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RESEARCH ARTICLE

A rare type of fracture neck femur in children

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Manuscript Info	Abstract
Manuscript History:	Hip fractures constitute less than 1 % in children and are rare as compared to
Received: 15 October 2015 Final Accepted: 22 November 2015 Published Online: December 2015 <i>Key words:</i>	in adults. They differ from neck femur fractures in adults by easy damage to blood vessels supplying the head of femur, high chances of osteonecrosis, presence of physis. The child presents with deformity, pain, inability to walk. The management is difficult and prognosis guarded. Aggressive treatment of hip fractures in children is needed to prevent complications. Prognosis is poorer in displaced fractures. Hereby we report a case of neck
	from inside.
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INTRODUCTION

Hip fracture in children are rare entities and comprise 1 % of all fractures in children. Unlike in adults these fractures in children occur due to high energy trauma and result in injuries to viscera, head injury, extremities. The complication rate is high in spite of fixation. Importance of operative procedure is not easily understood by parents but is necessary to prevent complications. Here we are presenting an interesting case which will misled the Orthopaedician in approaching a management protocol.

Case report-A 14 yr old male pt. comes to the Emergency Department of Orthopaedics with history of falling of a heavy stone with injury to right hip. He had pain in the hip, inability to walk, decreased range of motion and a very unusual finding-Wound over the medial aspect of thigh proximally with tenting of adjacent skin. It was a 2cm lacerated wound with minimal bleed and bone was felt beneath the skin over the medial aspect. The distal neurovascular status was intact. General examination revealed no additional injury was detected. Pulse was 98 beats per min. Bp 112/78 mm HG. No history of any chronic disease. He was admitted. I.v antibiotics and splintage done to relieve pain.

X ray of pelvis revealed transcervical fracture of neck of femur(DELBET CLASSIFICATION) but the distal fragment was so severely displaced medially that it caused compounding from inside.



Fig 1-initial x ray of pt.

Due to this severe displacement of distal fragment medially, pt. Was in severe pain. The pt. was brought to minor OT and fracture manipulated under sedation so that the medial displacement of distal fragment is corrected to relieve pt. of pain and prevent damage to neurovascular structure on medial aspect of thigh.



Fig 2-After reduction in minor OT

The pt. was then planned for operative procedure after about 12 hrs.

Intraoperative findings-The severely displaced distal fragment which caused compounding from inside was almost lying along axis of proximal fragment due to the reduction done in minor ot of emergency. Intra operative x rays showed this displaced neck of femur fracture as any other neck femur fracture that occurs in children. Whitman manoeuvre was attempted and the fracture reduced successfully. 3 cannulated cancellous screws were put percutaneously under image intensifier. The wound over the medial side was debrided and closed in layers as was done with the main surgical wound.



Fig 3-Post operative x ray



Fig 4-aAnother post op x ray view

Discussion-Fracture neck femur in children is a rare fracture and a compound neck femur in children is even more rare. These usually occur due to high energy trauma. The fractures are classified as per the Delbet fracture classification and the management also differs accordingly. Displaced fractures are difficult to manage and have a poorer prognosis.

Pt. Presents with a high energy trauma with inability to bear weight, pain, deformity. Pt. is examined for injury to other body parts due to the high energy trauma as mode of injury. X ray of the part is done and fracture is classified as per the Delbet classification. The transepiphyseal and transcervical fractures essentially need operative fixation as early as possible. The fracture displacement poses a challenge to the Orthopaedician for the management protocol.

The cornerstone of treatment in these patients is gentle reduction by reduction manoeuvres under c arm guidance and fixation with cancellous screws.

Conclusion-The preoperative planning of displaced neck femur fracture is difficult. We report a patient of neck femur fracture in a child with severe displacement and compounding from inside which is not seen in neck femur fracture in children.

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