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Case Report

Obturator Dislocation of the hip: a rare trauma in sports practice about 2 cases and review of the literature

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Abstract: Anterior traumatic dislocations of the hip without fracture of the acetabulum or femoral head are rare. They are often secondary to high-energy kinetic accidents. Therapeutic management requires a vigilant surgeon and prevented the risk of complications. We report two cases of obturator dislocation (anterior inferior). The first patient is an 18-year-old practicing roller skating. The second patient is a 23-year-old practicing football.
Keywords: Luxation, obturatrice, Sport.

INTRODUCTION:

Anterior traumatic dislocations of the hip without fracture of the acetabulum or femoral head are rare. They are often secondary to road accidents and rarely encountered in sport. We report 2 cases of obturator dislocation (anterior inferior) the first patient is an 18-year-old practicing roller skating the second patient is a 23-year-old practicing football.

Patients and Observations

Observations 1:

This is an 18-year-old who has been practicing roller skating for four years and who has suffered trauma during sport by touching his colleague's rear wheel. This resulted in trauma to the left hip. The initial examination found a total functional impotence of the left lower limb, with a hip flexed abduction external rotation. The vasculo-nervous examination was without abnormality as well as the cutaneous examination. An emergency radiograph (Figure 1) showed a dislocation of the left hip. An emergency reduction under general anesthesia and curarization was performed at the operating room using the following maneuver: Initial traction in the limb axis followed by internal hip flexion and abduction while maintaining traction. The control radiography was satisfactory (FIG. 2) and post-reduction CT (FIG. 3) was performed which confirmed the reduction as well as the absence of associated lesion and intra-articular fragment. A discharge of 15 days has been prescribed while avoiding external rotations for a duration of 4 weeks. The resumption of the sport activity was without problem in the 6th month.

Fig 1: First patient: Xray showing lower antero-inferior dislocation

Fig 2: First patient Radiography showing reduction in left hip dislocation

Fig 3: First Patient: Scanner after reduction shows no associated lesion or foreign body

Fig 4: Second patient: Image showing the clinical aspect of antero-inferior dislocation

Fig 5: second patient: X-ray showing left antero-inferior dislocation

Observation 2:

It is a patient aged 23 years without a pathological history notable professional footballer who suffered a trauma by pulling the ball in the void. This caused a trauma in his left hip. Admission found a conscious patient with a hip flexion abduction external rotation. The vasculo-nervous examination was without abnormality (Figure 4). We performed a standard radiograph that showed a dislocated dislocation of the left hip without associated fracture (Figure 5) the patient benefited from a reduction to the operating room under general anesthesia with good muscle relaxation by the same maneuver described initially. The radiological control showed a reduction of the head without associated fracture (FIGS. 6 and 7). A discharge of 15 days without traction was prescribed to the patient followed by a functional rehabilitation of 4 weeks. The resumption of activities was authorized after 6 months.

