(5cm x 11.4cm [3201]) is then inserted (Fig 1). Access can be clearly seen in the final picture (Fig 2) with good exposure of the relevant anatomy: axillary vein, long thoracic nerve, thoracodorsal trunk. The clamp and blade are the only components that require decontamination, further reducing sterile services costs.

Figure 2 Exposure of relevant anatomy through retraction

DISCUSSION

This technique can be utilised if surgical assistance is unavailable and provides superb retraction for the un-assisted surgeon. It is also a useful training adjunct to allow excellent exposure for consultants to supervise surgical trainees.

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The extended external fixator kickstand for free and local flap reconstruction of the heel

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BACKGROUND

Heel defects requiring local or free flap reconstruction pose a significant reconstructive challenge. Pressure avoidance on the flap postoperatively is crucial to ensure success. Various authors have described the use of kickstands to ensure appropriate elevation, venous drainage and oedema control.^{1,2} Due to problems experienced with other techniques, we developed the extended kickstand described below.

TECHNIQUE

Using the Orthofix Galaxy™ Fixation system (Lewisville, Texas, US), two 6mm anteroposterior screws are inserted into the tibia along the safe corridor under image intensifier guidance. Large clamps along with 200mm, 300mm and 400mm carbon fibre rods are used to construct two parallel triangular frames with cross-link reinforcement to form a robust external fixator kickstand (Fig 1).

This layout was effective with the leg placed on a hard surface, such as the operating table. However, when placed on the ward bed, the frame sunk into the compliant mattress leading to flexion of the knee, dependency of the as well as and congestion and swelling. To combat this, a modified construct was created by extending the frame distally providing a broad, long base (Fig 2). This maintained elevation of the foot at all times. Degree of elevation can be adjusted as desired.

Figure 1 External kickstand fixator

Figure 2 Extended external fixator kickstand

DISCUSSION

Postoperative care of flap reconstructions to the heel is particularly challenging. Offloading the reconstructed area allows pressure relief, prevention of shear, immobilisation, ease of neurovascular monitoring and wound care. We remove the kickstand after three weeks and to date have not encountered any difficulties with dangling regimes with the frame on.

References

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Key steps in anatomical reduction for fibula nail insertion

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Figure 1 Supination external rotation fracture: anteroposterior and lateral plain radiographs of SER ankle fracture as described by the Lauge Hansen Classification showing a spiral oblique fracture of the fibula

BACKGROUND

Fibula nailing is a minimally invasive alternative to open reduction and internal fixation for lateral malleolar ankle fractures. We believe

Figure 2 Fracture reduction: reversing the deforming forces. The foot is held in an internally rotated and pronated position to facilitate guidewire insertion.