult to believe that any notable amount of alteration of nutrition can occur so rapidly, at least, as the result of mere anæmia. Animals after decapitation, when the circulation must be well nigh abolished, manifest reflex movements perfectly; anæmia is therefore insufficient to account for the loss of function of the cord. Dr. Brown-Séquard's own reply, in the same paper, to some objections against certain other experiments seems conclusive on this point.

"It is true that the cord loses one of the sources of its supply of blood when the roots are divided; but, on the one hand, the quantity of blood which the cord ceases to receive after the section of seven or eight pairs of nerves, is not very considerable (?); and, on the other hand, the entire suspension of the circulation after the removal of the heart allows the properties and functions of the cord, not separated from its roots, to remain during one or two minutes, whilst the section of the roots annihilates or diminishes immediately these properties, and as quickly abolishes, or renders less active, the exercise of its functions."

It seems, therefore, to me incontestable that we must look to some other cause than local anæmia for the paralytic phenomena in these and like cases. If we look to the two chief kinds of non-organic paralysis; viz., that termed reflex, and that which I have called simple, or neurolytic, we see that in the first the palsy, to all appearance, depends on some morbid impression conveyed to the centre, ceasing on its removal; while, in the other, the nervous centre appears to be directly enfeebled, as by the action of some poison, or obscure influence, on its tissue; and the "juvantia" are not, as in the other case, the removal of an irritation, but stimulants. Amaurosis from dental irritation, paraplegia from a stricture, are examples of the first; influenzal and malarious paralysis

of the second form. In the latter affections, the signs of general debility are often so *prononcé*, as well as the effects of tonics and stimulants, that we can hardly err in regarding the condition of the nervous centre implicated as one of debility. We are then entitled, it seems to me, to assume the occurrence of a form of paralysis depending on temporary functional disorder or exhaustion of a nervous centre. Some minute alteration in the cells of the gray substance, or in the connected axis-cylinders, would easily arrest the free passage of nervous force. Now, if this may occur from the direct influence of some poisonous matter in the blood, it seems at least probable that it may also occur as the result of some morbid impression on the periphery of a centripetal nerve. That the paralysis is in some way dependent on the morbid impression we know; that anæmia from contraction of blood-vessels will not account for it we have admitted; there remains, therefore, so far as I can see, nothing but to assume some interference with, or derangement of, the minute molecular changes, which occur normally during the active state of nervous tissue. In the foregoing I have assumed, and I suppose fairly, that the morbid condition termed reflex paraplegia is closely analogous with that produced in the experiments above cited.

FOREIGN OPINIONS OF THE NATURE OF SYPHILIS.

Collected by M. BERKELEY HILL, F.R.C.S., M.B.Lond.

IV.—DIDAY OF LYONS.

M. DIDAY published, in the *Gazette Hebdomadaire* for June 21st, 1861, a summary of his views on syphilis, entitled *Histoire Naturelle et Thérapeutique de la Syphilis*. He says that, between March 1855 and June 1861, he has had under his care two hundred cases of constitutional syphilis, both primary and secondary in its affections, of which he has detailed notes of one hundred and thirty. He takes this mass of observations as his basis on which to found his conclusions.

The course of syphilis was sometimes severe, but generally light, in these cases.

Origin. Acquired and not inherited syphilis always commences by more or less ulceration, which ulceration has two varieties—1, the indurated chancre; 2, the chancreiform erosion. This latter is identical with the "parchment chancre" of Ricord, and has been described under different names by other authors. The disease may be communicated by either of these, or by secondary eruptions. When by the latter, the chancreiform erosion is the primary sore resulting. The chancreiform erosion propagates most syphilis, because it is more indolent than the indurated chancre, and better permits friction against its surface; it also is more contagious than the secondary lesion, whence it fails less frequently to communicate the infection.

Severity. This depends on—1. The source. When the contagion comes from a primary indurated chancre, the syphilis is generally severe; also, if the infection be hereditary, less so when the inoculating lesion is chancreiform, and least so when from a secondary affection. The more recent the chancre which gives contagion, the more likely is the disease to be severe. 2. The state of health of the patient, the degree of his observance of the rules of hygiene, etc., have also their influence. The tertiary affections are no longer contagious. The immunity of a syphilitised person is regulated—1, by the source whence he was infected; 2, by the distance of time since he was inoculated. For example, a man recently inoculated by an indurated chancre is quite safe; but a person for whom several years have elapsed is possibly re-inoculable.

Symptomatic Manifestations of the Degree of Severity of the Disease. The disease will be obstinate and invade the tissues deeply—1. If it resist specific treatment; 2. If there exist an indurated chancre in both subjects—the transmitter, and the one on whom the contagion has alighted; 3. If the incubation period be short; 4. If the earliest eruption be pustular or scaly, or repeatedly returning at short intervals, or have a confluent tendency; 5. If the constitution be subject to any other diathesis, as tubercles, Bright's disease, etc., or if there be much chlorosis, accompanied (or caused?) by great ganglionic enlargement.

The disease will probably be light and disappear quickly—1. If the source of contagion be a secondary sore or chancreiform erosion; 2. If the primary sore be a chancreiform erosion; 3. If the period between the primary and secondary eruption be long; 4. If the earliest secondary eruption be roseolous or papular; 5. If the intervals between the appearance of each series of symptoms be long.

