



## Recurrent posttraumatic posterior dislocation of the hip A case report and review of the literature

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**We present the case of a 53-year-old male patient who presented with recurrent posttraumatic posterior hip dislocations, Epstein-Thompson type 1. No specific abnormality or pre-existing pathology was found. After closed reduction and rapid mobilization the patient was discharged from our institution. Although he had sustained six dislocations of his right hip over a period of 17 years, he once again recovered unlimited function without any signs of complications. In this specific non-compliant patient, early mobilization following each one of his successive dislocation episodes did not result in the occurrence of any complications. The literature on this rare topic is reviewed.**

**Key words :** hip dislocation ; recurrent.

### INTRODUCTION

Recurrent traumatic posterior hip dislocations without pre-existing pathology or fracture are rare. The reported incidence in adults ranges from 0 to 2 percent (2,8). Recurrent posttraumatic posterior hip dislocations are associated with complications, such as avascular necrosis, osteoarthritis and heterotopic ossification. Several reports state that early full-weight bearing and a long time-interval to reduction increase the risk of these complications (2,5,7). We present a case of a 53-year-old male who sustained six posterior dislocations of his right hip over a time period of seventeen years. In this patient early mobilization did not give rise to any complications.

### CASE REPORT

A 53-year-old drug and alcohol addict presented to our emergency unit with a sudden pain in his right hip after standing up from a chair, with inability to bear weight. Over a period of seventeen years, he reportedly had sustained five posterior dislocations of the right hip, which were treated in another hospital. He sustained his first posterior hip dislocation during a fight. No fractures of the acetabular rim or femoral head were found following any one of the successive dislocations. Due to non-compliance, the patient had initiated early mobilization and full weight bearing during every previous admission.

On examination his right hip was flexed, adducted and in fixed internal rotation. Physical examination revealed no neurovascular compromise. Radiographs of the pelvis showed a Thompson &

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Fig. 1 & 2. — Radiographs showing a Thompson & Epstein type I posterior dislocation of the right hip.

Epstein type I posterior dislocation of the right hip (fig 1 & 2, table I). Furthermore, there were no signs of avascular necrosis, heterotopic ossification or osteoarthritis. The hip was reduced under anaesthesia, using the Allis maneuver (1). Post reduction radiographs showed that the reduction was congruous and that there were no associated fractures.

The patient was admitted and mobilized under supervision of a physiotherapist, without the use of a brace. After three days he was discharged from

Table I. — Thompson & Epstein classification of posterior hip dislocations

Type	Posterior dislocation of the hip
Type I	With/without small fracture
Type II	With a large fracture of posterior acetabular rim
Type III	With comminuted fracture of acetabular rim with/without large fragment
Type IV	With fracture of acetabular wall
Type V	With fracture of femoral head

our institution, with full weight bearing and unlimited function of his right hip.

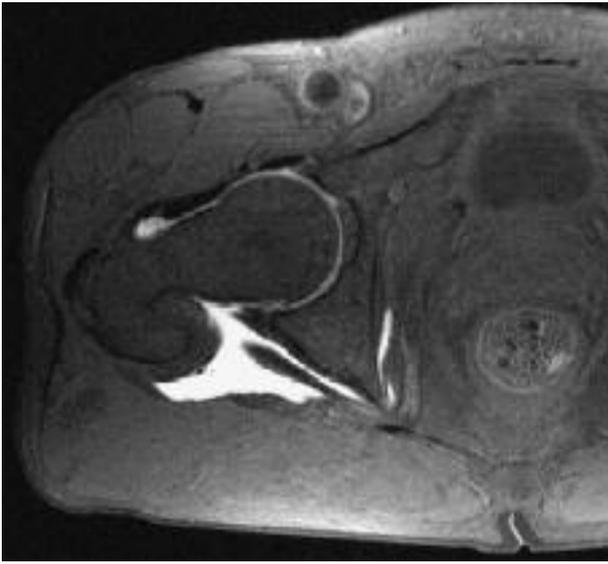
An additional magnetic resonance arthrogram of his right hip only revealed a small posterior capsular defect (fig 3). The previous dislocations of his right hip had not resulted in any complications such as injury to the labrum or the femoral head. Physical examination one year after his latest dislocation showed a full range of motion of the right hip, and the patient did not experience any difficulties with his right hip in daily life.

## DISCUSSION

Posterior dislocations of the hip are characterized based on the Thompson & Epstein classification (table I). Only few reports describe Thompson & Epstein type 1 recurrent posterior traumatic dislocations of the hip.

The initial treatment of a posterior dislocation of the hip is anatomic reduction. Several reports state that the longer the time-interval to reduction, the higher the chance of complications such as osteoarthritis, avascular necrosis, ischiatic nerve dysfunction, heterotopic ossification and redislocation (8).

