trust that, as the champion of the rights and privileges of the profession, and, consequently, the benefactor of the community at large, you will not allow the circumstances to pass unnoticed; the injurious consequences which are likely to result from this verdict are incalculable; many deaths will, in all probability, ensue, for the united faculty will, after such an unprecedented judgment, passed by a jury of Englishmen, be apprehensive of resorting to extreme measures, in future, to rescue their patients from death; and the old adage, "in extremos morbos, extrema remedia," will become a dead letter.

It is stated, in the evidence adduced upon the trial, that employment of the instruments was unnecessary. Will it be believed that this evidence, affecting as it did the future reputation and happiness of an individual, instead of being borne out by professional ability had no other claim to scientific or practical truth than the idle gossip of some female attendants, who (as is well known by medical men upon these occasions) are particularly fond of twaddling, and of busying themselves about those matters of which they are *particularly* ignorant.

The medical men who made a post-mortem examination of the body gave it as their opinion, that the instruments had been unnecessarily and unskilfully applied. Now, I do not wish to question the professional acumen of these gentlemen, but I do say that their evidence was not sufficient to condemn a man upon so serious a charge, for, with reference to the necessity of using force, it would be utterly impossible to give a correct opinion, with any certainty, unless they had seen the patient previous to its application. They, however, did not see her till after death. Adverting to the charge of unskilfulness, this matter appears still less satisfactory. The child may have been large, and in its passage may have caused lacerations, or the forceps may have done so from their unavoidable application.

The question, in fact, resolves itself into this,—Was the evidence brought forward at the trial sufficiently convincing to warrant the jury in returning such a verdict? From the statements already made I think it is clearly proved that it was not.

The flaw consists in the imperfect evidence, derived from examination of the mother, after death, by the medical men. According to the reasoning by induction they ought to have had an opportunity of judging whether the application of the forceps *was* necessary during the mother's lifetime, before they came to the abrupt and illogical conclusion that it was *not*. Admitting this, the charge of want of skill in the use of the instruments cannot be substantiated, inasmuch as unavoidable and unforeseen causes might have operated at the time, and in this particular case may have led to the results seen by the medical men upon inspecting the body after death. I have the honour to be, Sir, your obedient servant,

A Country Practitioner.

Leeds, March 10, 1838.

DISTORTIONS OF THE FEET.

CASE OF

TALIPES VARUS VERUS,

AFFECTING BOTH LIMBS.

By W. J. Little, *M. D., London.*

Remote Cause.—Severe derangement of the supply of motor and nutrient nervous energy to the lower extremities, taking place anterior to birth.

Proximate Cause.—Contraction of the adductor, and so-called * extensors of the foot.

Cure by division of both Achilles' tendons.

April 5, 1837. Henry Reynolds, aged 16, a stout youth, presents himself for relief of a severe lameness and deformity of both feet, with which his mother says he was born.

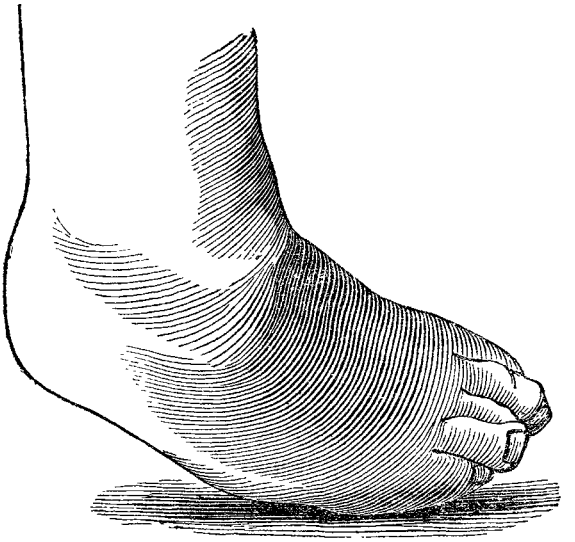
Present Condition of the Patient.—The first circumstance which strikes the observer is the imperfect development of the whole organisation of the lower extremities, which are disproportionately short, compared with the length of the trunk of the body, and with that of the upper extremities; the muscles of the pelvis and thighs are, although well cased in adipose tissue, much below the usual standard, while those of the leg are still less developed; indeed, there is a total absence of the calves of the legs from atrophy of the gastrocnemii. The shortness of each limb depends less upon deficiency of the femur than of the tibia and fibula; the shafts of the latter can also be distinctly felt to be more slender than natural. The feet are also stunted in their growth; both heels are held up two inches from the ground by the shortness of the gastrocnemii, and the toes are drawn inward, and the inner margins of the feet upwards,

