Case reports

NON-OPERATIVE MANAGEMENT OF A PERI-PROSTHETIC SUBCAPITAL FRACTURE AFTER METAL-ON-METAL BIRMINGHAM HIP RESURFACING

D. Cumming, M. J. F. Fordyce

From Kent & Sussex Hospital, Tunbridge Wells, England

We describe a patient who sustained a peri-prosthetic fracture of the femoral neck two weeks after undergoing a resurfacing procedure for osteoarthritis of the hip. The fracture was minimally displaced and a satisfactory outcome was obtained following conservative treatment.

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Hip resurfacing has always been an attractive concept for younger patients. In the 1970s the outcome after surface replacement was good in the short term, but long-term data led most orthopaedic surgeons to abandon this procedure.1 The mechanism of failure was originally thought to be avascular necrosis of the femoral head and neck leading to subcapital fracture. Most recently it has been suggested that failure may be due to acetabular loosening initiated by a foreign body response to wear debris.2 This has led to the development of metal-on-metal resurfacing techniques. Again, the early results in young patients were encouraging.3,4 Fracture of the femoral neck is thought to be a rare complication of this procedure.

Case Report

A 60-year-old woman presented with osteoarthritis of the right hip having recently undergone a left Birmingham hip resurfacing with a satisfactory outcome (Midland Medical Technologies, Birmingham, UK) (Fig. 1). She underwent a similar procedure on the right hip using an extended posterior approach and standard instrumentation (Midland Medical Technologies). A 48 mm acetabular and a 42 mm femoral component were used. There were no intra-operative or early post-operative complications and she was discharged fully weight-bearing at four days. Radiographs showed no adverse features (Fig. 2).

Two weeks after the operation she developed acute pain in the right hip and radiographs showed varus tilting of the femoral component and a fracture of the femoral neck (Fig. 3). A decision was made to revise the femoral component to a conventional stemmed prosthesis. In the interim she was mobilised non-weight-bearing. At the time of admission for the revision two weeks later, the symptoms were improving; a radiograph showed no change in the position of the fracture and a trial of conservative management, non-weight-bearing, was advised. The symptoms continued to improve and partial weight-bearing was allowed six weeks later.

Radiographic follow-up at ten weeks showed no further displacement of the femoral component and at nine months showed union and remodelling of the fracture (Fig. 4). Clinically, there was a symmetrical range of movement of both hip joints. An Oxford Hip
Score\textsuperscript{5} of 14 for the right and 12 for the left hip confirmed excellent function. Radiographs at 15 months showed further remodelling.

Discussion

Although there have been few published results of the Birmingham hip resurfacing technique, fracture of the femoral neck, particularly if there is notching of the bone and varus alignment of the femoral component, is a complication which has been described following previous similar techniques.\textsuperscript{6}

There have been no previous reports of the conservative management of this complication of hip resurfacing. In patients who sustain a minimally displaced peri-prosthetic femoral fracture in the early post-operative period after hip resurfacing, it would seem reasonable to try a period of conservative management before considering further surgery.

No benefits in any form have been received or will be received from a commercial party related directly or indirectly to the subject of this article.

References

\textsuperscript{1} Freeman MAR, Cameron HU, Brown GC. Cemented double-cup arthroplasty of the hip: a 5-year experience with the ICLH prosthesis. \textit{Clin Orthop} 1978;134:45-52.


INTRAPELVIC DISLOCATION OF THE HEAD OF FEMUR THROUGH THE OBTURATOR FORAMEN ASSOCIATED WITH IPSILATERAL FRACTURE FEMUR

A. W. Farag, K. A. Shohayeb

\textit{From Cairo University, Cairo, Egypt}

We describe a case of traumatic anterior dislocation of the hip in a 14-year-old boy with associated intrapelvic displacement of the femoral head and ipsilateral fractures of the shaft of the femur and greater trochanter. There was a delay in presentation of eight days. At operation the femoral head was reduced into the acetabulum after enlarging the obturator foramen by performing an osteotomy of the superior pubic ramus.

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Traumatic dislocations of the hip have been classified as anterior, posterior and fracture dislocations.\textsuperscript{1} Anterior dislocations have been further classified as: inferior, luxatio erecta of the hip, supe-