



Case Report

Open anterior dislocation of the hip in an adult: a case report and review of literature^{☆,☆☆}

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ABSTRACT

Open anterior hip dislocation is a rare condition and results from high-energy trauma. Ten cases of open anterior dislocation have been described in the literature so far. Its rarity is due to the inherent stability of the joint, its deep position in the pelvis, with strong ligaments and bulky muscles around the articulation. Several factors influence the prognosis, such as the degree of compounding, the associated soft tissue injuries, the age of the patient and, mainly, the delay in reduction. The main complications are: arthrosis of the hip, with incidence of 50% of cases, when associated with fractures of the femoral head; and osteonecrosis of the femoral head, with incidence between 1.7 and 40% (in closed anterior dislocation). Because of the rarity and the potential disability of this lesion, we report a case in a 46-year-old man, involved in an automobile accident. The hip was reduced (anterior superior dislocation) in the first three hours of the trauma. The patient was kept non-weight bearing until sixth week, with complete weight bearing after 10th week. After one year follow-up, the functional result was poor (Harris Hip Score: 52), probably because of the associated labral tear, but without signs of osteonecrosis of the femoral head in magnetic resonance imaging.

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Luxação anterior exposta do quadril em um adulto: relato de caso e revisão da literatura

RESUMO

A luxação anterior exposta do quadril é condição rara e resulta de trauma de alta energia. Até o momento, foram descritos na literatura 10 casos. Sua raridade deve-se à estabilidade inerente da articulação e à posição profunda na pelve, com fortes ligamentos e musculatura volumosa ao seu redor. Influenciam o prognóstico dessa lesão diversos fatores, tais como grau de contaminação, lesões de partes moles, idade do paciente e, principalmente, atraso na redução. As principais complicações são: artrose do quadril, com incidência que pode chegar a 50% dos casos, quando associada a fraturas da cabeça femoral; e osteonecrose da cabeça

Palavras-chave:

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^{☆☆} Study conducted at Hospital de Caridade São Vicente de Paulo, Jundiaí, SP, Brazil.

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do fêmur, com incidência entre 1,7% e 40% (nos casos de luxação anterior fechada). Por causa da raridade e da potencial incapacidade funcional decorrente dessa lesão, relatamos o caso de um homem de 46 anos vítima de acidente automobilístico. Foi feita redução do quadril (luxação do tipo anterior alta) nas primeiras três horas pós-trauma. O paciente foi mantido sem carga até a sexta semana, com carga total após a 10^a semana. Após um ano de seguimento, observou-se resultado funcional pobre (Harris Hip Score: 52), provavelmente por causa de lesão labral associada, porém sem sinais na ressonância nuclear magnética de osteonecrose da cabeça femoral.

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Introduction

The hip joint is inherently stable, which requires significant force to promote its dislocation.¹ Thus, hip dislocations usually result from high-energy trauma. Cranio-cerebral, thoracic and abdominal injuries are commonly associated. Skeletal injuries often associated include fractures of head or femoral neck, femoral shaft, acetabulum and pelvis, as well as knee, ankle and foot injuries and neurological lesions.^{1,2}

Previous hip dislocations are uncommon and constitute 12% of traumatic hip dislocations. These injuries may occur in accidents by deceleration, in that the vehicle occupant is with his (her) legs bent, abducted, and externally rotated during impact, as well as in motorcycle accidents in which the legs are often in hyperabduction. The hip position determines the type of anterior dislocation: pubic/superior type when the hip is extended, and obturator/lower type when it is in flexion.¹⁻³

So far, research in databases (Lilacs, Medline, SciELO and Cochrane) revealed ten cases of open anterior hip dislocation reported in the literature,⁴⁻¹³ six of them in children between five and 11 years, one in a teenager aged 15 years, and three in adults. Because of the rarity and the potential incapacity resulting from that injury, we describe this case.

Case report

Male patient, 46 years old, victim of an automobile accident, was ejected from the vehicle. He was admitted in our hospital about an hour after the injury, brought by the rescue team.

On examination, the following were observed: he was conscious and hemodynamically stable; with a wound of about 10 cm on the left inguinal region, cross position, with exposure of the left femoral head; hip in extension, abduction and external rotation (Fig. 1); distal pulses present and, apparently, no signs of neurological impairment in the affected limb.

The initial radiographs revealed high anterior dislocation of left hip (Fig. 2) and fracture of the left clavicle; no visceral injury was detected.

The patient was sent to the operating room two hours after admission. A lesion of the proximal rectus femoris muscle was viewed. Cleaning and debridement of the wound were made; the joint reduction was done by traction and internal rotation, without difficulties. Clinical and radiographic evaluation revealed a stable reduction (Fig. 3). The wound was



Fig. 1 – Appearance of wound at the root of the left thigh, exposing the femoral head.

closed with introduction of broad-spectrum antibiotics for 72 h. Wound healing without need for further debridement occurred.

The post-reduction computed tomography (CT) demonstrated joint congruence and great trochanter fracture without deviation, treated conservatively (Fig. 4). The patient was kept without loading for six weeks, followed by progressive load, with full load after 10 weeks.

After one year of follow-up, the functional outcome was poor (Harris Hip Score: 52 points) with limited range of motion of the hip (flexion 90°, extension 20°, abduction 20°, adduction 10°, internal rotation 10°, external rotation 30°) and without neurological deficit. Radiographs and magnetic resonance imaging (MRI) showed no signs of necrosis of the femoral head until the last follow-up. MRI showed a lesion of the

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