

A Rare Case Report: Traumatic Anterior Dislocation of the Hip with Ipsilateral Segmental Fracture of Shaft of Femur, Left Ribs Fracture with Haemothorax in an Adult

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Abstract

Among traumatic dislocation of the hip with fracture shaft of the femur on the same side is a very rare injury. Traumatic anterior dislocation of the hip is a relatively rare condition, especially when compared to the more encountered posterior dislocation of the hip joint. We report a case of traumatic anterior dislocation of the hip associated with ipsilateral segmental fracture of the femoral shaft with left ribs fracture and haemothorax in a 45 years old female following road traffic accident.

Keywords: Anterior hip dislocation; Ipsilateral femur shaft fracture; Ribs fracture.

Introduction

Sir Astley Cooper in 1823 was the first to record the successful treatment of this condition.¹ The hip joint is anatomically the most stable joint in the body. It consists of a ball; the femoral head, and a socket; the acetabulum. Anterior dislocations of the hip are uncommon, forming approximately 10-15% of hip dislocations. Complications in anterior hip dislocations are osteonecrosis, vascular injury and nerve injury. Traumatic anterior dislocation

of the hip with an ipsilateral segmental fracture femur shaft fracture is a rare condition. Therefore, this study was undertaken to describe the clinical presentation in 45 years old patient with anterior hip dislocation with ipsilateral segmental femur shaft fracture with left ribs fracture and haemothorax and their surgical management.

Case Report

A 45 years old female patient came to the casualty

with complaints of pain in her left groin, left thigh, left chest wall region and face following an accidental injury due to run over by a tractor without head injury. On physical examination the findings included shortening and external rotation of the left lower limb.

The femoral head was palpable just below the inguinal ligament. Distal neurovascular function was intact. She had marked swelling and pain from the left hip till the femur. There was no apparent skin injury.

The dorsalis pedis artery was palpable, and there was good movement of the toes. No nerve or vascular injury was noted. X-rays findings at the time of arrival revealed left hip anterior dislocation with ipsilateral femoral shaft comminuted segmental fracture. Chest x-ray suggestive of left 5th, 6th and 7th ribs fractures with haemothorax. CT scan confirmed the above diagnosis.

CT brain suggestive of right zygomatic-complex fracture. A closed reduction of hip joint was done under GA as an emergency with Intercostal chest drainage for haemothorax and closed reduction internal fixation using intramedullary interlocking nail was performed after 2 days.

A postoperative radiograph of the pelvis showed adequate reduction and the patient was placed on Thomas splint with skin traction for a period of three weeks. Ribs fracture was managed conservatively. For right zygomatic-complex fracture, open reduction and internal fixation with plating was placed once patient was stable by OMFS team. After 3 weeks Thomas splint was removed and mobilization of extremity advised.

Result

Post-operatively no dislocation of hip and no infection of wound seen. At 3 weeks the mobilization of hip and knee joint was started. Patient was made to walk with the help of walker without weight-bearing on left lower limb. At the end of 6 weeks patient was started with partial weight-bearing with walker support.

At 3 months, fracture was united radiologically, full range of movements were achieved at hip and knee joints and patient was made to walk with full weight-bearing.



Fig. 1: X-ray Showing Left Hip Anterior Dislocation with Ipsilateral Comminuted Segmental Femur Shaft Fracture.



Fig. 2: Post-OP X-ray Showing Concentric Left Hip Reduction with Imil Nail In-Situ and Thomas Splint.

Discussion

Traumatic dislocation of the hip is broadly classified into anterior and posterior dislocations on the basis of a dividing line that connects the anterior superior iliac spine with the ischial tuberosity. Anterior and posterior dislocations are further classified into superior and inferior dislocations based on a line connecting the superior pubic ramus with the greater sciatic notch.

Types and subtypes of anterior dislocation of the hip joint as described by Epstein.²

I :Superior dislocations (includes pubic and subspinous dislocations)

A: No associated fracture (simple dislocation)

B: Associated fracture of the head and/or neck of the femur

C: Associated fracture of the acetabulum

II :Inferior (includes obturator and perineal dislocations)

A: No associated fracture (simple dislocation)

B: Associated fracture of the head and/or neck of the femur

C: Associated fracture of the acetabulum

Complication rates in hip dislocations are quite high, with osteonecrosis rates of 4% reported for anterior dislocations³ compared with rates of 52.9% in posterior dislocations. This is explained by the pattern of blood supply to the hip. Recent studies have shown best results if reduction is done within a 6 hour period.⁴ Common complications in anterior dislocations of the hip include vascular injury and nerve injury.

Conclusion

Emergency reduction of hip dislocation with closed reduction and internal fixation of femur shaft with immobilisation in Thomas splint showed excellent surgical outcomes and a satisfactory recovery rate. If hip dislocation can't be reduced – open surgical intervention is needed to reduce complication rates. Making a proper and early diagnosis of traumatic anterior dislocation of the hip with ipsilateral fracture of the femoral shaft needs early reduction of hip joint and definitive fixation for femur shaft fracture followed by post-operative rehabilitation can result in complete and satisfactory recovery.

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