

The most convenient position in which the patient can be placed whilst inhaling chloroform, is lying on the back or side, as he is then duly supported in the state of insensibility, and can be more easily restrained if he should struggle whilst becoming insensible. The semi-recumbent posture on a sofa, also, does very well; and there is no objection to the sitting posture, when that is most convenient to the operator. In that case, however, the patient should be placed in a large easy chair with a high back, so that the head as well as the trunk may be supported without any effort, otherwise he would have a tendency to slide and fall when insensible. It has been said, that it is unsafe to give chloroform in the sitting posture, on the supposition that it would, in some cases, so weaken the power of the heart as to render it unable to send the blood to the brain. Observation has proved, however, that chloroform usually increases the force of the circulation; and although the horizontal position is certainly the best for a patient under an operation in all circumstances, I consider that the sitting posture is by no means a source of danger when chloroform is given, if the ordinary precaution be used which would be used without chloroform, that of placing the patient horizontally if symptoms of faintness come on. I have preserved notes of 647 cases in which I have given chloroform to patients sitting in a chair, and no ill effects have arisen in any of these cases.

The person who is about to inhale chloroform is occasionally in a state of alarm, either about that agent itself or the operation which calls for its use. It is desirable to allay the patient's fears if possible before he begins to inhale, as he will then be able to breathe in a more regular and tranquil manner. In a few cases, however, the apprehensions of the patient cannot be removed, and they subside only as he becomes unconscious from the inhalation. It has been said that chloroform ought not to be administered if the patient is very much afraid, on the supposition that fear makes the chloroform dangerous. This is, however, a mistake; the danger, if any, lies in the fear itself. Two cases were alluded to above, in which the patients died suddenly from fear, whilst they were beginning to inhale chloroform, and before they were affected by it; but the probability is, that if they had lived till the chloroform took effect, they would have been as safe as other patients who have inhaled it. If chloroform were denied to the patients who are much afraid, the nervous and feeble, who most require it, would often be deprived of its benefits. Moreover, the patients would either be prevented altogether from having the advantage of surgery, or they would be subjected to the still greater fear of the pain, as well as the pain itself; for whatever undefined and unreasoning fears a patient may have when the moment comes for inhaling chloroform, he has only chosen to inhale it on account of a still greater fear of pain. The practice I have always followed has been to try to calm the patient by the assurance that there was nothing to apprehend from the chloroform, and that it would be sure to prevent all pain; but where it has been impossible to remove the fears of the patient in this way, I have always proceeded to remove them by causing a state of unconsciousness. As soon as this is induced, the pulse, which just before may have been extremely frequent and small, from the effects of fear, generally falls almost to its natural frequency, and resumes its full volume and force.

As a general rule, it is best to place the patient in the position in which the operation will be performed before he inhales the chloroform; but in cases of disease of the large joints, and other instances where motion causes pain, it is an advantage to give the chloroform to the patient in bed before he is removed to the operating-table. It is often desirable also to give it to children in another room, that they may not see any of the preparations for the operation.

(To be concluded in our next.)

ON

PARALYSIS OF THE MOTOR NERVES IN NEURALGIC AFFECTIONS.

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DR. MACCULLOCH is almost the only writer that I am acquainted with who distinctly states that paralysis is a mode of neuralgic disease. He considers that the action of malaria on the nervous system is essentially debilitating and prostrating, tending to produce numbness of sensory nerves, palsy of motor,

and fatuity or mental debility when it affects the brain. Of the general correctness of his opinions I feel strongly convinced, although it must be admitted that the conclusion that the disorder is dependent upon malaria as an exciting cause is rather matter of inference than of demonstration in many cases. The recognition of the fact, that impairment of motor power may be owing to the cause just mentioned, seems to me so important that I offer the following histories in illustration:—

CASE 1.—R. B.—, aged sixty-five, male, labourer, admitted June 18th. Had been ill three or four days. Is stout and healthy-looking; not subject to rheumatism; says he has lost the use of his right hand, can hardly grasp at all with it; the parts supplied by the median nerve are numb, but never in pain; has some stiffness extending up to the elbow; glands in the axilla not enlarged; the affection came on suddenly; no pain in the head; no giddiness; pulse large and full; skin warm; tongue large, moist, with long white papillæ; urine natural. His condition appeared so decidedly sthenic, that although I was much inclined to regard the disorder as of neuralgic character, I thought it prudent to test, as it were, the system I had to deal with by other agents, before administering the usual remedies for neuralgia. I gave him, therefore, bichloride of mercury, one-eighth of a grain; nitrate of potass, ten grains; compound infusion of gentian, one ounce, three times a day.