* These muscles, situated on the posterior part of the leg, are analogous muscles to the flexors of the arm, as regards position, diseases, and even function. Some of them flex the toes. They have been called extensors of the anklejoint, by anatomists and surgeons, because they straighten the foot; but by some eminent physiologists they are denominated flexors. That they are so, is particularly evident in the quadrumana, for instance, were the hind feet are used for taking hold with as readily as the fore. Pathologically we see that they correspond with the flexors of the arm; as in *club-hand*, it is the flexors and pronators which are affected, and not the extensors, &c.; and in club-foot the gastrocnemii and adductor tibialis posticus, &c.

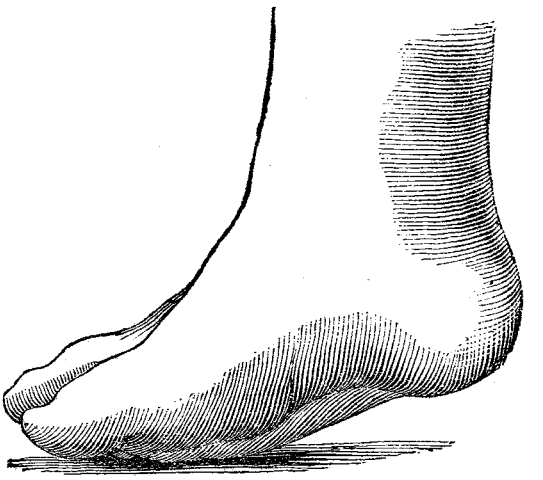
by the shortness of the tibialis posticus, so that the great toes are in contact with one another, and the patient touches the ground by that part only of the plantar surfaces of the feet, called the ball of the little toe. This part, which is an oval of an inch and a half in length, is covered by a painful corn, through having had to bear all the weight of the body. Of the remainder of the soles of the feet, the ball of the great toe, the heel and under part of the instep, no part has ever come into contact with the earth. There is very little mobility of the anklejoints, particularly of the left, scarcely sufficient to enable the surgeon to render the Achilles' tendon tense; the ligamentous tissues are very rigid, and those of the inside of the feet (lig. deltoidea), as the form of the feet indicates, are particularly contracted; the legs are both œdematous, and the skin purplish, from languor of the circulation in them; their temperature, also, is unusually low. These conditions co-exist with some displacement of the tarsal bones; the round head and superior trochlea of the astragalus can be seen, and still more clearly felt projecting, the former from being partially denuded of the os naviculare, the latter in consequence of the fixed state of so-called extension of the joint. The os cuboides is also more prominent along the side of the foot than natural; the left foot, as I have elsewhere * shown to be commonly the case, is in all respects the worst,—in the extent of elevation of the heel—in the twisting inwards of the foot—the rigidity of the joint, and deformity of the tarsal bones. All the strength which can be exerted with the hands in the endeavour to improve the form of these feet, *has not the least effect upon it*, but merely renders the Achilles' tendons a little more tense.

The patient's mode of progression, when he has boots on, which, having heels and broad soles, are accommodated to his lameness, is extremely laborious and difficult; his arms maintain the equilibrium of his body, as without useful gastrocnemii, and with so extremely small a point of support upon the earth as is afforded by the ball of the little toes, he would be in constant danger of falling were it not from the agility the constant practice from infancy has afforded him; his arms are almost constantly in motion, until his body has found the perpendicular; like the dancer upon the tight or slack rope, he raises the one foot over the other alternately, giving the limb, whilst it is moving, a peculiar semicircular swing, first outwards, then forwards, and, lastly, inwards. Without his boots, unaided by the arm of his mother, or by two sticks, he cannot make a single step. The peculiar swing I have described, arises from the endeavour to avoid touching the toe of one foot against those of its fellow, and to bring as large a part of the sole against the ground as possible; for if such a patient were to place his feet perpendicularly on the ground, the point of the foot would turn gradually still more inwards, and the ankle outwards, the tendency of which would be to cause him to tread upon the dorsum pedis, in which case, although the deformity is increased, progression is less laborious to the patient, as we see in those worst of cases, called in the Devon and Somersetshire dialects respectively, pumple and bumble-footed patients. He has worn, it is stated by his mother, various mechanical contrivances, the object of which was to overcome the distortion of the foot; but, beyond drawing the toes somewhat outwards, his feet are at present in the state in which they were when he was born.

