Figure 3 Confirmation of 20% oversized image.

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A variable angled drill guide for acetabular screw insertion in total hip replacement

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BACKGROUND

Cementless cups are routinely employed in resurfacing and total hip arthroplasty. The acetabular component fixation is by interference fit,

Figure 1 Variable angled guide.

Figure 2 Variable angled guide at 120°.

Figure 3 Variable angled guide at 160°.

which can have the option of screw fixation. The use of screws can potentially compromise neurovascular structures around the pelvis.^{1,2} The use of the pelvic quadrant system^{1,3,4} provides the surgeon with the safe areas for placement of screws. The postero-superior and the postero-inferior quadrants have been shown to be safe and also provide the maximum screw purchase.^{1,3,4} Most instrumentation sets employ a fixed angle drill guide for the placement of the acetabular screws. This can make screw placement technically difficult in sockets with reduced access due to small incisions, depth of acetabulum or a relatively closed cup position. If the screw is inserted at an oblique angle, the head of the screw remains prominent and can obstruct the insertion of the liner, damage the polyethylene liner, break the ceramic liner and cause subluxation of the ceramic or metal liner.

TECHNIQUE

We describe a simple variable angled drill guide (Fig. 1), which allows the screw to be placed in a wide range of angles from 120° to 160° (Figs 2 and 3). It consists of a handle with a drill guide. The attachment of the drill guide allows for variable angles to be set by the use of a ratchet (Fig. 1). Thus, the angle of the drill guide can be varied to allow safe and accurate screw insertion.

DISCUSSION

This novel and simple device allows ease of placement of screws and enables the surgeon to utilise the safe quadrants with the maximum bony purchase and accurate seating of the liner within the cup.

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A helpful technique for removing resurfacing acetabular components

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BACKGROUND

Removing well-fixed, cementless acetabular components has been made considerably easier since the introduction of rotating

Figure 1 A ball of bone cement is placed within the acetabular component during the dough phase.

Figure 2 Indent the centre of the cement with the 32-mm head on the Explant handle.

handle devices, including the Explant Acetabular Cup Removal System (Zimmer, Warsaw, IN, USA), that preserve bone stock by extracting the cup using a curved cutting blade matching the external diameter of the prosthesis.¹ Explant is supplied with 22-, 26-, 28- and 32-mm femoral head sizes and is not designed to remove resurfacing acetabular components with internal diameters over 32 mm. Birmingham Hip Resurfacing acetabular components (Smith and Nephew Orthopaedics, Warwick, UK) can be removed with Explant using specially designed inserts. These inserts do not allow for universal adaptation of the Explant, which therefore remains incompatible with the inner diameters of many other resurfacing components. It is possible to obtain custom-made devices but this incurs expense and a lag time.

TECHNIQUE

To allow removal of a 50-mm outer diameter, 45-mm inner diameter, well-fixed resurfacing acetabular component, we placed a ball of bone cement within the acetabular component during the dough phase (Fig. 1) and indented the centre of the cement with the 32-mm head on the Explant handle (Fig. 2). Once the cement had cured, Explant was then used to remove the cup in the normal fashion.

DISCUSSION

This is an economic, effective and adaptable method that can be utilised in cups of unusual internal diameter without the need to order a costly custom-made attachment. Until Explant and similar devices come with multiple head sizes to fit all resurfacing cups, this will remain a useful technique.

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A technique for applying a non-adherent, tri-laminate dressing for hypospadias repair

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BACKGROUND

The aim of dressings in hypospadias repair is to maintain haemostatic pressure over the wound and maintaining the phallus in an upright position. It should be easy to apply and comfortable. The