June 25th.—Reports that he can close his hand better, but it feels stiff and numb; head rather giddy this morning; tongue large, quite clean and moist. He feels the debility of the muscles of the forearm in the hand. I now thought I might venture upon tonics, and gave him citrate of iron and quinine, five grains; water, one ounce, three times a day. On this treatment—the iron and quinine being increased after a fortnight to eight grains—he improved steadily, and was discharged July 23rd, having almost completely regained the power of his hand, as well as its sensibility. He said that at one time it had been so weak he could not use a knife or pen. Such a case as this illustrates very well M. Trousseau's remark that "l'issue du traitement fait connaître la nature des maladies." Suppose cupping, blistering, and purging had been employed, would the result have been so favourable? His age, habit, and symptoms might well, however, inspire suspicions that the disease was of cerebral origin, and that an apoplectic attack was threatening.

CASE 2.—Is. E.—, aged fifty, female, married, one child. Has been ill since Christmas; admitted March 22nd; of short stature; complains of numbness and weakness of both arms, of the right especially; the arm, forearm, and hand are all affected; has pain mostly in the arms, and numbness in the hands; cannot scrub, or use her hands in anything that requires strength; is not worse at night; skin cool; pulse rather weak; digestion good; bowels regular; tongue clean; no catamenia for nine years; has much soreness in an old blistered spot on the right arm. Moderate doses of quinine and iron were given up to May 3rd, conjoined at one time with tincture of Indian hemp, and at another with belladonna, but very little ground was gained. For the next two weeks she took ten grains of citrate of iron and quinine, with five grains of citric acid thrice daily, but at the end of the week after, (medicine having been omitted one week,) she complained that her arm was weaker, and all her limbs. I then began to give her larger doses of quinine, (or cinchonine, which is supplied to out-patients), at first eight grains three times a day, and afterwards twelve grains. Under this she improved very much. By July 12th her arms were much stronger, and felt much less numb. I then gave her arsenite of iron, one-eighth of a grain, with phosph. amorph., one grain, to be made into a pill, and taken three times a day, which she did until August 23rd, when she was discharged almost well, able to do needlework, or pick up a pin. There can be no question that this was a severe affection of the peripheral nerves, of a neuralgic character, and it is manifest that paralysis of the motor nerves was quite as prominent a feature of the disorder as pain, or numbness of the sensory. Large doses of cinchonine seemed to be most efficient in obtaining the cure; I have little doubt that still larger doses, and preferably of sulphate of quinine, would have produced more speedy benefit.

A circumstance which seems to me to invest with especial interest the occurrence of paralysis as a result of neuralgia is, that the heart itself is not very unfrequently the seat of a similar affection. I have been informed of the case of a man, who suffered from tertian ague, commencing with deadly faintings. I have seen a case in which attacks of syncope, apparently depending upon the action of malaria, were so severe as to cause much alarm. Patients convalescent from

the Crimean fever are liable to attacks of a similar nature, sometimes so severe and so easily brought on, as to incapacitate the sufferers from performing their military duties. An officer, who laboured under this form of neuralgia in a moderate degree, described it to me as "a sense of dead weight at the heart," attended with a feeling of exhaustion, and some failure of pulse, to relieve which he was obliged to take ether or wine; it came on every second day or thereabouts, and was especially induced by any painful emotion or agitation, but not by cheerful exercise. Dr. Macculloch has noticed particularly *neuralgia of the heart* manifesting itself by palpitation, and also by paralysis more or less severe. In one case of this kind "the suffering was extreme, even frightful, as the sensation was always that of imminent or immediate death, and of death which nothing but a strong exertion both of the mind and body could have prevented." I would recommend his observations very strongly to the careful perusal of all who may feel interested in this subject. (*Vide* vol. i., pp. 354—366.)

Southwick-place, Hyde-park, Oct. 1855.

REMARKS ON THE

PATHOLOGY OF A CASE OF DISEASE OF THE SYNOVIAL MEMBRANES AND CARTILAGES OF THE ANKLE AND FOOT.

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A LABOURER sprained his right ankle severely, recovered partially, but never regained perfect freedom of motion. Many months elapsed, and the tender joint began to swell and be painful. In spite of treatment, this tenderness increased, and the whole foot became enlarged. Suppuration in the ankle-joint occurred, and the offending member was removed.

There were many points of interest connected with the disease: such as the cause of the outbreak of the phenomena so long after the sprain had become of secondary importance to the man; the nature of the changes induced in the ankle and in the tarsal articulations, and their histology. Dissection proved that the sprain had been the prime mover in the disease of the ankle-joint; there was disease of the ligaments, the cartilages were wanting in many places, and a creamy pus covered the inside of the joint. But the articulation between the astragalus and calcis, and that between the astragalus and scaphoid, did not present these appearances; there was no suppuration, no decrease of the ligaments, and the synovial membranes were hypertrophied, and apparently continued nearly over the cartilages. The concave articulating facet of the scaphoid presented the disease, which was common to the tarsal articulations, in the most perfect form. The glistening cartilage was only visible in the centre of the facet; the rest of it was hidden by a "growth" from the edge of the synovial membrane. The margin of this growth was thin and semi-transparent, but where it joined the synovial membrane, it was dense, streaked with large capillaries, and intimately adherent to the cartilage beneath. The consistence of the synovial membrane itself was semi-cartilaginous; it was softer on the surface, and highly injected. The cartilage beneath the growth was opaque and rough generally, but in many places vascular offshoots pushed through the thin cartilage, and thus produced a vascular connexion between the haversian systems of the bone and the adventitious product of the synovial membrane. Drs. Goodsir and Brinton have described this state of things exactly. I endeavoured to determine—first, the origin of the "growth," its histology, and its effect upon the subjacent cartilage; secondly, the microscopic anatomy of the diseased synovial membrane; thirdly, whether or no there might be concurrent disease of the cartilage.

