Simple glove guard to protect soft tissues during digital amputation

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BACKGROUND

Digital amputation (also known as 'digital terminalisation') is a common procedure carried out by plastic surgeons and orthopaedic surgeons. The aim in these procedures is to maximise function by preserving the length and sensibility of bone, and to provide robust soft-tissue coverage of the bony stump. Here, we describe a simple technique to protect soft tissues during digital amputation.

TECHNIQUE

One layer of a sterile surgical glove is cut into a square of dimension 4cm × 4cm. Then, this square is folded in half and a cut of 5mm made halfway along the folded edge. This action leaves a hole in the centre of the square when unfolded (Fig 1). Once the digit has been prepared, the central hole is placed over the exposed bone end (Fig 2). The surrounding square is pushed down on top of soft tissues to protect them. Then, the surgeon can use an oscillating saw to cut through the bone safely.

Figure 1 Glove guard protecting soft tissues during digital amputation

Figure 2 Once the digit has been prepared, a central hole is placed over the exposed bone end

DISCUSSION

Here, we describe an inexpensive, simple soft-tissue guard made from a section of glove. This guard helps to prevent inadvertent damage to soft-tissue flaps, and provides a clear aid to saw through bone at the desired level confidently. We have used this soft-tissue guard in emergency and elective settings, and found it helpful for surgeons at all levels of experience.

A simple technique for injecting the small joints of the fingers and thumb using finger traps for traction

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BACKGROUND

Injection of steroids for pain relief into the small joints of the fingers and thumb is a well known treatment method. It is not easy to insert the needle accurately into the joint. We have used finger traps to distract the joint for injections.

TECHNIQUE

Under image intensifier guidance, after ring block anaesthesia, the finger trap is applied distally (Fig 1). With an assistant applying traction, a 25G injection needle is inserted into the joint under fluoroscopy and the steroid injected (Figs 2 and 3). We have found a point just dorsal to the midlateral position where it is safe and easy to enter the joint.

DISCUSSION

It is not easy to inject small joints of the hand owing to the narrow joint space, which can be reduced further by the arthritic process, the shape of the joint, associated osteophytes and calcification of

Figure 1 Finger trap applied to the finger for traction

Figure 2 Fluoroscopy image before traction

ligaments. Intra-articular injections can be given inaccurately if sufficient precautions are not taken.¹ Distraction of the joint by finger trap is a useful method to create space for injections. It may be possible to apply excessive traction: use of fluoroscopy would avoid this happening.

We have used this technique in 12 joints in 7 different patients. Only once did we fail to inject into the joint. We recommend the use of finger traps for distraction of small joints of the hand for injection (under fluoroscopic guidance) and not to over distract them.

Reference

1. Jones A, Regan M, Ledingham J *et al*. Importance of placement of intra-articular steroid injections. *BMJ* 1993; **307**: 1,329–1,330.

Figure 3 Fluoroscopy image showing needle in the proximal interphalangeal joint after traction

Novel intraoperative applications for the metal suction cannula

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BACKGROUND

The Suzuki frame, as described by Suzuki *et al* in 1994, is a skeletal traction system for comminuted intra-articular fractures and fracture dislocations of the proximal interphalangeal joint of the hand (Fig 1).¹ In order to fabricate such a frame, hand surgeons often use two needle holders to firmly hold the K-wires, and subsequently use one to form a series of 90° bends and turns. This method can be cumbersome, resulting in suboptimal angulation, and leaves the sharp K-wire ends exposed throughout the procedure.

TECHNIQUE

The metal suction cannula, which is readily available in standard instrument sets, is passed over the K-wire to the proposed point of angulation and bent (Fig 2). Using the principle of levers, the longer the distance from the fulcrum compared with the grip of a needle holder, the greater the moment of force and the better controlled the bend.