Technical Section

TECHNICAL NOTES & TIPS

TECHNICAL NOTES

Excision of metatarsal bone and metatarso-phalangeal (MTP) joint in neuropathic diabetic foot ulcer

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BACKGROUND

Neuropathic diabetic ulcers are the result of joint deformity and abnormally high foot pressures.¹ They usually present over the first metatarso-phalangeal (MTP) joint or on the plantar aspect of metatarsal heads (Fig. 1). They usually heal if pressure is relieved, infection is treated, providing the arterial circulation is not compromised.²

TECHNIQUE

The skin incision is made on the dorsum of the foot overlying the osteomyelitic metatarsus and MTP joint(s) (Fig. 2). We favour a

Figure 1 Ulcer in the plantar aspect of 2nd, 3rd, and 4th toes pre- (A) and post- (C) excision of the relevant MTP joints. The incision was made transversely in the case of multiple adjacent metatarsal involvement (C).

dorsal approach as it involves healthy soft tissues free from inflammation, and this area is not on any pressure points on the foot. We usually operate on the hallux, although up to two toes can be operated on at the same operation. The operation is very similar to Keller's excision arthroplasty for hallux valgus,³ but it is important to dissect close to the metatarsal bone in order to avoid

Figure 2 Ulcer in the plantar aspect of 2nd and 5th toes (A). Longitudinal incisions were made on the dorsum of the foot with corrugated drains inserted (B).

damage to the digital neurovascular bundle. The infected bones are excised and all septic tissue carefully debrided. The wound is washed, and the skin closed with interrupted sutures over a corrugated drain. The foot is dressed lightly with gelonnet, wool and crepe bandage.

Postoperatively, the patient should continue antibiotics and remain on bed-rest for 5 days, before being discharged with special well-padded surgical footwear.

DISCUSSION

This technique saves the toe and heals rapidly. The conventional ray amputation often involves the sacrifice of healthy tissue, at the expense of a small area of ulceration next to the infected MTP joint. The mobile flail joint created quickly fills up with granulation and fibrous tissue, allowing a reasonable range of movement. This operation is useful in neuropathic diabetic foot ulcers over the MTP joint, where the blood supply is good, or when peripheral arterial disease has been rectified.

References

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A new technique for reduction of paediatric femoral fractures using elastic stable intramedullary nails

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BACKGROUND

Flexible intramedullary nails have revolutionised paediatric femoral fracture management.^{1–4} Achieving a closed reduction may sometimes be difficult, requiring special measures that can cause additional trauma, including use of a traction table, or an 'F'-shaped radiolucent reduction device (Fig. 1), or even an open reduction. We describe a novel and effective method of achieving reduction whilst the nails are being inserted.

Figure 1 The fracture reduction 'F' tool.