The thin, semi-transparent edge of the growth exhibited, under a power of thirty diameters, splendid specimens of the development of capillaries from the loops of the minute vessels peculiar to the denser portion of the tissue; also, under a higher power, faint indications of cells, many dark molecules, and a few refractile globules. This edge could be lifted off the cartilage with the handle of the scalpel. The denser portion of the growth consisted of bloodvessels in loops, (each loop springing from the convexity of one or two nearer the main vessels,) of much white fibrous tissue, of a certain portion of tissue nearly homogeneous, of areolar tissue, and, superficially, of a layer of large globular cells, which, when ruptured, flattened out considerably. Looped vessels and areolar tissue

dipped down into the erosions in the cartilage, and could be traced in many spots down to the soft cancellated bone.

Close to the margin of the cartilage, the tortuous capillaries of the true synovial tissue could be seen with the low power; the loops of the adventitious tissue were continuous with them, and the histologic elements of the synovial membrane, hypertrophied as they were, and mixed with new appearances, could be traced continuously into the growth covering the cartilage,—instancing the law of continuity as regards adventitious growths. The synovial membrane was only to be distinguished from this offshoot by its long and tortuous capillary system; otherwise, in structure, they were identical. The most interesting question was, as to the state of the cartilage.

The central, uncovered portion was less opaque than the rest. With a power of 200 diameters, the inter-cellular portion was seen to be intensely granular; the cells were enlarged, and contained many refractile granules; and the knife detected a loss of crispness. The other portions presented the same appearances, with the following additions: the cells in many places had coalesced, the inter-cellular tissue having been absorbed; these cells were many times larger than healthy cartilage cells, and were filled with refractile globules, granules, and secondary cells. Near the erosions, this destruction of the inter-cellular structure was most marked; and where any portion was left, the infiltration of molecules, dark in their outline, rendered it anything but transparent and homogeneous. Below, the bone was soft and dark.

The erosion of the cartilage can hardly be ascribed to the influence of the vascular tissue above it alone; intrinsic changes, fatty degeneration and softening, had been contemporaneous with the evolution of the adventitious growth from the synovial membrane. The disease was, to all appearance, Brodie's pulpy degeneration, accompanied by the erosive process described by Goodsir; and to these was added a concurrent disease of the cartilage; and the common origin of all must be admitted.

From subsequent observations, I am firmly impressed that the bloodvessels of the opposed adventitious growths do, under favourable circumstances, anastomose, and when this is perfect, the vascular systems of the opposed bones are united by this strange medium; ankylosis may then ensue.

October, 1855.

ON

DISEASES OF THE INTERNAL SURFACE OF THE BODY AND FUNDUS OF THE WOMB.

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BELIEVING, as I do, that the attention of the profession has been of late years directed far too exclusively to affections of the os and cervix uteri, and that grave and exhausting diseases of the body and fundus have been consequently overlooked, I propose in this paper to make some practical observations on the latter, founded on cases which have resisted in other hands the usual treatment for the former. It must have occurred to many practitioners to have been from time to time consulted by patients, whose symptoms evidently point to the womb, but who say that they have already been treated for that organ, and have been pronounced cured, and who, though not suffering to the same amount that they did before treatment, are yet far from well, and still feel that there is *a something* to be removed. They struggle against what they are assured is a mere morbid feeling, but with very little success; and though positively told that there now remains nothing but the languor of convalescence, and that change of air, tonics, and a determined resolution to feel well, will complete the recovery, they, on the contrary, grow gradually worse till they are again the same as they were before any treatment, and with the mind considerably more depressed and despondent. Being induced to submit again to an examination, the newly-consulted practitioner, if he confines himself to the os and cervix uteri, probably finds the statement of the patient as to the previous treatment literally correct; there is, it may be, no ulceration, no congestion, no relaxation of these parts; and if he pursue his investigation no further, the patient is condemned again to change, tonics, &c., and not improbably to years of misery, all the more intolerable that it is regarded as fanciful, and *she* as a hypochondriac. If, on the contrary, he examine the body of the womb *externally* by compressing it between the vagina and the abdominal wall, and *internally* by the uterine bougie, and by dilatation so as to admit of his finger being introduced