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Obturator Traumatic Hip Dislocation: A Case Report

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Abstract

Pure anterior dislocation of the hip in its obturator variety is extremely rare. It typically results from high-energy trauma and can jeopardize the functional prognosis of the hip if reduction is not performed urgently. We report the case of a motorcyclist who sustained an isolated anteroinferior (obturator) hip dislocation. The patient underwent reduction 4 hours after the trauma, with good clinical and radiological outcomes observed at an 18-month follow-up.

Keywords: Dislocation, hip, obturator.

INTRODUCTION

Traumatic hip dislocation is defined as the permanent displacement of the femoral head out of the acetabular cavity following a high-energy trauma occurring in a predisposed hip position [1]. The obturator variety is the rarest (10%) and is characterized by the position of the femoral head anterior to the obturator foramen. It generally occurs during forced hip flexion, abduction, and external rotation [2]. It constitutes a functional emergency, with urgent orthopedic reduction as the first-line treatment to minimize the risk of avascular necrosis of the femoral head. We report the case of a 42-year-old patient who presented with a pure obturator hip dislocation and the clinical and radiological outcomes observed after an 18-month follow-up.

PATIENT AND OBSERVATION

The case involved a 42-year-old patient admitted to the emergency department following a road traffic accident. The patient, a motorcyclist, had been struck by a car and sustained a closed trauma to the left hip. Clinical examination revealed a malposition of the left hip in flexion, abduction, and external rotation, along with dermabrasion on the anterior aspect of the ipsilateral knee. Any attempt at mobilization was extremely painful and restricted. The patient was conscious, hemodynamically and respiratorily stable, with no associated vascular or neurological complications. A pelvic X-ray (Fig 1) confirmed an obturator dislocation of the right hip.

A reduction under general anesthesia was performed 4 hours after the trauma using the following maneuvers: initial axial traction of the limb to achieve disengagement, followed by flexion, internal rotation, and abduction, which restored the limb to extension, adduction, and internal rotation. The post-reduction X-ray was satisfactory, showing no fractures of the femoral neck or acetabulum (Fig 2).

The patient was placed on complete non-weight-bearing for 6 weeks, followed by a return to full weight-bearing at 8 weeks. The outcome was satisfactory, with full recovery and no complications observed at the 18-month follow-up.

Figure 1: Anteroposterior pelvic X-ray showing an anterior obturator dislocation of the left hip

Figure 2: Anteroposterior pelvic X-ray after reduction

DISCUSSION

Obturator dislocations account for 6–10% of dislocations reported in the literature [3]. For our patient, this anteroinferior dislocation was classified as type IIA according to Epstein's classification. In such cases, fractures of the femoral head and shaft can occur [3], which was not observed in our patient. Obturator dislocations typically occur during forced abduction, external rotation, and flexion, with the force applied in this position being the most likely mechanism for the injury [4]. Examination findings suggest shortening, internal rotation, and adduction of the lower limb, which are associated with posterior hip dislocations. Conversely, a flexed, abducted, and externally rotated lower limb indicates an anteroinferior dislocation [5].

The risk of secondary avascular necrosis increases with delayed reduction; Hougaard [6] reported a 52.9% incidence of avascular necrosis when the reduction was delayed beyond 6 hours. In our case, reduction was achieved within 4 hours without iatrogenic fractures, owing to early diagnosis and atraumatic reduction. Reduction should be performed under general anesthesia with complete muscle relaxation. The techniques for reduction are widely debated in the literature. Epstein [7] and Brav [8] recommend axial traction along the femur followed by gradual hip flexion in internal rotation and abduction while maintaining traction. Toms *et al*., [2], however, criticized abduction during the reduction maneuver, as the hip is already forcibly abducted. They also condemned forced internal rotation, which has been associated with femoral neck fractures reported in some cases [9]. They advocate the use of an orthopedic table, combining axial traction with lateral traction of the thigh, followed by gradual release of traction while applying adduction and internal rotation movements.

Post-reduction management, whether orthopedic or surgical, remains non-consensual. Currently, there is no scientific evidence supporting the use of traction or non-weight-bearing to reduce the risk of avascular necrosis of the femoral head. Catonné *et al*., [10] recommend early partial weight-bearing followed by full weight-bearing at 15 days post-reduction,

avoiding external rotation for 3 weeks in cases of anterior dislocations [10].

CONCLUSION

Obturator hip dislocation is a rare variety of regular hip dislocations. Orthopedic reduction must be performed urgently; it is not always easy and can significantly affect the functional prognosis, with the risk of iatrogenic femoral neck fracture being non-negligible.

Conflicts of Interest: The authors declare no conflicts of interest.

REFERENCES

1. Pietu, G., Malissard, M., Raynaud, G., & Letenneur, J. (1993). Pure traumatic hip dislocations. *Traité d'Appareil locomoteur*, 14-077-A-10.
2. Toms, A. D., Williams, S., & White, S. H. (2001). Obturator dislocation of the hip. *J Bone Joint Surg (Br)*, *83*(1), 113-115.
3. Phillips, A. M., & Konchwalla, A. (2000). The pathologic features and mechanism of traumatic dislocation of the hip. *Clin Orthop Relat Res*, (377), 7-10.
4. Sanders, S., Tejwani, N., & Egol, K. A. (2010). Traumatic Hip Dislocation. *Bulletin of the NYU hospital for joint diseases*, *68*(2), 91-96.
5. Leiber-Wackenheim, F., Brunschweiler, B., Ehlinger, M., Gabrion, A., & Mertl, P. (2011). Recurrent dislocation after total hip arthroplasty: an 8-year follow-up study of 59 cases treated with a dual-mobility implant. *Rev Chir Orthopédique Traumatol*, *97*(1), 8-14.
6. Hougaard, K. T. (1986). Traumatic posterior dislocation of the hip: prognostic factors influencing the incidence of avascular necrosis of the femoral head. *Arch Orthop Trauma Surg*, *106*(1), 32-35.
7. Epstein, H. C. (1973). Traumatic dislocations of the hip. *Clin Orthop Relat Res*, (92), 116-142. doi: 10.1097/00003086-197305000-00011.
8. Brav, E. A. (1962). Traumatic anterior dislocation of the hip. *J Bone Joint Surgery (Am)*, *44*(A), 1115–1121.
9. Polesky, R. E., & Polesky, F. A. (1972). Intrapelvic dislocation of the femoral head following anterior dislocation of the hip: a case report. *J Bone Joint Surg (Am)*, 54, 1097–1098.
10. Catonné, Y., Meyer, A., Sariali, E., & Biette, G. (2009). Pathology of the pelvis-femoral complex in athletes. Pathology of the pelvis-femoral complex in athletes, 88–99.