Technical Section [TECHNICAL NOTES AND TIPS

A novel way to augment a tibial prosthesis for significant bone loss

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During joint replacement, when faced with significant unilateral bone loss of the tibia, impaction bone grafting has been shown to be effective in small defects.¹ We propose a technique for augmenting a prosthesis to fill a large defect. Using tibial augments of decreasing size provides a tapered effect. A stepped cut of the tibia is performed and the size of the defect is measured. Each block is cemented on top of the other up to the desired size (Fig 1) and can then be implanted into the tibia (Fig 2).

Figure 1 Intraoperative photograph of the augmentation technique

Figure 2 Postoperative radiography of the augmentation technique

Reference

1. Kharbanda Y, Sharma M. Autograft reconstructions for bone defects in primary total knee replacement in severe varus knees. *Indian J Orthop* 2014; **48**: 313–318.

A novel technique to assist arthroscopic screw removal

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A video demonstration of this technique is available to view at:

<http://publishing.rcseng.ac.uk>

BACKGROUND

Arthroscopic removal of screws has advantages although it can be technically challenging. It can be difficult to withdraw the screw and there is a risk of dropping it, resulting in a loose body. Several techniques to lessen this risk have been described. However, they require a skilled assistant, a washer or a cannulated screw. None help with the difficulty of withdrawing the screwdriver while remaining engaged in the screw head.

TECHNIQUE

A few turns of the screwdriver are made to back the screw out and expose the shaft. Via an accessory portal, a loop of suture is placed around the neck of the screw. A simple sliding knot is tied and pulled tight. A knot pusher can be used to make the knot more secure. The suture limbs are withdrawn via the original portal and the screwdriver is re-engaged. As the screwdriver is turned, traction is applied to the suture limbs. This reproduces the 'negative traction' effect and ensures that as the screw comes free of the bone, it is not lost in either the joint or soft tissues.

DISCUSSION

Various techniques for the arthroscopic removal of screws have been described. Forceps can be used when all but the last few threads have been disengaged¹ or an assistant can stabilise the screw via an accessory portal.² If the screw is cannulated, a guidewire³ or bent K-wire⁴ can be placed in the cannulated shaft of the screw.

When removing a screw and washer, a suture may be looped through the washer to prevent loss.⁵

All of these techniques either risk losing the screw or are applicable only to certain screw types. None provides the 'negative traction' required when removing a screw. The technique we describe