collateral damage, at regular intervals, eg 5mm, to avoid overlap of heated areas.

DISCUSSION

The use of various inks has the disadvantage of being readily dissolved or washed away in operative sites. Methylene blue has documented toxicity due to oxide and free radical production causing localised inflammation and vasoconstrictive effects.² In areas with poor perfusion, excessive use may lead to tissue necrosis.³ Use of guiding drill holes may cause irreversible bone damage/weakening in an area larger than the intended cut size or an adjacent bone.

This modified technique improves accuracy and symmetry of bone cuts. The marks remain visible despite blood or irrigation fluid, unlike commonly used dye materials. If further definition is required, ink can be placed in the indentations (Fig 3). This technique is also haemostatic.

Figure 1 A monopolar diathermy with fine Colorado needle tip used to create surgical bone markings prior to maxillary movement

Figure 2 Minimal indentations in the bone surface along the intended line of cut for the osteotomy

Figure 3 Bone markings and additional filling with ink, where required, enable greater accuracy in following lines of intended cuts in osteotomy cases

References

1. Granick MS, Heckler FR, Jones EW. Surgical skin-marking techniques. *Plast reconstr surg* 1987; **79**: 573–580.
2. Lee JH, Chang CH, Park CH, Kim JK. Methylene blue dye-induced skin necrosis in immediate breast reconstruction: evaluation and management. *Arch plast surg* 2014; **41**: 258–263.
3. Dumbarton TC, Gorman SK, Minor S *et al*. Local cutaneous necrosis secondary to a prolonged peripheral infusion of methylene blue in vasodilatory shock. *Ann Pharmacother* 2012; **46**: e6.

K wire in difficult screw removal armamentarium

S Kasture, SKV Pydah

Ysbyty Gwynedd, Bangor, UK

CORRESPONDENCE TO

Sarang Kasture, E: sarangkasture@gmail.com
doi 10.1308/rcsann.2020.0061

BACKGROUND

Known risk factors for difficult screw removal include use of a 3.5mm locking head screw, a prolonged interval since screw insertion, and young patient age.¹ Furthermore, removal of a screw from a plate with bone overgrowth on to the head is challenging. It is particularly difficult to remove bone from within the screw head drive which engages with the screwdriver during removal.

TECHNIQUE

We report a novel method using a Kirschner (K) wire in such cases. A 1.25mm or 1.6mm wire is driven through the overgrown bone in the screw head drive in the centre without striking its margins (Fig 1). This causes the overgrown bone to splinter. Any residual fragments are loose and easily removed (Fig 2). The K wire can also be used to remove bone overgrowth along the screw-plate junction

at the periphery of the head, which is required to disengage screw from the plate (Fig 1, arrow). There is less concern of damage to the metal as this part of the screw does not take part in engaging the screwdriver.

Figure 1 K wire causing splintering of the overgrown bone in the screw head drive. Arrow showing the screw head and plate junction

Figure 2 Overgrown bone removed in entirety

DISCUSSION

We promote this as a quick technique for removing all bone in the screw head drive without damaging its margins, so helping to establish a secure fit of the screwdriver for removal. We therefore recommend having a humble K wire available in difficult screw removal set.

Reference

1. Fujita K, Yasutake H, Horii T *et al.* Difficulty in locking head screw removal. *J Orthop Sci* 2014; **19**: 304–307.

Protecting the surgeon's hand: a technical tip when implanting a cemented acetabular component

DS Bhachu, PN Unnikrishnan

Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust, Oswestry, UK

CORRESPONDENCE TO

Davinder Bhachu, E: davinder.bhachu@nhs.net
doi 10.1308/rcsann.2020.0110

BACKGROUND

When implanting the cemented acetabular component of a total hip replacement, satisfactory implant position is achieved using a combination of axial load and maintenance of correct position while the cement is allowed to cure. This controlled axial load is achieved with the surgeon providing direct pressure on the cemented acetabular component via a ball ended handle over the implant introducer.

In order to provide increased and sustained pressure while the cement cures, the heel of the hand is commonly placed against the tip of the ball ended metal handle. This is to provide axial loading with the other hand, which is positioned to prevent component drifting. This direct pressure on the heel of the hand can be considerably uncomfortable and can lead to bruising given the handle's sharp edges. Clearly, with an operating list including multiple patients requiring the same operation, this can become an exaggerated and cumbersome issue.

Figure 1 Original intended use of blue component