* See its probable explanation, also "Symbola ad Talipedem varum cognoscendum," auctore W. J. Little, M.D., Berolini, 1837, p. 12.



Sketch of the outside of Reynolds's right foot.



View of the inside of Reynolds's right foot.

Indications of Cure.—As it cannot be for a moment doubted, after reading the description of this case, that the deformity was produced during uterine existence, by some violent derangement of the innervation of the lower extremities, from which resulted the deficient nutrition and derangement of motor nervous energy, we cannot expect that any means which may be used for the restoration of the form and function of the osseous part of these feet can, at the same time, procure a cure of the lesion of the central organs of the nervous system, which has so intensely affected their capillary and muscular systems, as that occurred at a period anterior to birth, and has, consequently, existed during a period of sixteen of the most important years of human development, those of infancy and adolescence. I will not enter here upon the discussion whether the proximate cause of the deformity in this lad's case arose from partial paralysis of the voluntary power of all the muscles of the leg, whereby the involuntary or organic contractility of the gastrocnemii, and other so-called extensors, obtained the ascendancy over their antagonists; or whether it was direct permanent contraction—tonic spasm of the surales and their allies, induced by the derangement existing in the medulla spinalis, the source of the involuntary motor power. The disease, in this instance, may have either cause for its origin, and its decision will not affect the means to be resorted to for its relief, *i.e.*, to remove the chief impediment to his treading fully upon the sole, namely, the shortened state of the gastrocnemii by the section of the tendo Achillis and the displacement of the bones, and the contraction of the other muscles on the back of the leg, and of the ligaments of the joint, through the consequent deformed position in which the feet had been held by the muscles, by the careful application of mechanical power. In many cases the surgical operation constitutes the major part of what has to be accomplished for a cure, and the mechanical is of minor importance; in others, particularly those aggravated by walking on the distorted limb, the success will depend as much, and sometimes even more, upon the mechanical part of the treatment, than upon the chirurgical; but in all the cases I am about to relate in this communication, the cure was rendered possible by resorting to the division of certain tendons, but was absolutely impossible by mechanical treatment alone.

In this lad, Reynold's case, had division of tendons been resorted to in his early years (that is, had the method been known beyond one or two Universities of Germany, where it was afterwards abandoned, owing to failures through the imperfect principles which then guided the operator) the surgical operation would have sufficed with very little attention to mechanical treatment, but, at the present time, the section of the tendo Achillis, which I purpose performing, must be followed by considerable attention in the wearing of an extension apparatus.

Ordered to remain in bed, and take—*Calomel with jalap*, one scruple, every other day, with the view of procuring the disappearance of the œdema and thus restoring the parts to a state fitter to undergo any operation.

April 11, 1837. I divided both the Achilles' tendons. The knife used is a very narrow, slightly curved, sharp-pointed bistoury, the blade one line in width at the widest part, and an inch and a half long, ground to a slightly concave cutting edge, in half only of its length, the remaining half (that connected with the handle) being left blunt. The operation I perform as follows,—the patient being seated in a chair, one assistant supports the knee firmly, whilst another, grasping and drawing downwards the patient's heel with his left hand, and pressing upwards the toes and front of the foot with his right, renders the tendon to be divided as tense as possible. After feeling with my left thumb and forefinger the outline of the tendo Achillis (enveloped in this patient in much adipose tissue, owing to which no relief of the tendon was visible externally), I pass the small bistoury through the skin, one or two fingers breadth, above the malleolus internus, with one of its sides turned towards the tendon and immediately above it (the patient sitting), the other directed towards the deeper muscles and the tibial vessels and nerves; as soon as I know that the point of the knife has been passed beyond the external edge of the tendon, and has nearly reached the skin of the opposite side, I turn the knife so as to bring its cutting edge to press against the tendon, which is divided generally at one stroke, in the act of withdrawing the knife from the limb. The complete division of the tendon is known by the sensation of the immediate cessation of the tense resistance, and by feeling, before the knife is wholly withdrawn, that nothing remains undivided except the flaccid integuments. (The operation does not occupy a quarter of a minute.) After the withdrawal of the knife, there remains a single puncture in the skin of less than a line in length, from which seldom oozes more than a single drop of blood; such was the case in both legs in the present instance. A few strips of adhesive plaster, and a roller, were applied, and each leg and foot secured to a pasteboard splint, adapted to their deformed shape, to prevent motion of the joint, as it is a wise principle of the Stromeyerian method to make no attempt to draw down the heel, or improve the form of the foot (which would be prematurely interfering with the effusion of lymph between the ends of the tendons, and with the closure of the external punctures), until the latter

heals, which it uniformly does by first intention.

