Adult Traumatic Eight Days Old Anterior Dislocation of the Hip with Ipsilateral Fracture Upper Third Shaft Femur: An Atypical Case Report

Brijesh Sharma[1], Yajuvendra Kumar Sharma[1], Rohit Yadav[1], Chandra Prakash Pal[1]

Abstract

Introduction: Anterior or posterior dislocation of hip are usually associated with fracture head of femur but dislocations associated with femoral neck, trochanter and shaft are very rare and among these anterior dislocation of hip with ipsilateral fracture of shaft femur is an extremely rare injury. We reported a case of anterior dislocation of hip associated with ipsilateral fracture shaft femur upper third in adult male.

Case Report: A 25-year-old male, low socioeconomic status was brought to our emergency department was conscious but unable to mobilize his right lower limb and external rotation deformity was present with some shortening. No neurovascular compromise and was found fracture shaft femur along with anterior dislocation of right hip on X-ray and treated by close reduction of femoral head and internal fixation of fracture shaft femur by intramedullary nail.

Conclusion: Early diagnosis of hip dislocation is essential to prevent avascular necrosis of femur head in future. We concluded that there is no need of open reduction for anterior hip dislocation in every such case. Close reduction of anterior dislocation of hip followed by femur interlocking for femoral shaft fracture is good option for management for such type of injuries.

Keywords: Hip dislocation, Close reduction, Avascular necrosis,Ffracture dislocation

Introduction

In high velocity trauma isolated hip dislocation injuries are very common as posterior is more than anterior [1]. Anterior or posterior dislocation of hip are usually associated with fracture head of femur [2] but dislocations associated with femoral neck, trochanter and shaft are very rare and among these anterior dislocation of hip with ipsilateral fracture of shaft femur is a extremely rare injury, in literature there are very few such cases are reported. Previously reported cases are usually in children and no significant data associated with injury in adults. We reported a case of anterior dislocation of hip associated with ipsilateral fracture shaft femur upper third in adult male.

Case Report

A 25-year-old male was brought to our emergency department in March 2017 after 8 days of road traffic accident. Immediately after the injury patient was admitted in a private hospital, where he diagnosed as a case of fracture shaft femur and advised for operative intervention but patient was not satisfied and came to our emergency after 8 days of trauma. Careful history was taken from patient and his attendant and they told us about external rotation deformity of injured lower limb immediately after injury. On careful examination, patient was conscious but unable to mobilize his right lower limb and external rotation deformity was present with some shortening. No neurovascular compromise was found. We advised new radiograph of pelvis with both hip AP view and right sided shaft of femur AP and Lat view and found fracture shaft femur along with anterior dislocation of right hip (Figure1). 3-D CT-scan of pelvis was done and found that femur head was present in right obturator region (Figure 2).

After necessary investigations patient was shifted in operation-theater. Firstly patient was shifted on table without traction attachments. A 4.5 mm shanz pin was inserted in to the femur head through base of greater trochanter under C-arm guidance. After confirming position of pin, femoral head was reduced successfully in acetabulum by manipulation of proximal fragment (Figure 3). Position of head of femur was again confirmed by c- arm and pin was holded by an assistant. After reduction of femur head traction attachments were applied with table. Entry site was made for anterograde femur interlocking nail with the help of c-arm and guide wire inserted after closed reduction (Figure 4). Femur interlocking nail of appropriate size was inserted after reaming (Figure 5). Proximal and distal locking was done after removing shanz pin (Figure 6 and 7). Stability of hip was again assessed and found stable. Incision site were closed appropriately (Figure 8). Buck's skin traction was applied for 4 weeks. Patient was discharged with advice not to bear weight. Stitches were removed after 14 days and skin traction was removed after 28 days. Range of motion exercises in lying down position were started for 3 weeks. Unfortunately, he was lost to follow-up and attempts to contact the patient were unsuccessful.

Discussion

Ipsilateral fracture of shaft femur with anterior dislocation of hip are very rare injuries which are associated with high velocity of trauma.

[1]Department of Orthopaedics, Sarojini Naidu Medical College, Agra, Uttar Pradesh, India.

Address of Correspondence
Dr. Chandra Prakash Pal,
Professor and Head, Department of Orthopaedics, Sarojini Naidu Medical College, Agra, Uttar Pradesh, India.
E-mail: drcportho@gmail.com

Submitted: 1/3/2021; Reviewed: 2/4/2021; Accepted: 5/5/2021; Published: 10/6/2021

DOI: 10.13107/ti.2021.v07i02.19 | *www.traumainternational.co.in*

Figure 1: Preoperative radiograph of patient

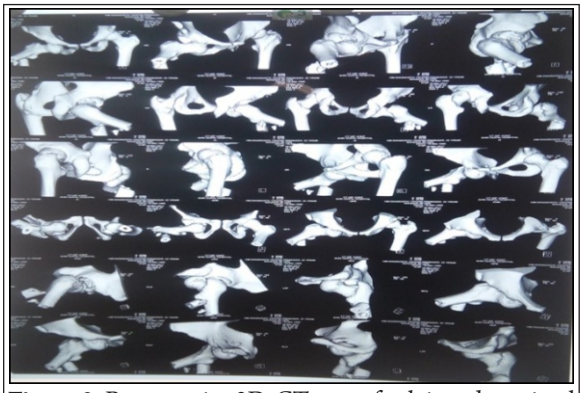

Figure 2: Preoperative 3D-CT scan of pelvis and proximal femur.

