DISLOCATION OF THE HIP WITH FRACTURE OF THE FEMORAL HEAD

A Report of Three Cases

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Dislocation of the hip associated with a fracture of the femoral head is a rare injury. Henry and Bayumi (1934), in a review of the literature, mentioned thirteen cases, most of them reported in an article by Christopher (1926) who pointed out that the first case was described in 1869. In nine of these cases reduction was attempted; it was achieved by closed methods in six, and by open operation in the other three. Among the seven survivors, four good results are reported—three after closed reductions and one after operation. Ankylosis occurred in the other three cases. King and Richards (1941) described two cases, both with a fracture of the acetabular lip and both requiring fusion of the hip. Armstrong (1948) described five cases, in three of which manipulative reduction was successful. In the other two reduction could not be obtained by closed methods, and in both cases fusion was required. In one the head was comminuted; in the other the fragment was large. Gordon and Freiberg (1949) wrote of one case in which fracture of the head was not detected until after manipulative reduction.

CASE REPORTS

Case 1—A man aged twenty-five received his injury when a reel of paper weighing six or seven hundredweight rolled on to his back from a small truck that he was pulling up a ramp. He was in great pain, lying with the right leg medially rotated at the hip. A radiograph showed a posterior dislocation of the hip with a large fragment of the femoral head lying within the acetabulum (Fig. 1). Manipulation failed to reduce the dislocation although the head could be made partly to enter the acetabulum, and crepitus could be felt when it impinged upon the fragment lying therein. Four days later open reduction was performed through a postero-lateral incision with detachment of the greater trochanter. The fragment lay in the acetabulum with its articular surface facing outwards, and to it was attached the ligamentum teres. The fragment was removed by screwing into it a Judet head remover, and was found to measure $4 \times 4 \times 2\frac{1}{2}$ centimetres (Fig. 2). The remainder of the femoral head presented a postero-medial defect. The dislocation was reduced easily and remained stable. A single hip spica was applied and retained for eight weeks, after which weight bearing was permitted. A radiograph at that time showed no avascular necrosis of the femoral head. Six months after operation the patient was walking well, and had 90 degrees' hip flexion, almost full abduction and adduction, but marked limitation of medial and lateral rotation. A radiograph again showed no avascular necrosis, and the defect in the head could not be seen (Fig. 3). Eighteen months after operation his range of movement had not changed, and radiographically the head appeared normal. Twenty-eight months after operation the femoral head showed degenerative changes and his range of movement had decreased markedly.

Case 2—A man aged forty-five sustained his injury in exactly the same way as the first patient, and in the same factory. The leg was shortened but not rotated abnormally. Movements of the hip were painful. Radiographs showed the left hip to be dislocated posteriorly, with a large fragment detached from the head lying in the acetabulum (Fig. 4). Open reduction was advised, and manipulation was not attempted.

Operation was performed the next day through a postero-lateral approach, detaching the greater trochanter. The femoral head was found dislocated above and behind the acetabulum. A large fragment was found cleanly detached from the antero-inferior aspect of the head (Fig. 5). To this fragment was attached the ligamentum teres. So large did the

FIG. 1 FIG. 2 FIG. 3
Case 1. Figure 1—Radiograph before reduction. Figure 2—The fragment of head removed.
Figure 3—Radiograph six months after operation.

FIG. 4 FIG. 5 FIG. 6
Case 2. Figure 4—Radiograph before operation. Figure 5—Photograph of the detached fragment.
Figure 6—Judet prosthesis in position.

defect in the head appear that it was decided to resect all the head and apply a Judet prosthesis. The fragment was removed as in the previous case. A radiograph (Fig. 6) showed the prosthesis to be in good position. Six months after operation the patient walked with an almost imperceptible limp. Flexion at the hip was just over a right angle; abduction and adduction were full; the range of rotation was about 15 degrees short of normal in both directions.

Case 3—A man aged forty-three was struck by a motor car while riding a motor cycle; his left thigh was driven backwards at the hip. The limb lay in medial rotation at the hip with no flexion deformity. Radiographs showed a posterior dislocation with a large fragment of the head retained in the acetabulum (Fig. 7). There was also a severe knee joint injury with cruciate and lateral ligament damage on the same side. Manipulative reduction failed, and

FIG. 7

FIG. 8

Case 3. Figure 7—Before reduction. Figure 8—Seven years after operative reduction.

open reduction was carried out a few days later through an anterior approach. The detached fragment of head was found attached to the ligamentum teres and it was removed. The dislocation was reduced easily and was stable. At first the hip was stiff and painful, but it became painless as ankylosis occurred from ossification in the soft tissues. When last examined seven years after injury the hip was completely stiff but painless (Fig. 8).

We are grateful to Mr Norman Roberts for his permission to publish the details of the third case here reported.

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