EMERGENCY CASEBOOK

An unusual rugby injury

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We describe an unusual sports injury in a young man, a combination of obturator hip dislocation with an ipsilateral anterior cruciate ligament injury. Traumatic non-prosthetic hip dislocations, particularly obturator hip dislocations, are extremely rare sports injuries and have not previously been reported in conjunction with a knee ligament injury. The severe pain and obvious deformity from the hip injury can distract from other injuries, particularly to the ipsilateral knee. This case reinforces the need for a thorough assessment of the knee joint, before hip reduction if possible and certainly after reduction of the dislocation.

Most hip dislocations are posterior, caused by impaction of the femoral head upon the acetabulum from direct force to the distal femur (generally against a dashboard). Anterior dislocations are less common and of two main types: superior, where the femoral head is displaced into the iliac or pubic region and inferior, where the head lies in the obturator region.

CASE REPORT

A previously healthy 31 year old man presented to our accident and emergency department with severe pain and inability to move his left hip after experiencing a rugby tackling injury. The mechanism of the injury was described as rotation to the right to pass the ball as an opposing player landed on his left leg, forcing it into abduction. He reported feeling his hip "move", causing extreme pain. Prehospital management included 20 mg of intravenous morphine and entonox.

On examination, the left lower limb was abducted, externally rotated and flexed. There was no distal neurovascular deficit. He did not complain of pain in the knee. Plain radiographs showed obturator dislocation of the left hip (fig 1A). After sedation with propofol, the hip was manipulated in the emergency resuscitation room.

Postmanipulation radiographs confirmed successful reduction (fig 1B).

The patient was admitted overnight for observation. On review the next day, the ipsilateral knee was noted to have an effusion and on clinical examination, an anterior cruciate ligament (ACL) injury was found. As the patient was keen to go home, he was discharged as non-weight bearing on crutches, to be reviewed in the fracture clinic.

A magnetic resonance imaging (MRI) scan of the left knee, performed 3 weeks post-injury, showed extensive bone bruising to the lateral tibial plateau and femoral condyle and a partial ACL tear. The knee injury has been treated conservatively and the patient continues to undergo rehabilitation and physiotherapy under orthopaedic supervision.

DISCUSSION

Obturator hip dislocations are uncommon,^{1,2} particularly as a result of sporting injuries. They are high energy injuries, caused by abduction and external rotation of the flexed hip. Hip dislocations are commonly associated with other injuries. Cases of obturator hip dislocation with fractures of the femoral head and neck have been described,³ as well as fractures of the subcapital femoral neck and shaft.^{2,4}

Gillespie reported that 26% of all hip dislocations are accompanied by knee injuries that are detected by physical examination.¹ The use of MRI increases the number to 93% as reported by Schmidt *et al.*⁵ The commonest associated knee ligament injury with all types of hip dislocations is the ipsilateral ACL injury.⁶

Delayed reduction of a dislocated hip increases the risk of avascular necrosis. This, in combination with the severe nature of the pain, may result in the knee injury being overlooked. Early diagnosis of the knee injury enables prompt rehabilitation.

This case report stresses the need for the evaluation of the ipsilateral knee for an accompanying injury, especially in the rare situation of obturator hip dislocation.

Abbreviations: ACL, anterior cruciate ligament; MRI, magnetic resonance imaging

Figure 1 (A) Initial, and (B) post-manipulation radiographs.

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