May 1, 1858.]

ORIGINAL COMMUNICATIONS.

[British Medical Journal.]

solely in consequence of want of experience in the details of treatment.

We find that the situation of the posterior tibial artery and its relation to the adjacent tendons varies greatly. I have seen it sometimes a short distance from the tendon of the flexor communis digitorum, sometimes eternally behind or even under it; and, in performing subcutaneous operations, the surgeon should remember that, in club-foot, the groove on the tibia which holds the tendons is often so oblique that it would carry the point of a sharp knife directly into the artery.

A modern author suggests that "the best way to avoid this vessel is to puncture the sheath of the tendon with a sharp tenotome, and divide the tendon and the arachnoid, and then divide it in a direction forwards away from the sheath." But I believe that, in the first part of the proceeding, there would be great risk of falling into the very danger it is wished to avoid; and, moreover, I doubt the possibility of dividing the tendon with any certainty by cutting in a direction behind forwards, i.e., towards the tibia. It is also recommended, by way of precaution, to divide the tendo Achillis first, so that the others may be rendered more tense before their section is undertaken; but this advice should not be followed, because, first, in infants, the tendo Achillis is required in its integrity to steady the foot in the earlier stages of proceedings; and, secondly, in the adult, the contracted and deformed foot has to be unfolded and put into shape after the division of the anterior and posterior tibial tendon, before any operation is performed on the great tendon of the heel. The first step is to cut away the sharp periosteal, or the equilateral, or the inner deformity. The inward displacement of the tendo Achillis in club-foot, and its abnormal relation to the posterior tibial artery, are points too well known to need remark.

Dupuy (Traité du Pied-bot, p. 168) relates the particulars of a case of ankylosis of a great number of joints in a woman aged 35, the subject of talipes varus in both feet. "The joints between the greater number of tarsal and metatarsal bones were ankylosed, (i.e., the astragal and the joints of the toes were not movable, nevertheless, in the first, adduction only was possible; while abduction was prevented by a firm fibrous mass, which extended to the depth of the tibialis anterior muscle,) and the internal malleus, the inner side of the neck of the astragalus, and, indeed, to the tuberosity of the os metacarpales. The tarsal bones were all changed in volume and form, and ankylosed one with another by osseous concretions and lamellae. Ossification was especially remarked between the three osseous bodies with the os naviculare, which were locked together as in the sagittal suture; also the articulations of the three first metatarsal bones were ankylosed by osseous plates. The metatarsal bones were less voluminous than natural."

Now, as regards this case, I may say that Mr. Tamplin has not met with the remarkable advantages of this long experience; nor have I, in my pathological researches, seen such a specimen, unless, indeed, those cases be excepted in which acute rheumatic inflammation has attacked the tarsus, and led to temporary or permanent loss of motion of the ankle; and, in such a case, the deformity, as known by the name of pes valbus, the bones retained their form, and the joints their mobility, although the displacement was considerable and of long duration. (To be continued.)

REMARKS ON THE THEORY OF ELIMINATION IN THE TREATMENT OF DISEASE.

By C. Handfield Jones, M.B., F.R.S., Physician to St. Mary's Hospital.

[Read before the Harveian Society.]

[Concluded from page 331.]

In syphilis, we have, I suppose, an undoubted instance of a poison being rejected by the circulation, and producing widespread morbid effects. Of the modus operandi of the two great reputed remedies, mercury and iodide of potassium, we do not know much. Our most certain information respecting the action of the first, points to it as a controller of atheromatous inflammatory movement, and an absorber of effused fibrine. Whether it has really any peculiar specific action on the syphilitic poison, at least in adults, is, to me, as many, a matter of some doubt; but, that it would completely arrest the secondary local affections; but does it really get rid of their existing cause? The following quotation from Mr. Erasmus Wilson's work justifies this doubt. After more than five pages devoted to the treatment of constitutional syphilis, he proceeds: "We may now suppose the first attack of fever, or secondary symptoms, to have passed away; but it does not therefore follow that the syphilitic poison is entirely banished from the blood; on the contrary, the probability is, that after the moment of a few moments of a fresh eruption, and occur, and after we have a third, a fourth, and even more; the attacks last becoming irregular, and putting on a new shape and new character."