Only a few case reports have appeared with regard to the post-reduction management of an Epstein-Thompson type 1 posterior dislocation of the hip. Several authors have reported that early full-weight bearing is associated with avascular necrosis and osteoarthritis or heterotopic ossification (2,5,7). However, although our patient resumed mobilization with early full weight bearing following all successive dislocation episodes, these



*Fig. 3.* — Arthro- MRI of the right hip revealing a posterior capsular defect of one centimeter.

complications could not be identified on MRI nine months after his latest dislocation.

Only a few reports have appeared in literature that describe capsulorrhaphy for the treatment of recurrent Thompson & Epstein Type 1 dislocations of the hip (3,4,6,8).

Graham and Lapp (3) described two patients who underwent capsulorrhaphy for recurrent traumatic posterior dislocation of the hip. Although capsulorrhaphy effectively prevented redislocations, one of the patients suffered from severe complications subsequent to the capsulorrhaphy. One of these two patients was a 41-year-old woman who sustained a Thompson & Epstein Type 1 dislocation of the right hip with a small, undisplaced fracture of the posterior acetabular rim in a motor vehicle accident. She suffered a high-energy trauma with severe damage to several visceral organs and was admitted during four months. During her hospital stay, she presented five redislocations before surgery was undertaken. The treatment of the first two dislocations was skin traction in abduction of the affected hip for six weeks. The subsequent four dislocations were treated with immobilization with skin traction for several days and early mobilization. During surgery per-

formed after the fifth dislocation, a large redundant joint capsule was imbricated and capsulorrhaphy was performed. Five years after surgery the patient showed a nearly normal range of motion, had no pain and presented no further dislocations. Although this patient was treated with skin traction twice, the hip dislocated four more times.

The second patient was a 24-year-old man who sustained a Thompson & Epstein Type 1 posterior dislocation of the right hip while dancing in a nightclub. Initial treatment consisted of closed reduction and mobilization within five days. After sustaining another dislocation, a posterior capsular redundancy was excised and imbricating capsulorrhaphy was performed. Postoperatively, this patient developed Brooker III heterotopic ossification and osteonecrosis of the femoral head.

Heinzelmann and Nelson (4) presented the case of a 31-year-old woman who sustained a posterior dislocation of the right hip when she fell from a height of 0.6 meter. She had a history of a posterior hip dislocation at the age of sixteen when she was involved in a car accident. Treatment after her first dislocation consisted of closed reduction and 2 weeks of skin traction followed by walking with crutches for 4 weeks. She continued to have subluxations probably caused by a posterior capsular tear, which was revealed using an arthrogram. The capsular tear was repaired by plication. One year after surgery the patient did not complain of instability of the right hip.

Liebenberg and Dommissie (6) described two patients after excision of a synovial pouch and capsulorrhaphy. The first patient was a 21-year-old man who sustained his first dislocation of the right hip on the football field. Initial treatment consisted of closed reduction with early mobilization. He presented two further dislocations with development of a partial lesion of the sciatic nerve. During surgery a posterior capsulorrhaphy was performed and the sciatic nerve was dissected free from scar tissue. Five months after surgery the patient did not complain about the hip, but there was some persistent weakness of the extensor muscles of the ankle. The second patient was a 31-year-old man who sustained his first dislocation of the right hip while playing football. The hip was reduced without any

further treatment. He dislocated his right hip five more times within 8 years. At surgery a large synovial pouch was excised, followed by capsular repair. Seven months after surgery no redislocation had occurred. These two patients did not develop avascular necrosis, heterotopic ossification and did not re-dislocate. However, follow-up of these patients was no more than six months.

Weber and Ganz (8) described the case of a 22-year-old Olympic ski medallist sustaining recurrent posterior dislocations of the right hip while falling during skiing. Initial treatment consisted of reduction and a 4 weeks period of partial weight bearing. After the third dislocation, repair of an inferomedial capsular tear was performed. Eighteen months postoperatively the patient had not presented any redislocations and was performing competitive skiing again.

In the case presented here, no significant complications could be detected after sustaining six posterior dislocations of the right hip over seventeen years, besides a small posterior capsular defect. Although the patient dislocated his hip six times in seventeen years, he still shows good function of his right hip. It was considered that the patient's established non-compliance predicted a non-favorable outcome after surgical repair of the posterior capsule. Therefore we chose non-operative treatment. Even early mobilization without use of a brace did not result in any complications, such as avascular

necrosis or osteoarthritis. One year after his last dislocation, the patient still shows a painless and unlimited function of his right hip.

Contrary to other reports (2,5,7), this case illustrates that early mobilisation after recurrent post-traumatic posterior dislocation of the hip may not result in complications such as avascular necrosis or osteoarthritis after seventeen years follow up.

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