TRIPLE ARTHRODESIS FOR PARALYTIC VALGUS – A MODIFIED TECHNIQUE:
BRIEF REPORT

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Valgus deformity of the foot is commonly encountered after poliomyelitis, which is still a medical problem in Egypt. Triple arthrodesis is usually indicated to correct the deformity and to stabilise the foot after it reaches skeletal maturity. However, technical problems may arise when the conventional technique is used, because dislocating the foot and removing a medial wedge through a lateral approach is not easy (Somerville 1979). It may result in a sloppy rather than a snug fit, and an additional medial incision is sometimes needed to facilitate removing the wedge (Ingram 1971).

It was to meet this difficulty that Williams and Menelaus (1977) introduced the lateral inlay triple arthrodesis as a suitable technique for the undeformed or the valgus foot. In this technique the foot is held plantigrade by an assistant while an oblong trough is cut across the mid-foot (Fig. 1); into this trough a tightly-fitting tibial graft is hammered. The forefoot may be stabilised by drilling two Kirschner wires longitudinally so that one passes through each of the midtarsal joints. If, however, the assistant holds the valgus heel in an overcorrected position, the trough and graft will be too long and a permanent varus deformity will result. This occurred in the first patient in whom we used Williams and Menalaus' (1977) technique and we therefore introduced the modification described below.

Technique. In order to maintain the heel in mid-position a stout Kirschner wire is introduced through the sole of the foot, from the calcaneus to the talus; this is done before the trough is cut or the size of the graft measured. Longitudinal wires through the midtarsal joint are not used, as these would not control the position of the heel and might hinder cutting the trough and impacting the graft. One or two staples are, however, inserted across the tarsal trough to help fix the graft, particularly when a tendon transfer also is being performed.

Patients and results. We have used this modified inlay triple arthrodesis in 18 feet with valgus deformity resulting from poliomyelitis. The age at operation ranged from 12 to 20 years with a mean average of 13.5 years. After an average follow-up of 22 months the result in 17 was entirely satisfactory, with sound fusion in good position. The one unsatisfactory result was in the first patient in whom the lateral inlay technique was used, before we introduced our modification.

REFERENCES


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