COMPLETE DISPLACEMENT OF THE FEMORAL STEM DURING DISLOCATION OF A THR

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We report an unusual complication of late dislocation of a total hip replacement. The femoral stem had completely migrated from the shaft. The insertion of a new long-stem prosthesis was successful.

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Aseptic loosening is the most frequent complication after cemented or non-cemented total hip replacement, and may lead to variable migration. Prosthetic dislocation is less common.1 We report a patient with prosthetic dislocation and complete migration of the femoral stem ten years after a Charnley low friction arthroplasty.

CASE REPORT

An 81-year-old man had a Charnley low friction hip arthroplasty for degenerative osteoarthritis, performed through a lateral approach with osteotomy of the greater trochanter. For nine years the result was clinically excellent, although radiographs taken at five years showed some loosening of the femoral stem (Fig. 1). Over one year, he had gradually developed groin and thigh pain associated with a decreased range of movement. Radiographs taken three months before his emergency admission showed some upward migration of the femoral stem with calcar resorption (Fig. 2). Revision was advised, but refused.

The patient slipped at home and developed severe pain in his right groin and buttock. On admission he was in a confused mental state, with dyspnoea from ischaemic heart disease and mild congestive cardiac failure. There was local tenderness posterolaterally above the hip, with shortening of the leg of 4 cm. Plain radiographs showed complete dislocation of the femoral prosthesis from both socket and femur (Fig. 3).

Under spinal anaesthesia, a lateral approach located the dislocated femoral prosthesis within the fibres of gluteus maximus, with its distal tip pointing towards the greater trochanter. The proximal trochanter with the gluteus medius tendon had been detached and some of the metal wires were broken. The femoral component was removed and fibrotic tissue around the acetabulum was excised. The acetabular socket was completely stable, but showed slight wear of its lateral border. In view of the patient’s poor general health and mental condition the cup was not revised. After removal of cement and suitable preparation, a polyethylene cement restrictor was introduced and a Corin modular long femoral stem (Corin Medical Ltd, Cirencester, UK) cemented in place. The detached fragment of the greater trochanter with the tendon of gluteus medius was rewired to its origin. Physiotherapy started 48 hours after surgery. The postoperative course was uneventful and the patient left hospital after two weeks.

DISCUSSION

Prosthetic dislocation after total hip replacement can be a frightening experience for both patient and surgeon. Reports of its incidence after Charnley low friction arthroplasty vary from 0.63% to 5.7%.1-5 There is a higher incidence of dislocation in patients with neuromuscular disorders, a confused mental state or after revision surgery.1,6

Woo and Morrey6 reported a greater incidence of dislocation when the greater trochanter had not united: Coventry7 suggested that this contributed to early but not late dislocation. Shaw and Greer7 discuss the influence of muscle imbalance after damage to soft tissues, malalignment of the prosthesis and impingement of bone or prosthesis.

In our patient, we believe that muscle imbalance due to
the detachment of part of the greater trochanter was the major contributor to dislocation, but we are unable to explain the complete proximal migration of the femoral stem.

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REFERENCES