

Isolated Apophyseal Greater Trochanteric Femur Fracture

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INTRODUCTION:

Isolated greater trochanteric avulsion fractures are rare in paediatric population. It may be due to direct trauma to the trochanteric or indirect trauma (contraction against resistance in gluteal muscles). These fractures have a high risk of avascular necrosis of the femoral head, irrespective of treatment (conservative vs surgical).

REPORT:

An 8-year-old girl had a motorbike accident where she was a pillion rider. Her motorbike was hit on the right side and she fell over to the left. Post-trauma complains of pain over the right lower limb and inability to ambulate due to the pain. On examination, there was tenderness over the greater trochanteric femur and reduced range of motion of the hip and knee. Radiological investigation showed an avulsion fracture of the right greater trochanteric femur. Screw fixation of greater trochanteric was done and she was discharged home. After 6 weeks post-trauma, she was able to ambulate without complaints.

CONCLUSION:

Isolated avulsion greater trochanteric fractures of femur are rare in the paediatric population. It may be caused by direct trauma on the trochanteric or indirect trauma (contraction against resistance in gluteal muscles)¹. These fractures are associated with a high risk of avascular necrosis of the femoral head, due to damage to the vascular structures or by intracapsular compression haematoma¹⁻². Based on literature reviews, there is no consensus on the best treatment for these fractures, between conservative or surgical management (open or closed reduction and internal fixation). Both methods have been shown to have bad outcomes, however, the majority of case reports opted for surgical intervention². Some writers suggest a minimally invasive surgical technique for fixation and some preferred conservative management in a minimally displaced fracture².



Figure 1: Right hip AP X-Ray



Figure 2: Pelvic AP X-ray

REFERENCES:

1. Freitas A et al., Apophyseal fracture or avulsion of the greater trochanter. *Acta Ortop Bras.* 2016;24(3):164-6
2. Malerba G et al., Isolated Apophyseal Avulsion of the Greater Trochanter Treated by Minimally Invasive Osteosynthesis: A Case Report. *Malays Orthop J.* 2020 Nov; 14(3): 177-179.