

Cases of talipes, or club-foot / by Buckminster Brown.

Contributors

Brown, Buckminster, 1819-1891.
Royal College of Surgeons of England

Publication/Creation

Boston : David Clapp, 1858.

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C A S E S

OF

L I P E S , O R C L U B - F O O T .

With Illustrations.

BY BUCKMINSTER BROWN, M. D.

COMMUNICATED TO THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

Re-published from "The Boston Medical and Surgical Journal."

B O S T O N :

DAVID CLAPP.....184 WASHINGTON STREET.

MEDICAL AND SURGICAL JOURNAL OFFICE.

1858.

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CASES OF TALIPES, OR CLUB-FOOT.

SOME time since, the original plaster casts of a case of talipes varus, in its severest grade, of which one of these on the table is a copy, were shown to this Society, and at the same time the young man, whose feet at a former period of his life they represented, was present for examination.

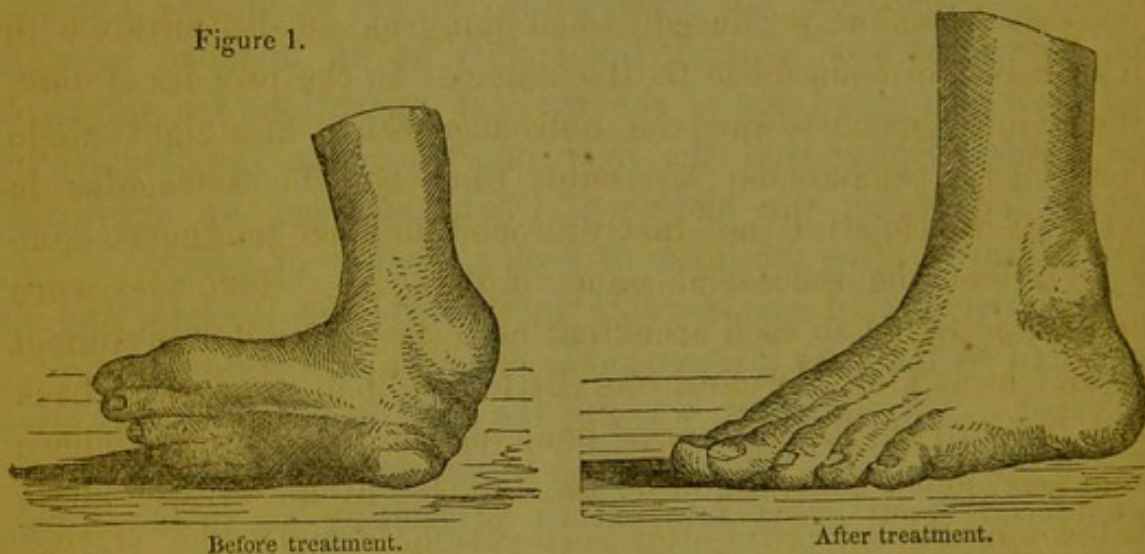
At the suggestion of Dr. J. B. S. Jackson, new models have been taken, to be placed in the Cabinet. The case was brought forward at that time, not because the success which had attended the treatment was unusual, but simply as an instance in which had been performed one of the earliest operations for talipes in the United States, and the only one where an opportunity had offered for tracing the history of what had been an aggravated case of varus, after the lapse of such a number of years.

The case excited considerable interest in the Society, and was regarded by many as a remarkable example of a complete cure of club-feet. This, however, was not the light in which it was viewed by Dr. Brown, Sen., who operated in the case, or by myself. We considered it of great interest as presenting an instance, some eleven or twelve years after restoration, in which the strength of re-united or new tendon had been rigorously tested, and where the perfection and permanence of the cure was strikingly exemplified. It was originally double congenital varus in its worst degree. The smallest of the casts upon the table, marked No. 1, is an accurate model of both feet previous to treatment. They were precisely alike. (See figure 1.) Locomotion was effected upon the anterior extremity of the os calcis and the proper superior surface of the os cuboides, or, in other words, upon the top of the foot. Upon examining the cast there will also be remarked as one of the most striking peculiarities the longitudinal doubling, or com-

plete folding inward of the soles, forming a deep groove, by which the great and little toes are brought almost in contact; and likewise will be observed the prominence of the round head of the astragalus upon the dorsum of each foot. The large cast, No. 2, is the same foot taken twelve years after. (See figure 2.) The subject was examined by the members of the Society at that time, and the faithfulness of the artists' representation* can be attested by all who were then present. The restoration was as complete as when he was first lost sight of by the surgeon. The feet were perfect, both in form and in freedom of action. They had become fully developed in bone and muscle, and somewhat exceeded in size an average foot. The patient had passed the intervening years partly at sea, performing duty as a sailor before the mast; and whether on land or sea, he stated that he had never experienced any inconvenience from his feet, and in appearance there certainly was no trace of the former distortion. He has more recently become mate of a ship.

