

A Positioning Splint for Use in Tendon Transplantations for Drop Foot

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Details are given of a simple but ingenious splint devised by the author for use in the operation for correction of drop foot. The splint is designed to maintain the patient's foot in a fixed degree of dorsiflexion and in a true plantigrade position and so avoid undue tension on the tendon suture.

One of the difficulties experienced in the course of the operation for correction of a foot drop is the adjustment of the tension of the tendon in such a way that the same tension is reproducible in subsequent operations. Usually the foot is maintained in dorsiflexion by an assistant during the suturing of the transplanted tendon. This is not very satisfactory, however, as the foot may inadvertently be tilted into either inversion or eversion without this being noticed in time; or if the assistant tires during the latter part of the operation, the foot may be allowed to relax and thus put too much strain on the tendon suture.

The splint described in this paper was designed to deal with both these difficulties by maintaining the foot in a fixed degree of dorsiflexion and in a true plantigrade position with reference to inversion-eversion. In this position suture of the tendon can be carried out and the tension measured by the length of tendon pulled distally from the neutral or relaxed position. In the prototype of this splint we initially made the angle of dorsiflexion variable, but in practice we found that, just as in the case of the hand-positioning splint, this was not necessary. In the splint now described, the angle of dorsiflexion is fixed at 70 degrees, and the surgeon is then free to adjust the tension in the tendon in accordance with his own experience.

The splint, which consists of 3 segments, so

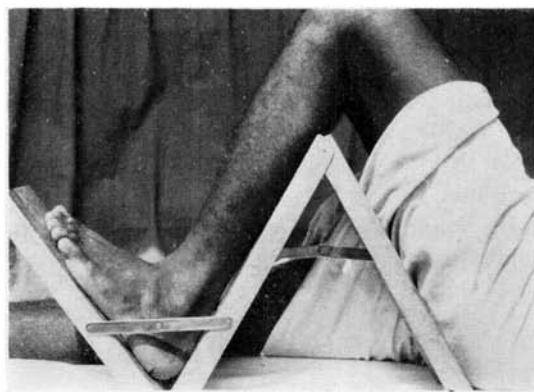


FIG. 1

that it can be folded for purposes of sterilization, is made of either aluminium or galvanized iron, and its width is 10.5 cm (4 in.). Each of the 3 segments is 25.5 cm (10 in.) long and the 2 end segments make each an angle of 70 degrees with the middle segment when opened out fully. The average length of a patient's leg is, of course, greater than 25.5 cm, but when the limb has to be draped this procedure is significantly easier if the middle segment is short.

This splint can be made in any reasonably equipped workshop. The one illustrated in Fig. 1 was made for us by Messrs. Hebbar Bros., instrument manufacturers, Palghat, Kerala State, S. India, from whom these splints are obtainable.