Iconography

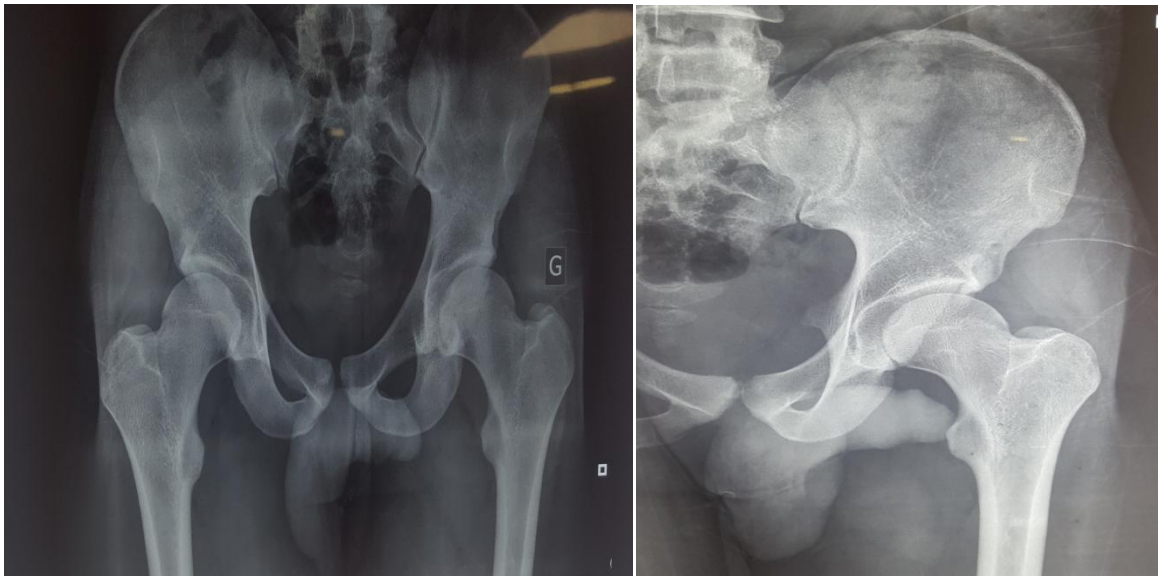

Fig 6&7: second patient X-ray showing reduction in left hip dislocation

DISCUSSION

Traumatic dislocations are rarely isolated. In most cases, they are associated with fractures of the acetabulum or the femoral head. The obturator dislocation represents 6 to 10% of luxations reported in the literature [1]. The mechanism of occurrence of this entity is a movement in bending, abduction and forced external rotation [2, 3]. It is this mechanism which explains the dislocation in our case: Impaction occurred at high speed on the internal face of the foot causing a brutal forced external rotation of the hip, the latter being in flexion. Catonne *et al.;* [4] reported 2 similar cases in a water skiing accident. The anterior capsular lesions are constant [5]. These lesions can lead to an irreducibility by a buttonhole effect [6]. Also the osteo-articular lesions are very frequent and depend on the mechanism and the violence of the initial traumatism. Fractures of the femoral head would occur in more than 50% of previous dislocations [4]. Cartilage lesions are encountered in 63% of cases according to the series reported in the literature [4]. Some authors perform systematic arthroscopies after reduction, given the high frequency of intra-articular foreign body and which may go unnoticed on the scanner [5]. Hematomas may occur in cases of vascular lesions or even osteonecrosis of the femoral head in cases of involvement of the circumflex vessels. The treatment of isolated obturator dislocations is orthopedic. This reduction can be difficult in muscular subjects. It is recommended to practice it under general anesthesia with curarization and it is essential not to cause fracture of the neck during reduction maneuvers [5]. The methods of reduction are discussed in the literature. Epstein [2] and Brav [7] recommend traction in the femoral axis followed by progressive flexion of the hip in internal rotation and abduction, while maintaining traction. Toms *et al.;* [8] have criticized abduction in the reduction maneuver since the hip is already in forced abduction. They also condemned the forced internal rotation that would explain the fracture of the femoral neck described by some [4, 9]. They recommend to use the orthopedic table and to associate with the axial traction, a lateral traction of the thigh and then to gradually release the traction while impregnating a movement of adduction internal rotation. These discussions draw attention to the difficulties of reduction and the significant risk of complications that can lead to a surgical approach for a bloody reduction. The consequences after orthopedic or surgical reduction are not consensual. At present there is no scientific argument that justifies the interest of traction and discharge in reducing the risk of cephalic necrosis of the femoral head [4]. Catonné *et al.;* recommend an early relief relieved and then total at j15 with eviction of the external rotation during 3 weeks in the context of previous dislocations [4].

The risk of cephalic necrosis increases with delayed reduction. This risk and 30% in adults [10]. Hoogard [11] observed 47% necrosis when the reduction time exceeded 6h. But these figures mainly concern lesions associated with fractures of the acetabulum or the femoral head, this rate is certainly lower in isolated dislocations.

CONCLUSION

Flap dislocation without fracture is not common in sports practice. Its reduction is not always easy and can completely change the therapeutic prognosis.

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