C A S E
OF
DOUBLE TALIPES VARUS

IN WHICH THE CUBOID BONE WAS PARTIALLY
REMOVED FROM THE LEFT FOOT.

BY
SAMUEL SOLLY, F.R.S.

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FIRMIN SANTA MARIA, æt. 21, a native of Medillin in New Granada, South America, came under my care in the beginning of June, 1852, afflicted with Talipes varus of both feet. He was a stout, muscular man, of lymphatic temperament, difficult of control, and peculiarly sensitive to pain.

The condition of the feet at that time afforded a perfect specimen of this deformity in its worst form, though both feet were not equally misshapen. The left was shorter and rather more inverted than the right, nor could it be so easily turned or moved towards its natural position. There was an entire absence of calf in both legs. The gastrocnemii and other muscles were all imperfectly developed. The lower extremities presenting a striking contrast to the great muscular development of the trunk and superior limbs.

A cast was taken of the left foot at the time, but unfortunately none of the right.

June 7th, 1852.—I divided in both feet (the patient being under the influence of chloroform) the tendons of the tibialis anticus, posticus, flexor communis, and flexor longus pollicis, also the plantar fascia. Three days after this a shoe was applied that allowed the leg and sole of the foot to be on one plane, having a screw to raise the outer edge of the foot and another to depress the heel. This apparatus, though well padded, could not be used long, the feet becoming sore, and a simple foot-piece with a side bar was applied to the right foot, a straight splint to the left. This latter instrument produced so much benefit in a very short time, that I wished to apply it to both feet. My patient would not submit to it, as he found it would confine him entirely to bed, whereas with the foot-piece he was able to get up and down stairs.

August 10th.—The tendons were again divided in the left foot, for this had improved but slowly, while the right had made considerable progress.

October 16th.—The tendency of the toes to turn inwards not being corrected sufficiently, I used an apparatus having leg and thigh pieces, and on—

November 3d.—A new foot-piece was added, by which the foot could be straightened on itself.

December 25th.—The condition of the feet showed improvement in the right, but not the left, although I had used the same means for both.

At this time I employed a pair of instruments, each one consisting of a strong metal shoe, padded and having side pieces for securing the heel, and to which were attached three straps, two of which passed over the front of the instep, and the other included the ankle-joint above the malleoli; in the sole of the foot and as nearly as possible beneath the articulation of the astragalus and scaphoid, was a centre governed by an endless screw, which was for the purpose of exercising lateral force upon the bones of the foot anterior to the astragalus; on the external side of the heel-piece a bar was fixed, having two racks and pinion-

joints, and below this was a horizontal bar with a broad strap for the toes ; a calf hand and straps completed the apparatus.

January, 1853.—I divided some tendons in the right foot, and also two or three in the left ; but having taken no notes at the time, and speaking from memory, I am unable to state the precise number.

March.—The left foot still resisted the treatment employed, Dr. Little then saw the case, and advised the same treatment to be persevered in. At this time a simple straight wooden splint was applied to the side of the leg and thigh, extending from the malleolus as far as the trochanter, to which the foot was firmly bound in as nearly a straight direction as possible, and considerable advantage was derived from this mode of treatment. It was at this consultation that Dr. Little first suggested to me the removal of the cuboid, to which I replied that this very plan had passed through my mind, but that I was afraid of the consequences, though his opinion would have great influence with me, from his immense experience in the difficulties which attend the cure of adult and extreme cases of deformity.

The patient had never borne the instrument well, never entirely submitting to the pressure that was exerted by a proper adjustment of the screws, seizing on all occasions an opportunity of loosening the straps, so that satisfactory proof was wanting that the pressure applied had been retained for any length of time ; and to this want of perseverance I feel justified in attributing the slow progress which the left foot made.

