

Bilateral Asymmetrical Hip Dislocation Due To An Unusual Mechanism

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Abstract

Simultaneous anterior and posterior dislocation of both hips is extremely rare. We report a case of asymmetrical bilateral dislocation of previously normal hips in a 65 year old female.

In this case, an unusual mechanism of injury resulting in such a pattern of dislocation is discussed.

CASE REPORT

A 65 year old female presented to the emergency room (ER) with bilateral hip trauma following collapse of a mound of loose earth she was digging at. On admission, her left leg was fixed in flexion, internal rotation, and adduction, while the right was in slight flexion, external rotation and abduction. There was no externally 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. An anteroposterior radiograph of the pelvis showed a posterior dislocation of the left hip and an anterior dislocation (Inferior / obturator) of the right hip. There was a fracture of superior pubic ramus fracture of the right side and a split fracture of the inferior pubic ramus extending into the ischial ramus of the left side. Both hips were reduced by closed manipulation under intravenous sedation in the E.R. within 1 hour of presentation. A post reduction radiograph confirmed concentric reduction of both the hip joints. Patient was put on bilateral skeletal traction for 3 weeks after which traction was released and range of motion (ROM) exercises were begun. Now at 7 weeks of follow up, she has a painless and complete ROM at both the hip joints.

DISCUSSION

Simultaneous 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 (3, 9). Considerable amount of direct force transmitted longitudinally to the thigh is required to result in a dislocation at the hip, an intrinsically stable, joint by design.

Most common causative mechanism is high energy trauma during motor vehicle accidents (MVA). 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 (8). Very few cases of such a pattern of dislocation at the hip are documented in the literature with almost all resulting from MVA's [1,2,3,5,7,8,9,10]*. In our case, the patient was sitting on the ground with the right leg in flexion and abduction at the hip and left in flexion and adduction. As the mound she was digging at collapsed, she was thrown down on her back with the hips in the same attitude, thereby resulting in an asymmetrical dislocation, i.e. anterior on the right and posterior on the left. Interestingly, there was no other major pelvic ring, spinal or visceral injury. This is almost similar to the mining or pit accidents, wherein, collapse of the roof of the mine results in such an injury. However, in contrast to the solid rock that causes such dislocations in a mining accident, in our case, it was the loose earth from the mound.

Traumatic dislocation of the hip are medical emergencies and early diagnosis with immediate reduction of the dislocation is the key determinants of an excellent result. 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 (4,6). In our case, both the hips were reduced within 6 hours of trauma and follow up at 7 weeks shows a painless and full ROM bilaterally.

Figure 1

Figure 1: image of patient with bilateral hip dislocation secondary to caving in of earth while digging in.



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