Figure 2.

Figure 1.



Since these casts were taken (1854), old cases of cured feet have reported themselves more frequently. Among others, I would refer to a young man who had been treated when a child for single varus, but who came to Boston in 1841 with his difficulty still unrelieved. In this case the tendo-Achillis was divided twice; the tibialis anticus, the tibialis posticus and the flexor longus pollicis each, once. The foot was completely cured. He has recently visited Boston, thirteen years having elapsed since his former visit. The foot which had been operated upon could not be distinguished from the one which had been always perfect. All

* Messrs. Chicci & Garey were the artists employed.

the natural movements of the foot—flexion and extension, abduction and adduction—were freely and actively performed. He had finished his education as an engineer, and had been engaged in his profession for a year or more. During the last eight months of the year 1856, he walked ten hundred and ninety miles, carrying his apparatus and wheeling his odometer. In a letter recently received from him, he says: "In respect to my foot, I can walk twenty-five miles a day, and while at work I would travel from twelve to twenty miles each day."

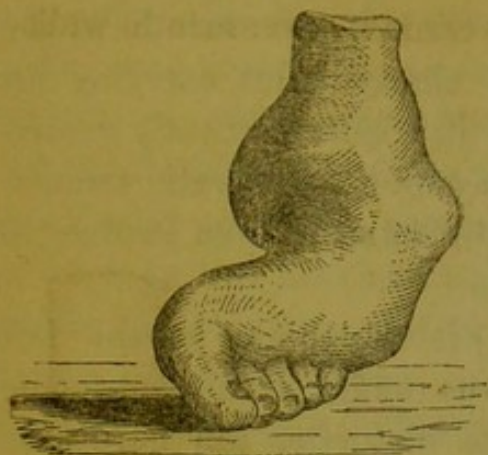
The cast marked No. 3 (see figure 3) is the model of the left foot of a lad 13 years of age, who was under treatment some years since. A more formidable case of distortion can hardly be imagined. If it were not identified by the toes, we could scarcely recognize it as the representation of a human foot. The metatarsus was doubled and twisted upon the tarsus in a most remarkable manner, forming, at the point of union, a sharp prominent bridge upon the top and side of the foot. The astragalus was luxated upward and outward, and very much diminished in size. The atrophy of this bone produced one of the greatest difficulties with which we had to contend in the treatment. In the process of cure, as the foot advanced toward its normal position at a right angle with the leg, it was almost impossible to retain the astragalus in its proper situation. It constantly slipped forward, tending to completely defeat the successful issue of the case. The toes were flattened backward to such an extent as to be partially in contact with the dorsum of the foot, the little toe being pressed back against the top of the metatarsal bone of the fourth toe. There was, in addition, a contraction of the left leg at an obtuse angle with the thigh.

The cast next to this, marked 4 (figure 4), is the same foot after treatment. It will be observed that they are moulded with great accuracy, the one last taken exhibiting the wrinkles in the skin where it had formerly been stretched over the projecting astragalus and tarso-metatarsal prominences. It will also be seen that this does not represent a foot which is in all respects perfectly formed. When compared with its previous state, however, the improvement may be considered as being at least equal to the anticipations of the most sanguine.

It may be stated that the pencil sketches of the casts from which the annexed engravings were copied, were drawn with great

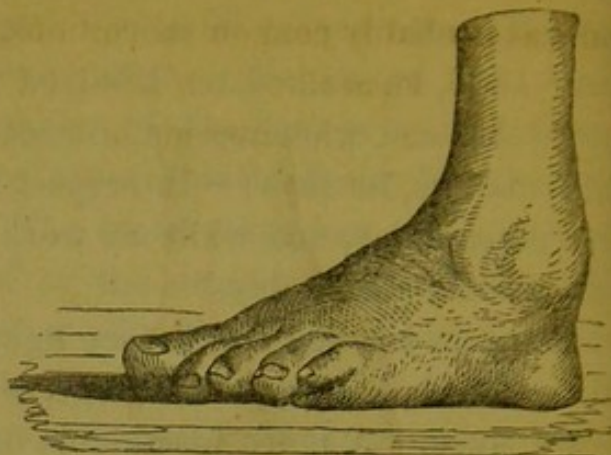
exactness, and for truth of detail and finished execution can scarcely be excelled.

Figure 3.



Before treatment.

Figure 4.



After treatment.

In the course of the treatment there were four sections of the tendo-Achillis. The union of this tendon advanced more rapidly than the foot could be proportionably straightened, and only a limited increased length of tendon could be acquired before firm union took place, presenting, after a short time, an unyielding obstacle to further progress. Re-division, therefore, became requisite to render continued extension possible.

