CUNEIFORM ROTATION OSTEOTOMY FOR RELAPSED HALLUX VALGUS

H. B. S. KEMP

Many of the surgical techniques currently in use in the management of hallux valgus result in shortening of the first metatarsal. Although this is usually of little significance, if recurrence of the deformity demands further surgical correction, this may produce unacceptable shortening; the first metatarsal head may no longer be capable of transmitting weight, which may lead to metatarsalgia or to stress fractures. A simple modification of the standard cuneiform osteotomy is presented which avoids further shortening.

Operation. The medial capsule is reflected and if the medial exostosis is large it is trimmed. The periosteum is divided circumferentially around the neck and retracted both proximally and distally. A cuneiform wedge, based medially, is cut from the metatarsal neck. This wedge is then rotated through 180° so that the osteotomy is closed medially and opened laterally (Fig. 1). The wedge is, in effect, a free graft and can be difficult to control, so adequate assistance is required. The angle of the wedge must be measured accurately; it is only half that required in an orthodox cuneiform osteotomy. However, the free graft loses approximately 20° of correction in the immediate postoperative period, so a further 20° is added to the estimated angle before cutting the wedge. The graft is internally fixed by introducing a K-wire from the distal medial aspect of the metatarsal head directed proximally and laterally, passing through the graft into the metatarsal shaft on the lateral side. Postoperatively a below-knee walking cast is applied and is worn for six weeks, by which time union has occurred.

Results. Over the past 15 years the operation described has been performed on 17 women aged between 22 and 45 years, in one instance bilaterally. The minimal follow-up has been two years. In all cases the symptoms have been relieved, though three patients were disappointed that full length had not been restored and considered that cosmetically the feet were not satisfactory.

The procedure has also been used on three women with hallux rigidus: in these patients, the base of the wedge was dorsal and it was rotated through 180° to the plantar aspect. Pain has been considerably ameliorated and function improved after follow-up for two and a half years in one and two years in the others.

Discussion. The operation is designed for patients whose hallux valgus has relapsed after operation and in whom a further standard operation would result in unacceptable shortening. It appears to be relatively safe in that if the periosteum is incised circumferentially the blood supply is not compromised and the graft is readily incorporated. To date, no patient has manifested avascular necrosis of the graft or delayed union.

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