

CASE REPORT

Bilateral Asymmetrical Traumatic Hip Dislocation in an Adult

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Abstract

Bilateral hip dislocation occurring as a result of trauma is a rare condition. Simultaneous anterior and posterior traumatic dislocation of both hips is even more unusual. A case is reported of bilateral asymmetrical traumatic hip dislocation in previously normal hips in a 20 year old adult male without an associated fracture of the pelvis or femur. An unusual mechanism for this injury is also described.

Key Words

Bilateral, Hip Dislocation, Trauma, Avascular Necrosis

Introduction

Bilateral hip dislocation occurring as a result of trauma is a rare condition. Simultaneous anterior and posterior traumatic dislocation of both hips is even more unusual (1). A case is reported of bilateral asymmetrical traumatic hip dislocation in previously normal hips in a 20 year old adult male without an associated fracture of the pelvis or femur. An unusual mechanism for this injury is also described.

Case Report

A 20 year old male was involved in road traffic accident while he was travelling in a car, sitting in the front seat. At the time of head-on collision, he was not wearing seat belt. He was brought to the Emergency Department of our institute within half an hour of injury. On admission, his left leg was externally rotated, abducted and slightly flexed, while the right was held in fixed flexion, internal rotation and adduction. There was no external visible soft tissue or bony injury of any other part. No associated visceral injury was present. Distal neurovascular status in both the legs was normal. A pelvic radiograph (Fig 1) performed in the x-ray room revealed bilateral hip dislocation with the femoral head displaced anteroinferiorly on the left side and posteriorly on the right side. There was no associated fracture of the acetabulum or femur. Both hips were reduced by closed manipulation under intravenous sedation in the emergency room within 1 hour

of presentation. A post reduction radiograph confirmed concentric reduction of both the hip joints (Fig 2). He



Fig 1. Image of Patient with Bilateral Asymmetrical Hip Dislocation



Fig 2. Image of Patient After Reduction of Bilateral Asymmetrical Hip Dislocation

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was kept on bed rest for three weeks with skeletal traction. Assisted partial weight bearing was allowed with walker in fourth week and painless full weight bearing began at the end of sixth week.

Discussion

Bilateral dislocation of the hip joints is a rare pattern of injury and asymmetrical involvement is even rarer, accounting for less than 0.8% of all hip dislocations (1,2). Ninety per cent of dislocations are posterior, occurring as a result of high energy trauma mostly in car and motorcycle accidents (46% and 18% respectively) (3). This results when a sufficient force is applied in the long axis of the femoral shaft while the hip is flexed and adducted. In contrast, anterior dislocations are caused by rotation and may be classified as superior and inferior. Superior ones occur attributable to abduction and external rotation in extension and inferior ones occur when the hip is adducted and external rotated in flexion. Simultaneous anterior and posterior traumatic dislocation of both hips is even more unusual. The mechanism of injury in our case probably involved adduction and internal rotation of the right hip and abduction and external rotation of the left hip, with both hips flexed. Often a result of dashboard injuries during a car crash, bilateral asymmetrical hip dislocation results from a peculiar "Wind Swept" position of the legs at the time of impact (4). Several studies (5, 6) have shown that the risk of osteonecrosis occurring after a hip dislocation is related to the length of time the hip remains dislocated. The risk rises after a delay of six hours, or after repeated attempts of closed reduction. Avascular necrosis is reported to occur in 4% of hip reduced within 6 hours and 58% of

those that remained dislocated for more than 6 hours (7, 8). In our case, both the hips were reduced within 6 hours of trauma and follow up at 6 weeks shows a painless and full range of motion bilaterally.

Conclusion

A rare case of bilateral asymmetrical hip dislocation is reported. We emphasise that traumatic hip dislocation is an orthopaedic emergency and early diagnosis with immediate reduction of the dislocation is the key determinants of an excellent result.

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