The author just quoted refers the beneficial effect of mercury to its acting as an eliminant, and approves of sweating and dilute drinks as adjuvant means; but I must think there are strong objections to this view. It is notorious that clysms salivation (three or four pounds) have a decided effect; but kilons purging are anything but desirable in the mercirial treatment of syphilis; on the contrary, we are especially anxious to obtain the mildest possible perceptible effect, and we stop as quickly as we can any violent action. I incline strongly to think, that when mercury acts beneficially in constitutional syphilis, it is as a blood alterant, decomposing and destroying some abnormal albuminoid matter in the blood; the modified improvement which takes place in the health of diseased children under its use seems quite independent of any noticeable elimination, and altogether concoment to the mode of action. I have suggested, beyond an empirical acquaintance with the action of iodide of potassium, we are quite in obscurity. We find that it effectually arrests certain inflammations of fibrous tissues, syphilitic or rheumatic, notably those of the peritoneum and the rectal and anal mucous surfaces; and that it exerts an absorbent action, attended with more or less wasting, if long continued. Dr. Pereira states that diuresis is a common consequence of its use. This I have not observed. I took ten grains in five doses, in about thirty hours, and collected and analysed the whole urine before and after. Five days before taking the iodide, the twenty-four hours' amount was 32 ounces, of specific gravity 1028.5. While, the two grains of iodide, and the three of ammonium chloride, of the twenty-four hours' amount was 38.5 ounces, of specific gravity 1028: the urine contained iodine. The urea, the uric acid, the citrulline, phosphoric and sulphuric acid, were all diminished by the use of the drug; the urea, especially was so. The case is not the case of a man with incomplete paralytic, which I suspected might be due to the poison of lead, and who had been taking 30 grains a day for several days, the twenty-four hours' amount of urine, while under the influence of the iodide, was 50 ounces, of specific gravity 1028; it contained iodine. Six days after omitting the iodide, and having substituted for it strychnia and aruna, the twenty-four hours' amount was 92 ounces, of specific gravity 1015. The urea had increased, and the sulphuric acid; the phosphoric acid had diminished, and the uric acid was 0. The result of these experiments (though far too few to be decisive) are very striking in favour of the idea that iodine causes increased urinary excretion. But, even if it were proved to be a diuretic, it would be the merest hypothesis, that it eliminated syphilitic poison, and we should have to explain how it came to act in a diuretic manner. As a diuretic. To my own mind, the essential agency of iodine of potassium, as of mercury, lies in its nullifying inflammatory natures; but it has a more immediate relation than the latter to syphilitic and rheumatic inflammations. It appears to us a fact full of significance, that a man who has contracted syphilis, and been apparently cured of it, may remain well for a considerable time, till something breaks down his health, and then the symptoms reappear. Does not this show that, while the vitality of the tissues is vigorous, they can tolerate the presence of the poison without injury; but, as soon as they are enfeebled, the morbid action recommences? The curious facts observed in the treatment of syphilis by repeated inoculation also point out that the expulsion of the poison is not the sole and only means of obtaining immunity from its injurious influence.

