BILATERAL DISLOCATION OF THE HIP DURING CONVULSIONS

A CASE REPORT

E. RATH, O. LEVY, N. LIBERMAN, D. ATAR

From Ben Gurion University of the Negev, Beer-sheva, Israel

Simultaneous bilateral posterior dislocation of the hip is very uncommon and most cases are caused by road accidents. Simultaneous bilateral posterior dislocation of the hip due to convulsions is extremely rare.

We report the case of a man who was diagnosed late and operated on 15 weeks after the injury. We discuss the treatment of chronic dislocation of the hip and review the literature.

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Simultaneous bilateral posterior dislocation of the hip is an uncommon injury which has usually been described following a road-traffic accident in which an axial force has been transmitted along the femoral shafts with the hips flexed to 60° and in neutral abduction and adduction. There have been a few reports of bilateral central fracture dislocation of the hip after convulsions, but simultaneous bilateral posterior dislocation by such a mechanism is an extremely rare injury and we are not aware of a previous case report.

Case report. A 36-year-old man with Down’s syndrome was admitted to the neurosurgical department for investigation of a convulsive disorder. He had suffered a convulsive episode 11 weeks before admission and was not able to stand or walk. He had been examined in the emergency room three days after the convulsions when a radiograph was reported to show ‘no fracture’ (Fig. 1) and he was sent home. He was bedridden until he was admitted for investigation; previously he had been able to stand and walk normally.

On admission, radiographs showed bilateral posterior dislocation of the hip (Fig. 2). On examination he had the usual stigmata of Down’s syndrome; he looked cachectic and weighed 38 kg. Both hips were flexed, adducted and internally rotated. He had a 30° range of flexion and there was fixed internal rotation on both sides. Attempts to move the hips produced severe pain. He was not able to stand or walk independently and while standing, leaning on others, there was hyperlordosis of the lumbar spine (Fig. 2). The femoral heads on both sides were palpable in the gluteal regions. There were no abnormal findings on neurological examination.

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dislocation of the hips with the heads lying high (Fig. 3). A review of the previous films clearly showed the bilateral dislocation. Closed reduction was thought to be impossible and skeletal traction was therefore applied through Steinmann pins inserted into the distal femora. The weight was gradually increased to 8 kg, bilaterally, over a period of one week without discomfort. Diazepam 5 mg was given twice daily. After ten days the head of the femur on the left side had reduced to the level of the acetabulum. Additional weight and abduction were applied to the traction on the right side, but after a further 11 days with 12 kg weight the right side had still not reduced.

Operation was undertaken on both hips through posterior approaches 15 weeks after injury. On the left side the acetabulum was filled with dense connective tissue, but the articular cartilage of the femoral head and the socket were preserved. After excision of connective tissue the head was easily reduced into the acetabulum. The posterior capsule was sutured and plicated tightly and the external rotator muscles reattached to their insertion.

On the right side the socket was filled with scar tissue but the cartilage was well preserved. The femoral head was markedly flattened and soft as a result of severe chondrolysis (Fig. 4). We were not able to reduce the head even after extensive release of soft tissue. Since avascular necrosis of the head was clinically apparent an uncemented hemiarthroplasty was performed (Fig. 5). The patient was immobilised for six weeks in a plaster spica with the hips abducted and externally rotated before the cast was removed and physiotherapy started. He was able to walk with assistance at eight weeks after operation and by three months could walk quite normally.

DISCUSSION

Dislocation appeared to be due to uncontrolled violent, simultaneous contraction of the muscles about the proximal femur. Bilateral posterior shoulder dislocations and bilateral central dislocation of the hip have been described during convulsions.

Subluxation and dislocation of the hips may occur in children with Down’s syndrome; they may have significant ligamentous laxity which facilitates this. Ligamentous laxity was not demonstrated in our patient and it seems that the dislocations were purely related to the convulsions, although the acetabula were shallow.

The management of old, unreduced dislocation of the hip is difficult. The results of operation have been disappointing. Great difficulty may be encountered in reducing the femoral head when it is held in an abnormal position by dislocation of the hips with the heads lying high (Fig. 3). A review of the previous films clearly showed the bilateral dislocation. Closed reduction was thought to be impossible and skeletal traction was therefore applied through Steinmann pins inserted into the distal femora. The weight was gradually increased to 8 kg, bilaterally, over a period of one week without discomfort. Diazepam 5 mg was given twice daily. After ten days the head of the femur on the left side had reduced to the level of the acetabulum. Additional weight and abduction were applied to the traction on the right side, but after a further 11 days with 12 kg weight the right side had still not reduced.

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scar tissue, which also fills the acetabulum and cuts off the blood supply to the femoral head. Delay in reduction carries an increased risk of avascular necrosis of the femoral head and joint degeneration. Oni et al achieved reduction in five patients with old, unreduced posterior dislocation by applying continuous heavy skeletal traction for one week, after which they retained reduction by traction for a further six weeks. Failure to attain reduction is common in patients with a fracture dislocation; this is usually managed by arthrodesis, excision arthroplasty, hemiarthroplasty or total hip replacement.

Gupta and Shravat reported good to excellent results in treating seven patients by heavy traction. They had only one failure; a hip had been dislocated for nine months. Others have reported open reduction after failure of reduction by skeletal traction after three weeks.

Bilateral posterior dislocation of the hips due to convulsions is an extremely rare injury which, if neglected, gives a devastating result. Early diagnosis requires a high index of suspicion, and treatment should be by heavy skeletal traction to overcome the contractures for one to three weeks. If this fails open reduction or arthroplasty is required.

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REFERENCES