June 11th, 1854.—I determined to adopt Dr. Little's suggestion, and to remove the cuboid bone, which seemed to be a bar to the ultimate success of the case. My patient was placed under the influence of chloroform, and in presence of Dr. Little and Mr. William Adams, I made a free incision over the cuboid. I cut out a wedge-shaped piece from its centre by means of a sharp gouge, without opening any articulation. As this did not produce much effect, I removed more of the bone, cutting quite through it, opening the articulation with the metatarsal bone of the

little toe, but not that with the os calcis. This proceeding completely effected my object, and I could bend the foot beyond the mesial line, in the outward direction. I then requested Dr. Little to do the same, and having put my finger into the chasm I had made, was surprised in finding my finger pinched so sharply that I was obliged to request the doctor to desist till I removed it.

From this fact it was clear that if the mechanical apparatus could have been then and there applied, and the foot retained in this amended position, the cure would have been completed with the healing of the wound. Having, however, to wait three weeks before pressure could be applied, and then only at intervals, most of the advantage expected to be derived from the excision was lost. This appears to me one of the greatest objections to its performance. If the operation should, from any peculiar circumstances, as in the present case, be again deemed advisable, I do not recommend the plan of gouging away the bone, as adopted in this instance. I should advise the removal of the whole bone, for although an incision into the numerous joints which unite it to the rest of the tarsus is a formidable proceeding, the effect of the operation so performed will be more permanent. The very reason which induces me to advocate the use of the gouge instead of the knife in the removal of carious bone renders this proceeding, in the case of deformity, objectionable. The bone left in either case reproduces new tissue nearly equivalent in bulk to that removed. In the case of disease this reparation is desirable; but in that of deformity I need hardly say it interferes with the object of the excision.

Very little blood was lost during the operation; the wound was brought together with sutures and strapping. Ice was ordered to be applied in the event of hæmorrhage. No constitutional disturbance followed, the wound healed up in fourteen days; but unfortunately there remained so much tenderness, increased by the peculiar temperament of my patient, as already adverted to, that it was found impossible to place any apparatus on the foot for the next

week. At the end of this time the foot was far less pliant than immediately after the operation, though the direction was improved ; it was not so much curved.

From this time the foot gradually though slowly improved, and the sole could now be placed flat on the ground, and my patient could bear the weight of his body on it, and walk with the help of a stick. Up to November, 1854, the same apparatus had been used as has been described above ; I then employed a metal shoe without any division in the sole, and instead of the lateral rack and pinion stem, a slight lever terminating at the ankle-joint by a half circle of metal connecting the lateral stem with a joint at the back of the heel, the combined action of which created a torsional force acting upon the foot.

December 28th. — I divided the tendons of the *tibialis posticus* and *flexor communis digitorum*, as they still offered some resistance in placing the foot on the apparatus. Since then I have relied on the instruments to complete the cure, though very much annoyed by the conduct of my patient. His present condition must be judged of by the accompanying casts, which demonstrate that the soles of both feet are fairly on the ground. They are still increasing in length, and the deformity nearly removed.

With regard to the effect produced in this case by the removal of the cuboid bone, I do not consider it is such as to encourage the profession to perform the operation except in some few old and obstinate cases that have resisted every other treatment. I believe that if this gentleman had been in the hospital, where he would not have been permitted to do as he liked—loosening the straps and unfastening the locks—that he might have been cured without any excision of the bone. Nevertheless, in his peculiar case I believe that the operation has been of the greatest value, inasmuch as, having become tired of restraint, he had determined to return to his native country uncured, but the idea of an operation by which he would be cured more rapidly, encouraged him to remain and persevere. After its performance he was much more amenable to treatment,

and there can be no doubt of its having materially expedited his cure.

In confirmation of what I have said regarding my difficulties in this case, I must quote the following from a letter of my patient's, sent just before he left England. The whole letter accompanies the paper.

“In justice to yourself, I must say that I now feel much vexed and ashamed that I was not two years ago as I am now, which I might have been if I had had the energy to have carried out fully all your valuable directions.”