DISCUSSION

We recommend using a K-wire rather than a guide pin because the end of the K-wire is easier to be bent. The length of the cannulated screw can be found by checking the marking on the screw cap or the index surgical records so that the K-wire cannot be drilled too deep and injure the posterior blood vessels or nerves. The technique described here can also be used in any other joints.

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Fixator assisted lateral opening wedge osteotomy of the distal femur

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BACKGROUND

Lateral opening wedge distal femoral osteotomy is commonly employed in the correction of genu valgum.¹ Application of the lateral locking plate, however, is frequently impeded by the osteotomy distractor. Placing the distractor eccentrically either anteriorly or posteriorly results in transformation of the rectangular shaped osteotomy gap to a trapezoidal shape, introducing a degree of procurvatum or recurvatum to the correction respectively. Medial cortical hinge fractures introduce additional degrees of freedom, rendering rotation and angulation of the osteotomy difficult to control and correct. We describe the use of a Hoffmann mini fixator to maintain osteotomy correction accuracy during bone grafting and plate application.

TECHNIQUE

A Hoffmann mini fixator is applied through a lateral incision to the anterolateral surface of the femur. Two half-pins are inserted parallel to each other and on either side of the already marked osteotomy site, at 45° to the coronal plane. The pins are connected with a short bar via two pin-to-bar connectors. The osteotomy is performed midway between the pins and opened with the osteotomy distractor to the desired correction. The pin-to-bar connectors are then tightened to preserve the achieved correction and the distractor is slid posteriorly. This maintains a symmetrical osteotomy gap while allowing unrestricted access for bone grafting of the osteotomy and application of the locking plate (Fig 1).

DISCUSSION

Our technique facilitates correction accuracy alongside ease of bone graft insertion and lateral locking plate application. In the event of a

Figure 1 Configuration of fixator assisted lateral opening wedge distal femoral osteotomy

medial cortical hinge fracture, the half-pins may serve as reference points to ensure correct rotation at the osteotomy site.

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A simple technique for ceramic liner extraction during revision total hip arthroplasty

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BACKGROUND

Ceramic bearings were introduced to reduce wear and increase long-term survivorship of total hip arthroplasties. Ceramic-on-ceramic bearing articulations are harder, scratch resistant and more hydrophilic than other bearing couples, with the benefit of decreased wear and particle load to surrounding tissues.¹ So far, long-term follow-up results have been excellent.^{2,3} Studies comparing ceramic couplings versus metal-on-polyethylene combinations have shown fewer revisions and less osteolysis at ten years.⁴ Revision of ceramic components, however, is not as straightforward as that of other bearing couples and can be challenging. When revising a ceramic liner, it is important to remove the insert without damage to the inner surface of the cup or fragmentation of the liner. Fragments are a major source of third-body wear to subsequent articulations.⁵ We describe a simple reproducible method for disengaging the ceramic insert from the acetabular component.

Figure 1 Drill held against outer diameter of acetabular shell

Figure 2 Removal of ceramic liner in one intact piece

TECHNIQUE

Circumferential exposure is achieved so the shell and liner are clearly visible. A high frequency drill is held against the outer diameter of the acetabular shell (Fig 1), allowing transmission of the vibrations to the ceramic Morse taper, loosening the taper and allowing the articulation to fail without fragmentation. The loose liner can then be delivered undamaged (Fig 2). Subsequent revision can be performed as required.

DISCUSSION

Revision of a total hip arthroplasty needs comprehensive knowledge of the characteristics of the articulating materials. This simple yet effective technique, which uses readily available equipment, can be employed when faced with these potentially challenging revisions.

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Use of the locking guide in facilitating the removal of locking plates

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When removing a locking plate, there can be difficulty in prising the plate from the bone despite removing all the screws. Once overgrowth of tissue is removed, the use of an instrument to create a plane between the plate and the bone or to carefully lever the plate from the bone is often required, with the inherent risk of bone loss or fracture. We have found that the insertion of the locking guide into the plate (Fig 1) enables the surgeon to gain better purchase on the plate, facilitating plate removal with less frequent need for risky manoeuvres.

Figure 1 The locking guide was used to aid removal of this distal radius volar locking plate.