LATE OPEN REDUCTION OF TRAUMATIC DISLOCATION OF THE HIP

REPORT OF THREE CASES

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Three patients were reviewed seven, eight and fourteen years after delayed open reduction of traumatic posterior dislocation of the hip. The delay between injury and operation varied from twenty-eight to ninety-three days. At the time of review symptoms were minimal or absent, and in all cases the injured hip was clinically normal. Radiological examination showed loss of articular cartilage in one hip and trabecular changes in the bone of all three. On the basis of these results the traditional pessimism about prognosis in such cases may not be justified.

It is customary to think that traumatic dislocation of the hip should be reduced immediately because every hour of delay makes a bad result more likely. The condition is a potent cause of shock, and the probability of avascular necrosis of the femoral head, with subsequent degenerative arthritis, becomes greater if reduction is delayed, especially in posterior dislocations (Stewart 1971).

![Case 1. Figure 1—Radiograph before operation, eleven weeks after injury. Figure 2—Appearance eight and a half years after operation.]

Three cases have been reviewed eight years, seven years and fourteen years after delayed open reduction, and the results were surprisingly good.

CASE REPORTS

Case 1—In June 1965 a man aged twenty-three was admitted after a motor-cycle accident. He was obese and had a laceration over the left knee. The diagnosis of a “lax” medial ligament of that knee was made and a plaster cylinder was applied. He was discharged, but at review eleven weeks later he was found to have posterior dislocation of the left hip (Fig. 1).

The following day open reduction was performed through a posterior approach. A well defined false joint was present and some flattening of the femoral head noted. Reduction was not difficult. After the operation the patient was immobilised for six weeks in a plaster spica with the hip laterally rotated.

Progress—The patient was kept under review, and when last seen eight and a half years after the operation he reported only occasional left buttock pain and no restriction of activity, and was working as a laboratory technician. There was no limitation of hip movement.


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Radiographs at this time show a well maintained cartilage space, altered trabecular pattern in the upper femur, and a small discrete foveolar fragment (Fig. 2).

Case 2—In September 1966 a man aged forty-three was admitted to hospital after a motor accident. He was

The patient was transferred to the Orthopaedic Centre and twenty-eight days after injury the bone fragments were removed at operation. A posterior approach was used, and on removal of the obstructions, easy reduction of the slightly scored femoral head was possible.

Case 2—In September 1966 a man aged forty-three was admitted to hospital after a motor accident. He was

found to have a posterior dislocation of the right hip, with a comminuted fracture of the acetabular rim (Fig. 3). Closed reduction was performed, but radiographs showed two fragments of bone in the joint, preventing complete reduction (Fig. 4).

He was allowed to begin partial weight-bearing five weeks after the operation.

Subsequent review revealed ossification about the capsule, but when he was last seen seven years after the operation he had no complaints and was working as a
joiner. He was found to have a full range of movement of the right hip. Radiographs showed capsular ossification, a well preserved cartilage space, and alteration of trabeculation in the upper femur (Fig. 5).

Case 3—In October 1959 a twenty-year-old male was admitted to hospital after a motor-cycle accident. A simple transverse fracture of the left tibia was treated in plaster, but at subsequent out-patient review posterior dislocation of the left hip was discovered and the patient was transferred to the Orthopaedic Centre (Fig. 6).

In January 1960, thirteen weeks after the injury, open reduction was performed through a posterior approach. The exposure proved inadequate and anterior extension of the incision was required. The acetabulum was filled with firm fibrous tissue which was scooped out, revealing a false joint on the ilium containing the femoral head, which was then replaced in the true socket. The reduction was stable. After operation, modified Hamilton-Russell traction was used for four weeks. The patient was discharged twelve weeks after operation.

Before the injury this patient had been found to have lumbo-sacral spondyloisthesis, for which posterior fusion was undertaken in February 1961. He was able to return to work as a van driver one year later.

At recent review, fourteen years after injury, his complaints were of right-sided sciatica with backache, but examination showed no limitation of hip movement. Radiographs in February 1974 showed about 30 per cent loss of cartilage space with slight patchy sclerosis in the femoral head (Fig. 7).

DISCUSSION

Astley Cooper in 1826 stated: “I am of the opinion that eight weeks after the accident may be fixed as the period at which it would be imprudent to make the attempt at reduction”; and Armstrong (1948), also discussing delay in treatment, stated that “the subsequent management presents difficulties so great that an unsatisfactory result is inevitable”. Watson-Jones (1955) observed that delay in reduction resulted in a greatly increased incidence of avascular necrosis of the femoral head and joint degeneration. In a review of 559 hip dislocations, Epstein (1973) had four such cases in which open reduction was done three, five, nine and thirteen days after injury. The result in all cases was said to be good. His cases were of types 2 to 5 in his own grading (Thompson and Epstein 1951) and it is in such cases that he recommended primary open reduction as yielding the best results.

In a review of the literature on the subject, Shea (1961) presented a case of “inveterate” traumatic dislocation of the hip in which a good result was achieved despite delay of about twenty weeks before open reduction. The largest series quoted is one of fifty cases unreduced for periods up to one year (Buchanan 1920). The results were “good” in 80 per cent of the survivors.

The situation is rare in Western society, but in East Africa, Huckstep (1971) described thirty-seven cases diagnosed more than one month from injury and was able to review them for up to eight years. Eleven dislocations were reduced by closed means, one at fifteen months. A further eleven were treated by intertrochanteric osteotomy and the rest by pseudarthrosis. The latter two methods gave “good to poor” results, and he recommended arthrodesis in the younger patient.

Traumatic dislocation of the hip should never be overlooked in societies with well developed medical services, but it can be so where a concurrent injury—such as fracture of the femoral shaft or of the tibia—masks the typical deformity. The dislocation in Case 1 was probably overlooked because of the patient’s obesity, and that in Case 2 was recognised but incompletely reduced.

Scott and Thomas (1974) postulated that dislocation could occur some time after injury, if spontaneous reduction was produced by movement of the patient and then recurred on weight-bearing, or if a potentially unstable acetabulum was produced by a fracture of the rim.

The length of follow-up in the three cases described is more than adequate because it has been found (Epstein 1973) that patients having “fair” or “poor” results had worsening symptoms within one year of injury, and only two cases required to have their grading changed from “good” to “poor” between four and thirteen years from injury.

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REFERENCES


