lateral view, the hand should be moved back to the radial border of the marked hand and elevated to approximately 30°. This position is shown by the additional outline (Fig. 1D).

DISCUSSION

Spending 10 s drawing around the hand will, over the course of an operation, save time and the frustration of having to repeat several images. It also reduces the radiation dose to the patient, theatre staff and surgeons. A similar technique can be used for finger imaging and is particularly useful with magnified images.

The cut-down 1-ml syringe – an excellent improvised drill sleeve

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BACKGROUND

Protecting the soft tissues while drilling bone is essential. Conventional best practice suggests use of a drill sleeve to cover the drill bit or K-wire. On occasion, the sleeve is either unavailable or too long.

Figure 1 Cut off finger rest end for drill bits less than 2 mm diameter.

Figure 2 Cut off nozzle for drill bits 2–5 mm in diameter.

TECHNIQUE

A 1-ml syringe does an excellent job as an improvised drill sleeve. For K-wires and small drill bits (< 2 mm), cut off the finger-rest end (Fig. 1); for larger drills bits and half-pins (2–5 mm), cut off the nozzle (Fig. 2).

DISCUSSION

Previous improvised devices have included a Yankauer sucker.¹ However, we found the Yankauer difficult to cut with the suture scissors or a blade. The 1-ml syringe is usually readily available. It is very cheap, at approximately 7.5 pence each (<www.medicaltek.co.uk>), it is easily cut with standard suture scissors and it is radiolucent. The syringe nozzle will centralise the drill bit in the plate hole. The interference fit between nozzle and drill bit captures and retains the bony swarf whilst on forward rotation. The syringe can be cut to leave only a short length of drill bit visible and thereby act as a drill stop. This may be of re-assurance while fixing plates to bones with vulnerable relations such as the clavicle.

Reference

1. Pratt DA, Tennent TD. Use of a Yankauer sucker as a temporary soft tissue protector and drill stop in surgical procedures. *Ann R Coll Surg Engl* 2007; **89**: 436–7.

The use of non-adhesive skin traction to prevent distal migration of a cylinder cast

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BACKGROUND

A cylinder cast is indicated for conservative management of injuries to the extensor apparatus and other soft tissue structures around the knee. A long-leg cast can be used for similar indications though ankle stiffness may ensue since it does not permit

Figure 1 External impingement upon the ankle with a standard cylinder cast.

Figure 2 Gap between the stirrup and foot.

free motion of this joint. The main disadvantage of a cylinder cast is that the cast will migrate distally and cause undue pressure anteriorly on the dorsum of the foot, medially and laterally on the malleoli, and posteriorly on the Achilles tendon. This migration can be secondary to gravity, conical shaped legs and a relative loosening effect occurring as the swelling around the injury reduces (Fig. 1). The use of an adhesive skin traction integrated within has been described to prevent migration¹ though this is potentially associated with allergy² to the adhesive and dermal injury on removal of the traction material. We propose the use of non-adhesive skin traction which we believe is equally efficacious but not associated with the side-effects described.

Figure 3 Division of the stirrup provides medial and lateral supports.

Figure 4 Stirrups are interposed between the first and subsequent layers of cast material.

Figure 5 The cast is maintained in its original position and does not slip down towards the ankle.

TECHNIQUE

Non-adhesive skin traction is applied with a 10-cm gap left between the stirrups and the foot (Fig. 2). The end of the stirrups is divided so that it can be folded back medially and laterally (Fig. 3). Wool and the first layer of cast material are applied in the standard manner. The folds of the stirrup are then placed adjacent to the cast material (Fig. 4) and the cast is reinforced with further layers (Fig. 5).

DISCUSSION

This method converts a longitudinal downward force into a compression force around the limb to prevent distal migration of the cast.

References

1. Maxwell DG, Dalton AJ. A novel solution for the notorious long-leg cylinder cast. *Injury* 2004; **35**: 432–4.
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Accurate injection of small joints – a useful technique

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Figure 1 Injection of local anaesthetic.

Figure 2 Removal of syringe and backflow of fluid.

Figure 3 Injection of steroid.

BACKGROUND

Small joint injections are frequently necessary. Examples include triamcinolone for osteoarthritis of the hand and feet as well as contrast material injected as part of an arthrogram. There is evidence that accuracy of needle placement varies with physician experience into small joints of the finger.¹ The side-effects of extra-articular triamcinolone are also well documented.² It is important to ensure the material injected is correctly inserted into the joint with some opting for the use of image guidance. Although widely used in hip arthrograms, we present this safe, simple and image-free method for accurate injection into small joints.

TECHNIQUE

A combination of 1% lignocaine and 0.25% marcaine local anaesthetic is prepared. The volume used varies according to the joint being injected. The anaesthetic is injected under the skin, the needle then advanced into the joint and more local anaes-