

on the stretch—the plantar fasciæ and short muscles of the feet contracted so that the plantar arches were greatly increased; the feet were narrowed from side to side, and their length diminished.

On measuring these casts, I find the length of the right foot, from the point of the heel to the end of the great toe, to be 6 inches, and the width of the sole at the ball of the great toe,  $2\frac{1}{2}$  inches.

The same measurements of the left foot are  $6\frac{1}{4}$  by  $2\frac{1}{2}$  inches, and the girth round each foot, immediately above the ball, is  $7\frac{1}{4}$  inches.

All arrangements having been made with Mr. Authors, the mechanic, for the manufacture of boots and instruments, I waited on my patient at her home in Bowmanville, when Dr. Reid, having kindly administered chloroform, assisted by Dr. Allison, I divided the achilles tendons, plantar fasciæ and muscles, stretched the feet as much as I could, and put them up in paste bandages, and directed her to bear as much weight on them from time to time as she could stand.

The boots having been obtained and applied, I got fresh casts taken at the end of six months, with the following gratifying results. The measurements being the same as before, gives for the

Right foot,  $6\frac{1}{2}$ ,  $3\frac{3}{8}$ , and  $8\frac{1}{2}$  circumference.  
Left "  $6\frac{1}{2}$ ,  $3\frac{1}{2}$ , and  $8\frac{3}{4}$  "

Thus we see we have gained length and breadth; and in addition we find that the callosities are fast disappearing, and when the patient sits and slightly extends the knees, she can place the soles of her feet flat on the floor.

A few months after this, finding the structures still rather tense, I divided everything I thought could impede the recovery of our patient,—Dr. Reid again kindly administering chloroform,—and having ordered new boots and stronger steel supports, we persevered until the end of the second year, when I again got Casci, the Italian, of Queen street east, to take casts of the feet, and repeating the former measurements, I got the following results:

Right foot,  $6\frac{3}{4}$ ,  $3\frac{1}{2}$ , 9.  
Left "  $7\frac{1}{4}$ ,  $3\frac{1}{2}$ , 9.

Furthermore, I have to remark that Miss G. can now walk across the floor without either crutch or stick, and can go up and down stairs with considerable ease. When she stands erect the right foot comes flat to the floor, but the left heel is still

elevated about  $\frac{3}{4}$  of an inch, and both feet turn a little inwards.

The elevation of the left heel is not due to any undue contraction of the sural muscles, but to the still remaining unnatural shape of the astragalus, which I expect will be absorbed by pressure so as to allow the foot to come to a right angle with the bones of the leg; and having again had the steel apparatus strengthened, I do not in the least despair of getting the toes turned out enough for all useful purposes.

I have deemed this case, Mr. Editor, worthy of record, as showing what may be accomplished by well directed, determined and sustained effort on the part of the surgeon, especially when aided by an intelligent patient, who is anxious for a successful issue. Most surgeons, taking her age into account, and the solid state of the bones, would have declined her case; but when I remembered that an aneurism by pressure will absorb the sternum, I thought that well directed pressure might change the shape of her tarsus, and so it has.

Some surgeons have advised, and successfully practised, division of the ligamentum longum plantæ and calcaneo-scaploid ligaments in these cases. I admit I was afraid to take so bold a step as that, or division of the anterior part of the internal lateral of the ankle joint, although I believe one or other, or both of these incisions, would have assisted materially in shortening the time required to produce the good result I have obtained.

From what little experience I have had in private practice within the last few years, it seems to me that club-foot is very common in Ontario; what the hospitals may show I do not know. In one year I had 13 feet under observation; and during the last four years I have met with several cases of double Equino-varus, one Equino-valgus, one Equinus with deficiency of part of the foot, one Calcaneus, and one more curious than all, viz., Equino-varus of one foot and Equino-valgus of the other, complicated by total absence of both patellæ, congenital.

In consulting Adams on club-foot, (Jacksonian Prize) page 89, we find that out of 999 non-congenital cases, only 5 gave varus of the one and valgus of the other; and in 764 congenital cases, there were 15, (page 201 op. cit.) so that there were only 20 cases of this difference in the deformity as between the two feet out of a total of 1763 cases; and at