Figure 3: Per operative fluoroscopy image shows reduction of femoral head with the help of schanz pin.

Figure 4: Per operative fluoroscopy image shows guide wire insertion with schanz pin in its place.

Figure 5: Intra- operative fluoroscopy image showing femur interlocking nail insertion.

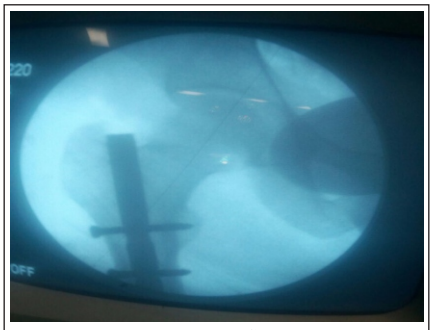

Figure 6: Per operative fluoroscopy image after removal of schanz pin with proximal locking of femur nail.

Figure 7: Immediate post operative X-ray

Figure 8: Stitches at entry site with proximal and distal locking site with buck's skin traction.

Watson-jones first described the technique of kuntcher nail insertion for femoral shaft fracture, followed by close reduction of hip in similar injury [9]. In our case we first reduced dislocation by inserting shanz pin in head of femur and then inserted femur interlocking nail.

According to literature there are very few such cases are reported in children [3-5]. Chirag TN et al., report a case of posterior hip dislocation with ipsilateral femoral shaft fracture in 40 year-old-male [6] but no significant data available for anterior dislocation of hip with femoral shaft fracture. We reported a case of 8 days old anterior dislocation of hip associated with ipsilateral fracture shaft femur upper third in adult male.

As the hip dislocations have their classical limb attitude so that they all are identified easily at the time of injury but situation is different in this combined injury, there is no such type of attitude (because of fracture shaft femur). Marked abduction of proximal fragment of femur raised suspicion about dislocation.

Helal and skevis in their study showed that these injuries are resultant from two different forces, axial forces for dislocation and direct transverse forces for shaft [7]. Sidhasambandan (1986) concluded that all anterior dislocations associated with fracture shaft femur required open reduction of femur [8]. But in our case closed reduction of femoral shaft was successful.

Conclusion

Early diagnosis of hip dislocation is essential to prevent avascular necrosis of femur head in future. Hence, careful radiological assessment is quite important to prevent delayed or missed anterior dislocations by identifying proximal fragment in marked abduction. We concluded that there is no need of open reduction for anterior hip dislocation in every such case. Close reduction of anterior dislocation of hip followed by femur interlocking for femoral shaft fracture is good option for management for such type of injuries.

Clinical Message

Main aim of presenting this case is to report and to conclude that there is no need of open reduction for anterior hip dislocation in every such case. Early close reduction of anterior dislocation of hip followed by femur interlocking for femoral shaft fracture is good option to manage such type of atypical rare case and to prevent future avascular necrosis.

Declaration of patient consent: The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the Journal. The patient understands that his name and initials will not be published, and due efforts will be made to conceal his identity, but anonymity cannot be guaranteed.

Conflict of interest: Nil **Source of support:** None

References

1. Sahin V, Karaks ES; Aksu S, Atlihan D et al (2003) Traumatic dislocation and fracture-dislocation of the hip: a long term follow-up study. J Trauma 54:520–529
2. Alexa O, Puha B, Veliceasa B, Paduraru D. Posterior dislocation of the hip associated with ipsilateral trochanteric fracture-a very rare case.Chirurgia (Bucharest, Romania : 1990) [01 Nov 2009, 104(6):761-764].
3. K Yamamoto, M Ko, T Masaoka, T Shishido, A Imakiire traumatic anterior dislocation of hip associated with ipsilateral femoral shaft fracture in a child: A case report. Journal of Orthopaedic Surgery 2004;12(1):126–132
4. Malkawi H. Traumatic anterior dislocation of hip with fracture of shaft of the ipsilateral femur in children: case report and review of the literature. J Pediatrorthop. 1982 Aug;2(3):307-11.
5. Barquet A. Traumatic hip dislocation with fracture of ipsilateral femoral shaft in childhood.Report of a case and review of literature.ArchOrthop Trauma Surg. 1981;98(1):69-72.
6. Chirag TN et al., Traumatic dislocation of hip with ipsilateral femur shaft fracture – A case report. Journal of Orthopaedics and Rehabilitation / January 2011/ vol.1/issue 1.
7. Helal and X. Skevis. Unrecognized dislocation of the hip in fractures of the femoral shaft. Vol. 49B. 2, may1967.
8. Sidhasimbandan, obturator dislocation of hip associated with fracture shaft of femur Singapore: case report; medical journal volume 23, NO 5, October 1986.
9. Watson–jones R: Fracture and joint injuries. 4th ed. Baltimore: The Williams and Wilkins Co, 1955;2:678-81.

How to Cite this Article

Sharma B, Sharma YK, Yadav R, Pal CP | Adult Traumatic Eight Days Old Anterior Dislocation of the Hip with Ipsilateral Fracture Upper Third Shaft Femur: An Atypical Case Report | July-December 2021; 7(2): 15-17.