Experiments upon animals, combined with previous experience, should be our guide in difficult and extraordinary cases. The former prove that divided tendon is re-united in about three weeks by a firm fibrous tissue, presenting considerable force of resistance, and that in five or six weeks it is perfectly continuous and inelastic. Still later, it becomes more solid than the original tendon.

The other parts divided in this case were the tibialis anticus, the adductor pollicis, the latter twice, the flexor longus pollicis, and some fasciculi of the plantar fascia; also the semitendinosus, the semimembranosus and the biceps.

The treatment resulted in a complete restoration of the leg, and the foot is now, I have been informed, in a more perfect condition than is represented by the cast or the engraving.

The third pair of casts (figures 5 and 6) represent a case of equino-varus in which the patient walked upon the extremities of the metatarsal bones. The toes were pressed back, the metatarsus flexed and rotated upon the tarsus; the astragalus, as may be distinctly seen upon the model, was thrown out and projected upon the dorsum pedis, with the bones of the leg resting upon its pos-

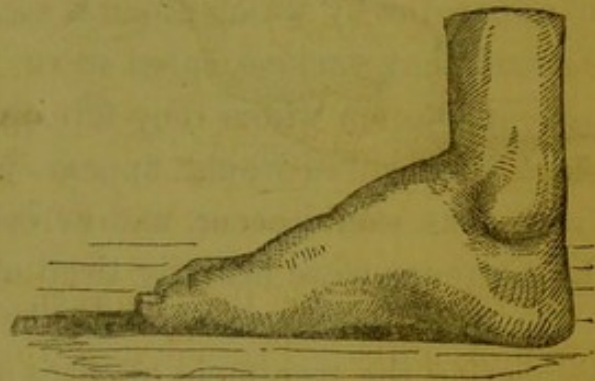
erior portion and upon the os calcis. The heel was elevated three and a half inches. The patient was a boy 11 years of age. The foot was discovered to be misshaped as soon as he began to walk, and was probably congenital equinus, converted by pressure in walk-

Figure 5.



Before treatment.

Figure 6.



After treatment.

ing into equino-varus. He came to Boston in September, 1847, and consulted Dr. Inches, who referred him to me. The parts divided were an adventitious ligament, broad, thick, and unyielding, which extended from the os calcis to the base of the great and second toes; this was formed, probably, from the plantar fascia—the flexor longus pollicis and the tendo-Achillis.

This case was remarkable not only for the severity of the distortion, but also, considering the age of the patient, for the unusual rapidity of the cure. The operation was done on the 22d of September, 1847. On the 30th, the toes were straight, the foot at a right angle with the leg, and the patient, for the first time in his life, could place his heel upon the floor. The plaster cast numbered 6 (figure 6) is the same foot after treatment.

There is also upon the table for examination the daguerreotype of a child, 4 years of age, from Cohoes, New York.

This portrait was recently forwarded in answer to inquiries concerning the state of the feet. They had previously been operated upon by a distinguished surgeon of Albany, but were a severe form of double varus when brought to Boston two years since. It gives the full length figure of the little boy, and the cheering impress of solar light represents the feet as perfect. An artistic response of this kind is certainly as graphic and satisfactory a reply to his queries as the physician or surgeon could desire.

[Dr. WARREN remarked that he had been in a position to see a great number of the cases operated upon by Dr. Brown, and all after treatment, and that he had truly been surprised at the perfection of the cures and the great care and unwearied attention by which this favorable result was accomplished. He thought very important that all of this class of cases should be placed in the hands of some one or two of the profession who had given great attention to the subject, and who had the necessary variety of apparatus by which alone a successful issue could be obtained. He said that various cases were brought to the Hospital—poor patients—upon whom they felt obliged to operate, and that in a short time sores would appear upon the feet, and various other drawbacks would occur, and before the patients left the institution the surgeons were heartily tired of the cases.]

Dr. J. HOMANS remarked that he fully concurred with Dr. Warren respecting the treatment of cases of this description by Dr. Brown.

Dr. H. having been a member of the Board of Trustees of the Boston Orthopædic Association, had opportunities to witness the practice of the Drs. Brown. The results of these cases were generally successful, some of them surprisingly so. He had seen several of their cases in private practice, some very unpromising attended with like success. It gave him pleasure to be thus able to testify to Dr. Brown's skill, and to the zeal and perseverance which he so constantly manifests. When we consider that this class of cases do not abound, it is desirable that they should be treated by a few only, whose experience and skill will be thereby increased, the necessary apparatus in all its variety be constantly on hand, and thereby the best results attained.—SECRETARY.]