With regard to ordinary skin diseases, I think the belief has been and is very general, that they depend on some materia morbi acting as a cause of irritation, which requires to be either neutralised or eliminated. But, taking the eruptions which show the greatest tenacity of affineness of the eruptions of the thighs and face, we do not certainly find that the best treatment is one which, by toning the vessels of the part affected, arrests the discharge; and that this, which we can often do by arsenic, yet of a new and different general health. What is true of these eruptions is also true in a less degree of most others, always provided that the inflammatory action is not of a sthenic kind, for in that case we
must first subdue the tissue-irritation before attempting to tone the vessels. Some of these skin diseases, as they are called, are beautiful illustrations of one most frequent form of disease action, of which that is essentially dependent on paralysis of the vaso-motor nerves. Roseola, for instance, is not uncommon as an effect of summer heat; it is also observed in cholera, and in remittent fever, and chronic agues. It is the effect of any poison was to escape by the lungs, but simply of a paralysis of certain vaso-motor nerves, and consequent flushing of the capillaries. Quinine I have found a very good remedy for it. Take herpes zoster, with its pearly vesicles, which, when pregnant, are so pretty on the back and other places, is this eliminative effect? Not so surely, seeing that the eruption is best treated by drying it up as soon as possible, and giving quinine or other tonics freely for the cure of the attendant neuralgia, which is often so severe. Of erythema nodosum, the nearly the same may be said. Dr. Watson finds it to yield readily to quinine. Now, if these instances are not of eliminative character, why should we, in the absence of proof, suppose other skin eruptions to be?

Carbuncles are sometimes imagined, as well as boils, to indicate the presence of some morbid matter in the blood; and it is probable enough that the flares are in an unhealthy state, and prone to behave. But no mere eliminative treatment is adequate to cure; but it is to tonics and generous diet that we must look chiefly for cure and prevention. Furanncolide poisoning is usually on no account called the hydrophoretic treatment, which must certainly eliminate, and it is certainly a matter of interest in the present case has lately been communicated to me by Dr. O’Ferrall, in which a carbuncle, which was evidently of having been overlooked, was immediately and beneficially modified, and soon brought to heal by the application of pressure. Here elimination was out of the question.

The last disease to which I shall allude in the discussion of this subject is rheumatism, including the febrile and non-febrile forms. The prevalent theory, that adopted by Drs. Todd and Fuller, is, that undue development of lactic acid in the secondary assimilating processes generates a poison which produces the feverish symptoms. Dr. Copland, on the other hand, locates the primary disorder in the organic nervous and vascular systems, and regards the production of acid rather as the effect than as the cause of the disease. A strong argument in favour of the lactic acid theory, as it appears to me, is the great benefit derived from saturating the system with alkali. No other mode of treatment, at the present day at least, seems to be comparable with this—I mean, of course, in rheumatic fever. Another argument is furnished by the interesting observation of Dr. Richardson, that injection of lactic acid into the peritoneum of animals produces endocardiac inflammation. On the other hand, it may well be questioned whether the alkalies act by neutralising and eliminating excessive acid; and whether their remedial agency is not of a different kind, viz., vitality-modifying, or dynamic. There are testimonies which can scarcely be set aside as to the power of the alkali in alleviating acute rhinitis and other morbid phenomena in a different and other various ways. Thus, Dr. Watson affirms to have certainly cured, not seen recover, patients by the use of colchicum, onion, and colostrum with quinine. Dr. Corrigan has succeeded well with opium alone. Dr. Sibson, while giving an alkaline drink, administers with advantage from three to twenty grains of opium daily. M. Tronsseanu, a first-rate authority, states that, after having carefully tried M. Biouet’s recommendation of quinine, he has satisfied himself of its happy effect in this disease, and in this conclusion he is supported by M. Logroux. Tronsseanu, however, thinks that quinine is much more efficacious when the inflammatory nasus has been previously relieved by the administration of colostrum in large doses. Now, be it especially observed, I am not advocating these modes of treatment; I decidedly give the preference to the alkalies; but my argument is this, that if these means, and especially the latter, can cure, then there is much ground for believing that the alkalies do not act beneficially merely in virtue of their chemical quality. It seems to me very probable that they may act solely as tissue-sedatives, tranquillisers of the action of the heart, and nullifying inflammatory excitement in the parts affected. Certainly, the alkalies may produce a notable eliminative effect. A man to whom I gave half a drachm of biouet’s quinine three times a day, was within twenty-four hours 35 ounces of urine, of specific gravity 1024; while, without any medicine, he passed only 18 ounces, of specific gravity 1057. The amount of urea was increased by about 100 per cent. On the other hand, a case of rheumatism in which this effect is not uncommonly slow of attainment. A boy, aged 12, suffering with rheumatic fever and slight periodicity, after nine days of alkaline treatment (a scuriole of biouet’s potash every two hours) passed in twenty-four hours only 10 ounces of urine, of specific gravity 1024; but after twenty days, and only 12 ounces, of specific gravity 1053; he was now much improved, and all medicine was suspended. Nine days later, no medicine having been taken, and diet being the same, he passed 20 ounces of urine, of specific gravity 1025, for he was then convalescent. A man, aged 21, suffering with acute rheumatism, a slight endocardiac murmur existing, after taking a scuriole of biouet’s potash every hour for four days, then twice, and then once a day, of specific gravity 1025. Five days later, all medicine having been omitted for the last three, he passed 28 ounces, of Specific gravity 1021; he was then much improved. From these and other observations, it seems to me, that the alkalies act primarily on the morbid process; and that, on the subsidence of this, the urine increased in quantity. I think I can be sure of this, that, in spite of the most thorough alkaliisation, the urine excreting with the morbid matter, the phenomena of rhematism in a subacute degree may persist, scarcely modified.

