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## Traumatic bilateral hip dislocation; one anteriorly and one posteriorly in adult: A case report and brief review of literature

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### Abstract

Bilateral asymmetric traumatic hip dislocation is a rare orthopaedic condition. Only few cases are reported in the literature. Most of the bilateral hip dislocations are posterior dislocation. In few numbers it is a combination of both anterior and posterior dislocation. We report such a case of asymmetric traumatic bilateral hip dislocation in an adult of 30 years of age. Reduced under general anaesthesia within four hours, both the hip showed concentric reduction.

**Keywords:** Hip dislocation, asymmetric, bilateral, adult, avascular necrosis

### Introduction

Hip dislocation in adult is a major traumatic event. Because of deeper ball and socket congruency, tough ligaments around, and bulky muscle cover the hip is a stable joint in normal range of movement. Only in extremes of range like flexion, adduction and internal rotation the hip is vulnerable for dislocation posteriorly provided there is sufficient traumatic force. Anterior dislocation is less common because of more abnormal posture it requires along with the trauma i.e. abduction, extension and external rotation. Moreover the tough ilio-femoral ligament always acts as a restraint along with the capsule. Bilateral dislocations are rare event and they are mostly posterior dislocation. High velocity injuries in vulnerable positions are required to cause these. Asymmetric bilateral hip dislocations means one hip dislocates anteriorly while the other dislocates posteriorly. They are found very rarely and only a few cases are reported of such types [1-10]. In these cases one hip should be in flexed, adducted and internally rotated, while the other hip in abducted, extended and externally rotated position during the impact. We presented a case of asymmetrical bilateral traumatic hip dislocation in adult.

### Case Report

A 30 years old male person was presented to our Casualty following road traffic accident with severe pain in both hips with deformities. He reached our Casualty after 2 hours of the accident. He was conscious and his vitals were within normal limits. His head and neck area, chest, upper limbs were normal except minor abrasions. He was unable to move the hips and to sit or stand. The left hip was flexed, adducted and internally rotated while the right hip was abducted and externally rotated. The movement were grossly restricted with severe pain. The right inguinal area was full and the femoral head could be palpated. The left femoral head could be palpable at the buttock. Distal pulsation in both the lower limbs were normal. No sensory-motor deficit was noted in any of the limbs.

X-rays of the pelvis and hips showed anterior dislocation of the right hip and posterior dislocation of left hip. However no fracture was noted. Closed reduction was tried in the ED under anaesthesia and both the hips were relocated. The time period from the accident to reduction of dislocation was around 4 hours. Post reduction x-rays showed congruent joints. Skin traction was applied to both lower limbs and the patient was admitted. He was discharged after 3 weeks with an advice of non weight bearing for another 6 weeks. He was reviewed after 2 months and had good range of movement and no pain around the hips.

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**Fig 1:** Clinical Photo



**Fig 2:** Pre-reduction X-ray



**Fig 3:** Post-reduction X-ray

### Discussion

The incidence of hip dislocation is now rising because of increase in numbers of road traffic accidents. Most of them are posterior dislocation. About 90% of all dislocations are posterior one. Bilateral dislocations of hip are rare occurrences. Some series mention 1.25% of all dislocations are bilateral [1, 2]. Bilateral asymmetric dislocations are rarer. Only a few cases are reported till date [3-15]. The precise

mechanism of these dislocations is still elusive. During the time of accident one hip should be in flexed, adducted and internally rotated position while the other hip should be in abducted and externally rotated position and the trauma must be significant in both hips. This 'windswept position' with significant trauma may be a predisposing factor [9, 18]. In Indian scenario overcrowded jeep drivers use to assume this posture. Their right side which is on the accelerator is flexed, abducted and externally rotated while the left side which is on the clutch is flexed, adducted and internally rotated because of overcrowding. Head on collision in that position may dislocate both the hips in different directions [16, 17].

Closed reduction should be done as soon as possible. The chances of developing avascular necrosis of head of femur increases with the time the hip remains in dislocated position. Some authors suggests 4 hours from the time of injury to reduction is the allowed time for good result with less chances of AVN [18, 19]. Reduction maneuvers should be less traumatic. Bigelow's method may be helpful in posterior dislocation and traction in the line of shaft with gentle rotations reduces the anterior dislocations in many cases [15].

After reduction the hips should be immobilized for 3 weeks by giving skeletal or skin traction. Further non weight bearing period of 6-8 weeks with mobilization of the hip gives optimal results.

Few dislocations are associated with acetabular fractures. They may require definitive operative procedures after the hip is relocated. Anterior dislocation may compress the femoral vessels in some cases compromising the vascularity of the limb. Similarly sciatic nerve may be stretched in posterior dislocations causing neuropraxic injury.

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