Treatment. The general effect of mercury is to retard the appearance of secondary symptoms when not present, and to hasten their departure, and with that to shorten the period of action of the poison; hence it accelerates the cure, but it does not absolutely prevent relapses.

Diday has recorded fifty-seven cases where mercury was given regularly and thoroughly for long periods. The result was various; some cases had a mild course, others a severe one.

Mercury is an exciting cause of phagedæna, stomatitis, and other complications of mercurial poisoning.

Those cases which are treated without mercury recover in the great majority, and these recoveries have lasted many of them several years. Severe cases are essentially relieved by mercury, and the following are the cases for its administration. Mercury should be given when the chancre is of woody hardness, when there is iritis, aphonia, or much glandular induration, with early chlorosis. It is seldom necessary, if the primary lesion is chancreiform, or if the other signs of a light case be present. Iron, quinine, etc., are generally sufficient. Mercury, when given, must be thoroughly applied, and often coupled with iodide of potassium.

[To be continued.]

RARE CASES IN MIDWIFERY.

By EDWARD COPEMAN, M.D., Physician to the Norfolk and Norwich Hospital.

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CASE XVII. *Twins: Convulsions: Mania: Recovery.* Mrs. B. was confined with twins on Thursday morning, September 19th, 1861. She had had two children before, both labours being difficult, on account of narrow pelvis; but her general health had been good. During the latter part of this, her third pregnancy, she felt very unwell, the uterus being much distended and its sympathetic effects severe. The uterus was of a peculiar shape, being most distended longitudinally from cervix to fundus; and she suffered much from dropsy of the lower half of the body, the urine being albuminous, and the œdema greater in amount than usually arises from pressure only. In this labour, the first child presented naturally, but its passage through the pelvis was, as usual with her, difficult; before the second was born, a sufficient amount of hæmorrhage occurred to make it desirable to complete delivery as soon as possible; it was a shoulder presentation and delivery was accomplished by turning, the child having been dead apparently some time, as the cuticle was separated in several places. The placenta soon followed, and the uterus contracted quite firmly. There was no more hæmorrhage, nor had the loss been either severe or lasting.

It was observed, when the membranes of the first child (born alive) ruptured, that the liquor amnii, of which there was a great quantity, had a very peculiar urinous smell. All went on well until the afternoon, when a frightful convulsion occurred, lasting some time, but at length giving way to mustard poultices to the feet, cold to the head, etc. She had also a five-grain dose of castor-oil. From this attack she seemed to rally, and was apparently going on well all Friday and Saturday; but on Sunday, without any visible cause, convulsions came on again, and continued almost without intermission for several hours, so as to leave scarcely any hope of recovery. I should mention that after the first convulsion, on the day of her confinement, she discovered that her sight was very indistinct; and this blindness, as well as a certain degree of bewilderment, remained more or less until the convulsions returned on Sunday. On Monday, the 23rd, I was summoned a distance of forty miles to see her, and remained with her from 2-30 until 6 p.m. During this time she had no convulsion, but looked wild, was only semi-conscious, with her sight imperfect, but pupils not dilated. She kept moving about in her bed slowly and deliberately, looked pale and ghastly, had very little sleep in the night; the pulse was very feeble, not exceeding 90; and there was a great disposition to become cold on the least exposure. There had been no sickness, nor any real convulsion since the night before; neither had there been relief from the bowels since taking ten grains of calomel on Sunday. She was quite willing to take nourishment, eating and drinking greedily whatever was put to her lips. The lochia were scanty but healthy, and there seemed nothing the matter with the uterus, but she said she had great pain in her back. It was difficult to get her to answer questions, and she had almost a demented look. I thought her in great danger from exhaustion, and gave her some brandy and milk, no stimulant having been hitherto given. We then agreed to administer an emulsion of turpentine and castor oil in gruel, which soon produced a good relief from the bowels, some of it being lodged. She had passed water very freely the day before, and the œdema of the lower half of the body was almost gone. The disturbance of having the bowels relieved, and the bed-clothes and linen changed, produced a good deal of exhaustion; but her pulse rallied after more nourishment, and we gave her twenty minims of tincture of opium in brandy and water, intending to repeat the dose in two hours if she got no sleep. She had no convulsion up to the time of my leaving, and I hoped if she took nourishment, and her nervous system were kept quiet by opiate, there might yet be a chance of her life being spared.

I did not see the patient again, but received from time to time the following reports:—

September 25th. "Our patient has had no return of convulsions up to the present moment. The first dose of opiate had very little effect; the second, given in two hours, made her rather wild and confused for some time after which she had a little unsatisfactory sleep for about half an hour. She had two more doses of tincture of opium (mxx and mxxx) yesterday, and has had some sleep, but not calm rest. I was afraid at one time last night we should have a case of mania, as she shrieked very violently, and was rambling and delirious. However the violence has passed off since 2 A.M. to-day. She takes nourishment, beef-tea, etc., about every two hours; but during her delirium last night, she refused everything, saying it was useless, as she was sure to die."

September 27th. "Mrs. — was better yesterday. Last night at 7 p.m., she took forty-five minims of tincture of opium, and slept four or five hours. She appeared to be quite herself to-day, only suffering a little confusion as if from the effects of the opiate; takes her food remarkably well, and talks very reasonably and quietly."

September 29th. "Our patient has we hope been steadily improving, although she is still in a weak state. Mentally she is much better, and our fears of mania have