Against the view of alkalies being useful in febrile rheumatism, by a neutralising and eliminating effect, may be adduced the almost equally marked action of Fowler’s solution in the less febrile or apyretic forms. This drug can only act as a toner to the vaso-motor nerves, and so, by contracting the vessels, diminish hyperaemia. In fact, it is certain that it can only have a beneficial influence essentially upon the elimination of some poisonous matter, as lactic acid (which, by the way, may be given a long while without producing rheumatism); or whether the disease is rather to be regarded as analogous to catarach with special arthritic implication, and is to be treated simply with reference to general principles, nullifying the inflammations and fever in any way that we best may.

I will now shortly, in the way of propositions, the views I entertain on the subject discussed.

1. In the majority of instances in which we have reason to believe that a morbid matter has entered the blood, and is affecting the system injuriously, it is vain to think of expelling it by any therapeutic efforts. Nature must be left to deal with it as she will, and the only direct aid we can give her in this process is to admit pure air as freely as possible, so as to favour the pulmonary exhalations.

2. We are at the same time to watch carefully for opportunities of aiding Nature in her conflict. If reaction be excessive, we must endeavour to lessen it; if prostration threaten, we must mitigate it. The facts are that the process must be corrected; and generally we must be on the look out to discover and meet any requirement that may arise. Often and often our help judiciously given will turn the scale; but, on the contrary, by any other means frustrated, is that to the advantage of febrile life.

3. It is a wise saying, “ That it often happens to good physicians to find no indications for treatment, to bad ones never.”

III. There are several disorders which simulate, so to speak, eliminative actions, but in which the morbid phenomena are capable of a different and better interpretation, and even the presence of a materia morbi is very doubtful. Those are to be treated by endeavouring to quiet inflammatory natures, to soothe nervous irritation, and to tone relaxed vessels.

The Surgeon-Surgeon. The stipend of this office used to be 505 marks, which is equivalent to £396:13:4 per annum. The following is a list of those surgeons who have held the appointment during the last eighty years:—Sir Charles Hawkins, Dr. Middlemore, Mr. Samuel V. Wilkie, Mr. Charles Hare, Mr. David Dundas, Sir Everard Home, bart., Mr. Patrick McGregor, Sir Astley Cooper, bart., Sir B. C Brodie, bart., Mr. Robert Keate, and Mr. B. Travers. Of the above twelve, Sir David Dundas filled it for the longest period (thirty-four years)—viz., 1792-1836; and Mr. Travers the shortest time. Apprise of the recent appointment, the Globe remarks, that the duties of Surgeon-Surgeon have a peculiar and interesting character, being executed rather than of the peaceful Highland solitude of Balmoral. The Surgeon-Surgeon has £400 a year for accompanying the Queen to the field of battle, when Her Majesty shall find herself exposed to danger, either on the march, or in the camps, or flying in the country, and may require the services of the veteran Lawrance's.