Second day after the operation. Both punctures perfectly healed; has never felt the slightest uneasiness in the divided parts. Takes his usual diet.

Third day. Stromeyer's foot-boards applied to each limb; scarcely any extension and consequent separation of the ends of the divided tendons attempted to-day, lest the first wearing of the apparatus should produce pain; it is, however, to be persevered in daily, and gradually increased.

Seventh day. Has had some pain, he says, from the apparatus, but has slept well every night. Hobbles about the room with the foot-boards on, assisting himself with two sticks; the heels have somewhat descended.

Fourteenth day. The heel of the right foot touches the foot-board at a right angle. The left is not so far advanced. On the dorsum of the right foot, just behind the toes, there has been a vesication from the pressure of a strap having retarded the return of blood from the front of the foot; cotton wadding has been applied to the parts, and it is again covered with epidermis. He has had two or three restless nights. Complains chiefly of the upward pressure of the foot-boards against the corns of the sides of the feet upon which he formerly trod.

Third week. The heel of the left foot touches the foot-board at a right angle with the leg; he walks about a good deal.

Fourth week. Both feet are bent at the anklejoint more than a right angle; the entire sole of each foot, therefore, touches the ground when he is allowed to stand without the apparatus, although the concavity on the internal aspect of the arch of the foot is still greater than natural.

Fifth week. Has, at present, Stromeyer's modified Scarpa shoes * on both feet, in which he now walks about without the aid of sticks, and seems delighted to feel the ground with the heels and the ball of the great toe.

Sixth week. Has acquired considerable freedom of locomotion; it is at least firm and regular, although the muscles of the leg (being so little developed that there is no calf), having little power of contraction, and the anklejoints being tender from the extension which their ligaments have necessarily undergone, in order to have admitted the trochlea of the astragalus for the first time since he was born into the tibio-fibular hollow, do not allow him to use his feet and legs more than as mere passive organs of support, as a very old man, whose calves being wasted, cannot rise upon his toes.

Seventh week. Improves daily; from his difficulty in walking formerly, compelling him to bend his body forwards, at the same time stretching out his arms, I have considerable trouble to get him to carry himself upright, even now that he has two firm feet to stand upon; the muscles of the trunk and thigh, from so many years adaptation to a particular combination of actions, which was necessary to enable him, as I have already described, to support himself in the erect posture, appear by habit, therefore, to constrain him to a peculiarly awkward gait; he is, nevertheless, so altered that his mother thinks nobody would recognise him. By my direction he now carries a seven pounds' weight in each hand, through which he walks better than when empty handed, as the muscles of the upper part of the trunk thus employed to a definite end, cause his body to be erect. He has, in fact, to learn the use of his legs as a child, without having the normal state of the muscles which exists in infancy.

Sept. 1, 1837. At the present time, he informs me that he can walk about all day with comfort, ten or twelve miles without difficulty, in the capacity of errand-boy. It could not be known that he had formerly had two congenital club-feet; the only remains of them are a slight turning in of the toes when he is fatigued, and, consequently, careless about his gait, and an evident want of the natural freedom of action in the anklejoints. The mass of muscle has evidently increased. He did not wear the Scarpa shoes after the tenth week, and has worn a common pair of lace-up boots ever since, stiffened on the inner side of the ankle with an additional piece of leather.

126, Fenchurch-street,
March 9, 1838.

* Vide LANCET, April 15, 1837, p. 122.

FURTHER OBSERVATIONS ON

DR. HALL'S STATEMENT

REGARDING THE

MOTOR NERVES OF ARTICULATA.

To the Editor of THE LANCET.

SIR:—As some of the circumstances referred to by Mr. Newport, in your Number of the 3rd of March, relative to the question of priority lately agitated by Dr. Marshall Hall, are likely to be better known to me than to the latter gentleman, and as their comprehension may assist your readers in judging of the merits of this discussion, I beg leave once more to trespass on your pages with a few explanatory remarks. The question of *priority* in the assignment of the motor function to the superior nervous columns of articulated animals, is obviously not one of *science*, demanding intricate discussion, or admitting of ingenious sophistry, but is merely a question of *historical fact*, requiring authentic and accurate statements of dates and circumstances; and for either party to divert the attention to matters totally irrelevant, or to obscure the