Unreduced Obturator Dislocation of the Hip
A Case Report

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SUMMARY
A patient with a late unreduced obturator dislocation of the hip is reported and the literature reviewed. The diagnosis was confirmed by vaginal examination. An open reduction was necessary and it is suggested that this is best achieved through an anterior approach.


CASE REPORT
A 16-year-old Black girl was admitted to hospital with an anterior dislocation of the left hip. She had fallen from a tree 4 weeks previously but was able to walk without help and had not thought it necessary to seek immediate medical advice. However, she continued to limp and pain in the hip persisted. She was seen by a local practitioner who arranged her admission to hospital.

Examination of the patient, a fit young girl, revealed that the left leg was fixed in 25° of abduction, slight flexion, and in 10° of external rotation. Any attempt to move the limb was extremely painful. The femoral head could not be palpated suprapubically or under the adductor muscles, but was easily felt on vaginal examination.

Anteroposterior and lateral radiographs (Figs 1 and 2) showed an anterior dislocation of the hip with the femoral head protruding through the obturator foramen. A notch was apparent in the anterior-superior part of the femoral head which was surrounded by a zone of soft-tissue calcification.

Fig. 1. Photograph of anteroposterior radiograph of both hips showing an obturator dislocation with a notch in the femoral head.

Fig. 2. Lateral radiograph of left hip.

Closed reduction under general anaesthesia failed. The hip was therefore explored by means of a Smith-Petersen anterior approach. The rectus femoris tendon was divided; the anterior capsule was intact, and extensive capsulotomy was required to allow visualization of the femoral neck. The femoral head was found to have penetrated the obturator foramen and was firmly embedded in the pelvis.
It was removed with great difficulty, by passing a Murphy hip-skid between it and the superior pubic ramus and then levering it out of the pelvis. The articular cartilage showed early degenerative changes but was in reasonable condition. Soft tissue filled the acetabulum. This was removed before relocating the femoral head. The notch, seen on the radiographs, was clearly visible.

Skin traction was applied for 6 weeks and the patient was kept in bed for a further 2 weeks. She was then allowed to walk with crutches for a further 6 weeks. Twelve months after the operation she walked with a slight limp and did not complain of any pain. All joint movements were limited. No fixed deformities were present and Trendelenburg’s test was negative. Radiographs (Fig. 3) taken at this time showed joint space narrowing, obviously caused by degeneration of the articular cartilage.

Fig. 3. Radiograph at 12 months. There is marked joint-space narrowing. The notch is clearly visible.

DISCUSSION

One case of anterior dislocation of the hip with the head of the femur passing through the obturator foramen has been reported by Brown. On that occasion the patient sought medical advice immediately after the injury and a closed reduction was accomplished. As in the case reported here the femoral head could not be palpated in the anterior capsule and then either taking up the obturator the hip was flexed or extended during the injury. This made the reduction more difficult, if not impossible.

Anterior dislocation of the hip is said to occur when the hip is forcibly abducted and externally rotated. The head of the femur is described as tearing through the anterior capsule and then either taking up the obturator (inferior) or pubic (superior) position depending on whether the hip was flexed or extended during the injury. This description of the mechanism of the dislocation has been challenged by Proctor who maintained that the anterior capsule was too strong for the femoral head to tear through and it must necessarily have passed either superiorly, inferiorly or posteriorly where the capsule was weakest. The terms ‘anterior’ and ‘posterior’ merely indicate the position of the femoral head after injury. During operation on the patient described here the anterior capsule was seen to be intact, thus confirming the latter view.

The notch seen on radiographs and at operation was probably caused at the time of injury. The femoral head, after being inferiorly dislocated penetrated the obturator foramen. It was then indented by the anterolateral margin of the foramen and became locked in the pelvis. This, together with delayed treatment and subsequent new bone formation, would account for the difficulty in reduction.

It is considered by most authorities that delayed treatment of dislocated hips, both posterior and anterior, will inevitably produce a poor result. Watson-Jones observed that delay in reduction increased the incidence of avascular necrosis and joint degeneration. Epstein stated that reduction during the 24 hours following injury improved the prognosis, and he recommends primary open reduction for types II to V in his own grading. However, not all patients with neglected dislocations fare badly. Nixon described 3 patients who required open reduction, 4 weeks, 11 weeks and 13 weeks after sustaining posterior dislocations. They were followed up for 8, 7 and 14 years respectively, with a good result in 1 patient and a fair result in the other 2.

The reported percentage of traumatic anterior dislocations is about 15% in all large series dealing with dislocations of the hip. As neglected cases of dislocated hips are rare in Western societies, it is not surprising that only 11 cases of late anterior dislocations have been reported. Hamada reported 4 cases and Aggarwal and Kardas Singh 7 cases. The period of time between injury and presentation varied between 1½ months and 16 years. All but 2 of the patients were treated by corrective osteotomies. All these patients had limited hip movement, but were pain-free and able to return to work as labourers. Open reduction (1 patient) and arthroplasty (1 patient) left the patient with painful hips 1 year later. No further follow-up has been reported.

Nine per cent of uncomplicated anterior dislocations of the hip reduced within 24 hours undergo avascular necrosis, but, in the case reported here, this had not occurred after 1 year. However, there was marked joint space narrowing and although the hip remained painless and located, further degeneration of the articular cartilage will probably necessitate arthrodesis.

REFERENCES