



Traumatic Bilateral Anterior Hip Dislocation-Reduction Time is of Essence: a Case Report

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Abstract

Majority of hip dislocations are posterior dislocations. Anterior hip dislocations are un-common, as are bilateral hip dislocations. All types of hip dislocations are time-sensitive emergencies and hence require early reduction. Here we present a case of 55-year-old lady presented with bilateral hip pain and unable to move her limbs at the hip joints in the setting of trauma. X-ray examination of the pelvis revealed bilateral anterior hip dislocations. Bilateral hip dislocation was successfully reduced, and confirmed later with post-reduction pelvis radiograph. The post-reduction period was unremarkable for any complication. She was discharged after 6 days and follow-up visit confirmed that she gained complete recovery and could walk without assistance. The case highlights the fact that early intervention in traumatic hip dislocation increases the chances of favorable outcome for patients.

Keywords Traumatic hip dislocation · Anterior dislocation · Bilateral dislocation

Introduction

Hip dislocations represent 5% of all dislocations with anterior hip dislocations accounting for 15% of all hip dislocations. Bilateral dislocations are an even rarer occurrence accounting for 1.25% of all hip dislocations [1, 2]. Hip dislocations may be classified in different ways based on etiology (congenital vs acquired), anatomical direction (anterior vs posterior), and prosthetic (total hip or hemi arthroplasty) or native status of the hip [3, 4]. Traumatic dislocations in native hip joints are rare

injuries usually occurring after significant trauma in patients involved in motor vehicle accidents, falls from heights, and sports injuries. Posterior dislocations being more common compared to anterior dislocations based on pathoanatomic factors rendering the posterior structures weaker and disadvantaged as compared to the anterior in term of stability [3, 5, 6]. Bilateral posterior dislocations and asymmetric anterior and posterior dislocations comprise most of the cases reported. An extremely rare presentation of bilateral anterior hip dislocation in an adult is reported. Very few case reports are available in the literature describing this injury.

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Case Presentation

A 55-year old female presented to trauma room of a teaching hospital after sustaining trauma to both her lower limbs. The patient was grazing a cow when the rope of its Halter got tangled in her leg, causing it to be pulled laterally. The patient fell down with both her lower limbs in extreme abduction. On examination both her legs were in 70° flexion, 30° abduction, and 30° external rotation at the hip joint. Both femoral heads were palpable in the right and left obturator region, respectively. No neurovascular impairment was detected. X-ray examination of the pelvis showed bilateral anterior (inferior) dislocations (Fig. 1).

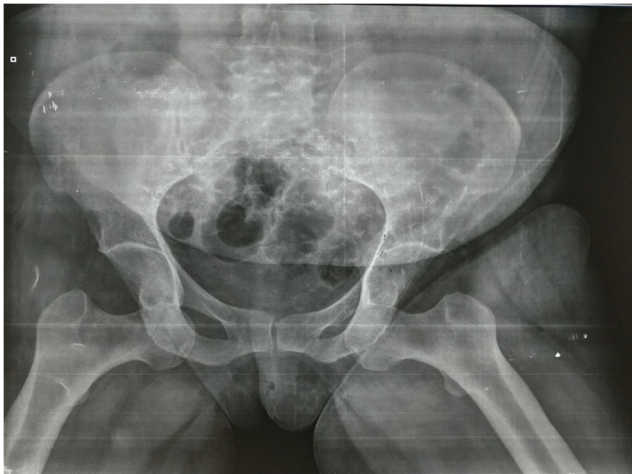


Fig. 1 X-ray pelvis AP view shows simultaneous anterior dislocation of bilateral hip joints

No associated injuries were found and patient was shifted to operating room. Both hips were reduced within 2 h of presentation by closed manipulation under general anesthesia using Allis's maneuver. Skeletal traction was applied after reduction with 5 kg weight for each limb for four weeks. Post-reduction radiograph showed reduced bilateral hip joints with no associated fractures (Fig. 2). Postoperatively, no neurovascular deficit was observed.

Patient was discharged after 6 days of admission and sent home on skeletal traction. At follow-up after 4 weeks, skeletal traction was removed and patient allowed to fully bear weight. Initially, she needed frame for mobilization but was independently walking after a month. The patient achieved complete range of motion at bilateral hip joints and walked without assistance. At 6 months, patient was contacted via telephone. She did not want any follow-up radiological investigation or visit, as she did not have any complaints. Written informed consent for publication was obtained from the patient's guardian.



Fig. 2 X-ray pelvis AP view shows congruent reduction of hip joints

Discussion

Bilateral anterior hip dislocation is an extremely rare entity with very few cases reported in literature. It is further subdivided into superior and inferior types. The superior type is caused by abduction, external rotation and extension of the hip whilst the inferior type, as in our case, is caused by simultaneous forced abduction, external rotation, and flexion of the hip. Approximately, 90% of anterior hip dislocations are of inferior type [3, 6].

Traumatic hip dislocation poses a unique challenge to surgeons and emergency care providers. Delay in diagnosis and reduction may result in disastrous sequelae like post-traumatic arthritis, joint instability, myositis ossificans, and osteonecrosis of the femoral head. Attempting closed reduction of the dislocated hip within the golden 6 h of injury is the preferred and established approach. The chances of osteonecrosis increase with delay in reduction. Hence, hip dislocations are associated with high energy trauma, thus necessitating a thorough examination to rule out associated fractures and neurovascular injuries [1, 3, 4, 7]. In our case, the patient was lucky that no such associated injury occurred.

Imaging has an important role in the management of traumatic hip dislocations. Usually, the dislocation can be seen on a frontal radiograph of the pelvis, rarely requiring additional views. Besides this, X-ray examination may also reveal associated fractures. Post-reduction radiographs are mandatory to confirm reduction. Recently, computed tomography (CT) has also been included in the management of traumatic hip dislocations as it gives a 3D orientation of the dislocation and is more sensitive in picking up associated fractures [3, 4].

The two most widely known and used methods of reduction of hip dislocations are the Stimson maneuver and the Allis maneuver [1, 3]. It may be attempted in sedation or general anesthesia with procedural sedation gaining wide acceptance. Rarely, attempts at reduction may fail and open reduction may be mandated due to interposition of soft tissue or associated fractured fragments [4, 8].

The case highlights the fact that early intervention in traumatic hip dislocation increases the chances of favorable outcome for patients.

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Declarations

Conflicts of Interest The authors declare that they have no conflicts of interest.

Ethics Approval Not applicable.

Consent to Participate Written informed consent for publication was obtained from the patient's guardian.

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