Technical Section [TECHNICAL NOTES AND TIPS

Closed reduction of femoral fractures using an L-shaped arm retainer

SD Brookes-Fazakerley, DM Wharton

Wrightington, Wigan and Leigh NHS Foundation Trust,
Wrightington, Lancashire, UK

CORRESPONDENCE TO

Steven D Brookes-Fazakerley,

E: sbrookesfazakerley@yahoo.co.uk

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The use of henna as a semipermanent skin marker to indicate the site of application for ultrasonography bone stimulation

J Fazekas, N Riley, I McNab

Oxford University Hospitals NHS Foundation Trust, UK

CORRESPONDENCE TO

Janka Fazekas, E: jankafazekas@hotmail.com

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Closed reduction of femoral fractures for intramedullary nailing can be difficult. Techniques include the strategically placed bump, axillary crutch and F-tool. However, these have disadvantages including difficulty in adjusting, sterility and radio-opacity.

We propose using an L-shaped arm retainer. Sealing it in a sterile drape provides a readily available reduction tool that is radiolucent and atraumatic. Its right-angle L-shape allows indirect reduction of the fracture by pushing of the surgeon's abdomen/thorax against its broad base and the narrow end against the thigh in the appropriate orientation (Figure 1). This frees up the surgeon's hands and avoids exposure to radiation.

Figure 1 L-shaped arm retainer wrapped in a sterile drape and crepe bandage being demonstrated as a closed reduction tool on a patient with a femoral shaft fracture undergoing intramedullary nailing

BACKGROUND

The use of ultrasonography stimulation to accelerate bone healing following fractures is widespread in orthopaedic trauma.¹ The site of the non-union, where the ultrasonography probe should be applied, is identified and marked in clinic by the surgeon. When performed with a surgical marker pen, this mark fades following washing and has to be reapplied on a regular basis. The use of henna (readily available from any art shop) to mark the position of a stoma preoperatively has been reported.² We describe its use as a semipermanent marker to demonstrate the site of application of an ultrasonography bone stimulator probe.

Figure 1 Clinical photograph showing the henna paste marking on the patient's hand, indicating the site where the ultrasonography probe should be applied in a patient with a symptomatic scaphoid non-union