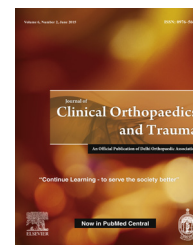


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Case Report

Ipsilateral hip and knee dislocation: Case report and review of literature



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ABSTRACT

Hip and knee dislocations are not uncommon but simultaneous ipsilateral dislocation of the hip and knee joint is rare; consequently, there is an inadequate amount of literature on the subject. We identified only 11 such cases reported in English literature. In the present report, we describe the case of a 23-year-old male patient who presented with ipsilateral hip and knee dislocation on the right side after being involved in a road traffic accident. The hip dislocation was associated with a posterior wall acetabular fracture. The hip as well as the knee joints was reduced in the emergency bay. The patient underwent an urgent fixation of the posterior wall acetabular fracture with delayed ligament reconstruction for the knee dislocation. At one-year follow-up, he had no pain in the hip or knee. There was grade 1 posterior sag but no symptoms of knee instability. Radiographs revealed no evidence of avascular necrosis or arthritis of the femoral head. The normal treatment protocol for individual injury is affected by the simultaneous occurrence of hip and knee dislocation.

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1. Introduction

Hip or knee dislocations occurring in isolation are not rare injuries, but their simultaneous ipsilateral occurrence is uncommon.^{1–11} A thorough review of literature identified only 11 such cases. The simultaneous occurrence of these two orthopedic emergencies affects the normal treatment protocol for individual injury. The outcome can vary widely from no

significant sequelae^{4,5,7} to knee amputation.⁶ We report a patient with such injury and discuss the literature.

2. Case report

A 23-year-old truck driver was involved in a high velocity road traffic accident. He presented to tertiary care hospital three hours after injury. Examination revealed hip in attitude of

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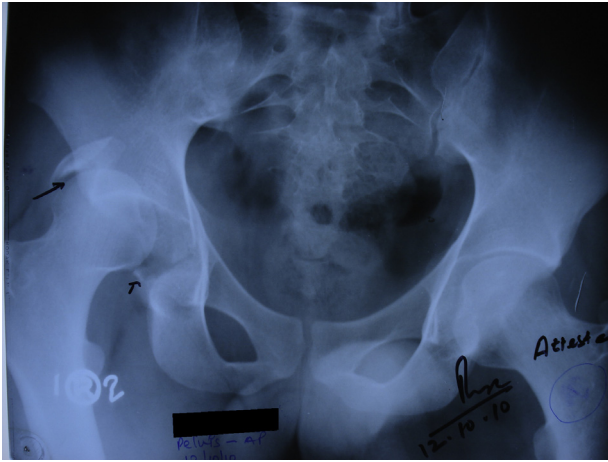


Fig. 1 – X-ray pelvis anteroposterior view showing fracture dislocation of hip. Note the large posterior wall fragment.

flexion, adduction, and internal rotation with a posterior dislocation of the right knee. The posterior tibial and the dorsalis pedis artery were palpable. Dorsiflexion of the right ankle was absent along with reduced sensations along the lateral aspect of the leg and the dorsum of the foot, suggesting common peroneal nerve involvement. Radiographic evaluation revealed a posterior dislocation of the right hip with a posterior wall acetabular fracture (Fig. 1) and a posterior knee dislocation (Fig. 2).

The patient underwent immediate closed reduction of the knee in the emergency bay under sedation followed by

application of a posterior splint with the knee in 90° flexion. The hip joint was then reduced by giving traction over the distal part of thigh with the hip and knee in 90/90 flexed position and pelvis stabilized by second assistant. A third person stabilized the leg while traction was applied through the distal part of the thigh, with the hip reducing easily. Postreduction CT scan of the hip showed a concentrically reduced femoral head with a large posterior wall acetabular fracture (Fig. 3), while the postreduction MRI knee revealed disruption of the cruciates, medial collateral ligament (MCL), and the posterolateral corner (PLC) (type IV) (Fig. 4).

Next morning the patient underwent osteosynthesis of the posterior wall acetabular fracture. He was operated in the lateral position using the Kocher Langenbeck approach. The posterior wall fragment was fixed with two lag screws and a buttress plate (Fig. 5). At the time of surgery, the knee was protected using a posterior splint.

In order to reduce the surgical insult to the patient and to reduce the risk of arthrofibrosis, a delayed reconstruction was planned for the knee. It was placed in a hinged PCL brace initially locked in extension. Controlled range of motion exercises were started at three weeks. The patient was mobilized with crutches, nonweight bearing on the right lower extremity for the first eight weeks. At this time, the knee range of motion was 10–120°. Examination under anesthesia revealed a mildly positive Lachman test with a firm end point, a positive posterior drawer test with more than 15 mm translation, and a positive dial sign. Under fluoroscopy, valgus stress testing did not reveal instability, but varus stress testing at 0° and 30° showed more than 10 mm opening of lateral compartment of the knee. Ten weeks post injury, he underwent combined PCL and PLC reconstruction (Fig. 6).



Fig. 2 – X-ray knee anteroposterior and lateral views showing dislocation of knee. Note the fractures of the avulsion fracture of head of fibula and fracture of shaft of fibula.

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