

Anterior Dislocation of Hip in a 11yr old Child -an unusual presentation

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Abstract:

Introduction: Traumatic hip dislocations in children are relatively uncommon and anterior dislocation of hip joint is even rarer.

Case Report: We are hereby reporting a case of 11 yr old male who had traumatic Anterior Dislocation of Hip which is a very rare scenario. Patient underwent emergent successful reduction. Follow-up was uneventful. No complications like osteoarthritis, coxa magna, heterotrophic calcification, incongruency of the joints or avascular necrosis of the head of femur were reported.

Conclusion: Reduction was successful and followup was uneventful. The case can be treated successfully without any post reduction short or long term complications.

Key words: anterior hip dislocation, young adult

Introduction:

We are hereby presenting a case of traumatic anterior hip dislocation in a 11 yr old Male child. Anterior Dislocation of Hip is a rare case especially in adolescent age group.

Case Report

A 11yr old male Indian came to our casualty with complain of pain in left hip following a fall while playing. Pain was acute, sharp, continuous, aggravated on mild movements. Pain was associated with inability to move left hip. There was no history of head or any other injury, any previous dislocation or laxity of any joints. On examination left hip was in Flexion, Abduction and External rotation. Bony prominence was palpable in left groin.

On radiology anterior dislocation of left hip was diagnosed [Figure 1]. There was no evidence of Developmental Dysplasia of Hip or Head or neck fracture of Femur or Slipped capital femoral epiphysis.

Emergency reduction was done under GA with in-line traction and support of the pelvis with a laterally directed force at the proximal femur. The reduction was confirmed under C Arm and radiographs. Full range of physiologic movements in the hip joint were present. No post

reduction evidence of acetabular fracture or head fracture, any neurological deficit was observed (Fig 2). Post reduction skeletal traction was applied for 3 weeks following which partial weight bearing was started followed by full weight bearing at 4 weeks.

Followup was done for a period of 1 yr. in form of clinical and radiological examination. It was uneventful. There was no evidence of restriction in movement or Avascular Necrosis of the femoral head. Patient could sit in squat or crossed leg position.

Discussion:

The hip joint is inherently stable, requiring significant force to dislocate. Thus, pure hip dislocation or dislocation with femoral head fracture is generally a result of high-energy trauma and is often accompanied by associated injuries that must be sought out.[1] In addition to a standard trauma evaluation, a meticulous musculoskeletal and neurologic examination and detailed radiographic assessment is necessary to avoid missing injuries.

Posterior dislocations outnumber anterior dislocations by approximately nine to one.[2] The less common anterior dislocations are the result of hyperabduction and extension.[3][4]

On a true AP view, the head will appear larger than the contralateral head if the dislocation is anterior and smaller if posterior. In an anterior dislocation, the head may appear medial to or inferior to the acetabulum.[5] The femoral nerve lies medial to the psoas in the same sheath and can be injured with anterior dislocation.[5] The position of the hip when dislocated can kink the vessels supplying the head, making the collateral circulation important. Yue et al.[6] But the change in the extraosseous

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Fig. 1 - Radiograph showing Anterior Dislocation of Hip.



Fig: 2 One year follow up radiograph with no AVN

blood supply does not provide a consistent change in the intraosseous supply to the head, presumably due to collateral circulation. For the hip to dislocate, the ligamentum teres and at least a portion of the capsule must be disrupted. Labral tears or avulsions and muscular injury are common.[7] In anterior dislocations, the psoas acts as the fulcrum of the hip, and the capsule is disrupted anteriorly and inferiorly. Although rare, in extremely high-energy injuries, the femoral vessels can be injured or an open dislocation can occur.[8] Femoral head injury is common and may be the result of a shearing injury, impaction, or avulsion. Impaction is more common after anterior dislocation and may be quite large[9] Care must be taken, however, to avoid undue damage to the epiphyseal plate, particularly in adolescents and those with concomitant injury.[10] Factors that influence the ultimate result after dislocations of the hip are the severity of the injury, the interval between injury and reduction, the type of treatment, the period of nonweight bearing.[11]

Clinical Message:

Reduction of the dislocated hip is an emergency due to the risk of developing avascular necrosis of the femoral head. Delay in the reduction of a dislocated hip joint increases the incidence of avascular necrosis with incidence being 4.8% of those patients who received hip reduction in less than 6 hours and 52.9% after 6 hours.[12]

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Conflict of Interest: Nil
Source of Support: Nil

How to cite the article:

Goyal NB, Shah G, Patil S, Ghodke A. Anterior Dislocation of Hip in a 11 yr old Child -an unusual presentation. *Journal of Trauma & Orthopaedics*. Oct-Dec 2014; 9(4):19-20