

Brief Communication

A Technique of Revision of Failed Acetabular Components Leaving the Femoral Component *in situ*

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Abstract: Management of a failed acetabular prosthesis in the presence of a well-fixed femoral prosthesis poses a technical challenge in revision joint arthroplasty. While failures can occur at any age during the lifetime of a prosthesis, a pattern has emerged of earlier failure of the femoral component and later failure of the acetabular component. The authors describe a technique in which the stable femoral prosthesis is left *in situ* during acetabular revision. The advantages of this technique include excellent exposure of the acetabulum, reduction in operative time and intraoperative morbidity, as well as early postoperative mobilization. **Key words:** failure, femoral component, acetabular component, *in situ*, revision.

Surgical Technique

Preoperative planning is important and includes careful clinical assessment and inquiries about the presence of groin and buttock pain (symptoms of a loose component) [1].

The patient is placed in the lateral decubitus position in a pelvic positioner. The hip is approached posterolaterally and the sciatic nerve is identified and protected. The deep insertion of the gluteus maximus muscle is released from the linea aspera leaving a cuff of tissue for repair. The femoral head is dislocated and an assessment is made of the femoral component's stability by applying a torque to the prosthesis. Any granulomata around the femoral neck are excised and the cement mantle is resealed, if necessary, with cement. The femoral head is protected with a cotton cover. If the femoral

component is modular, the femoral head is routinely removed and a cotton cover placed over the Morse taper.

The hip capsule is elevated anteriorly from the acetabular rim using diathermy. A periosteal elevator is used to continue the subperiosteal dissection anterosuperiorly for 3 to 5 cm. This creates an anterior pocket between the anterior wall of the acetabulum and the rectus femoris muscle. The limb is then externally rotated and the femoral head placed in the newly created "pocket." The retracted femoral component lies on the iliopectineal eminence within the newly created pocket. The pelvic cavity is never breached or entered. A curved Hohman retractor (Howmedica, Rutherford, NJ) is placed anterior to the acetabulum with the femoral component behind it (Fig. 1). The cloth head cover prevents metal-on-metal contact. The exposure is now complete and acetabular revision is performed.

The senior author (M. J. N.) has performed 256 cementless revision total hip arthroplasties between 1988 and 1995. Fifty-three patients have had acetabular component revisions using the technique

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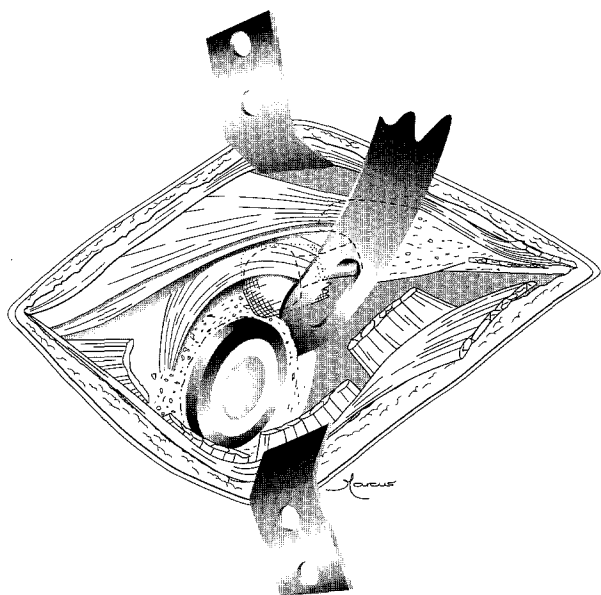


Fig. 1. The acetabulum with the Hohman retractor placed anteriorly, retracting the femoral component.

described. Indications for revision include loosening and instability. Exposure was satisfactory in all 53 cases, and this technique has never had to be abandoned due to inadequate access to the acetabulum.

Discussion

There is significant morbidity involved in the revision of a stable femoral component, including prolonged operative time, risk of intraoperative femoral fracture, and the need to delay postoperative mobilization. If it is accepted that the femoral component, which has not failed, is likely to remain stable in the long term, it would appear logical to revise only the acetabular component [5,6].

There are three surgical options to access the acetabulum adequately:

1. Removal of the femoral head if the implant is modular. This may still leave a prosthetic neck-obstructing access.
2. Removal of the prosthesis from an intact cement mantle and reimplantation at the end of the procedure [2-4].
3. Retracting the femoral head into an anterior pocket as described.

It is not our intention to present our results of acetabular revision surgery, but rather to describe a technique that has proven most successful in acetabular component revision in the presence of a stable femoral component.

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