

“Sleeve”, Rare & Easily Missed

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INTRODUCTION:

Patella fractures are rare in children comprising only about 6.5% of all such fractures. The sleeve fracture is a particular form that only occurs in children where it is the most common patella fracture.

REPORT:

A 14-year-old boy fell while jumping and landed on the ground in kneeling position. Post trauma, he was unable to extend his left knee. Lateral radiograph showed negligible bony fragment distal to patella and was initially treated as a tibial tuberosity avulsion in the casualty (Fig. 1). After assessment by the orthopedic team, a diagnosis of patella sleeve fracture was made.

During surgery, we found that one-quarter of the patellar articular cartilage and a large portion of the anterior periosteum were avulsed from the distal patella (Fig. 2). Reduction was done with cross Kirschner wires and cerclage wiring was performed with careful repair of retinaculum. This case illustrates that the diagnosis may be misdiagnosed or missed in certain cases unless there is a high index of suspicion.

Conservative treatment of sleeve fractures with cylindrical plaster of Paris immobilization should be considered for minimally displaced fractures (1-2 mm). For displaced fractures, open reduction with tension band wiring will usually suffice.

Complications include wound infection, limitation of knee flexion, ectopic bone formation, and ischemic necrosis of the patella.

Figure 1: X-ray image

Figure 2: Intra-op findings.

CONCLUSION:

It is important to be aware of the presence of this injury in the skeletally immature patient with an injury to the knee. Clinical signs and radiographs may not be diagnostic hence other modalities like MRI may be helpful. Prompt

diagnosis and appropriate early treatment is salient to achieve satisfactory functional recovery and prevent complications.

REFERENCES:

1. GxGao et al, Sleeve fracture of the patella in children. Journal of Orthopaedic Surgery 2008;16(1):43-6
2. David M. et al, A review of sleeve fractures of the patella in children, Knee Journal, January 2005 Volume 12, Issue 1, Pages 3-7

Figure 1

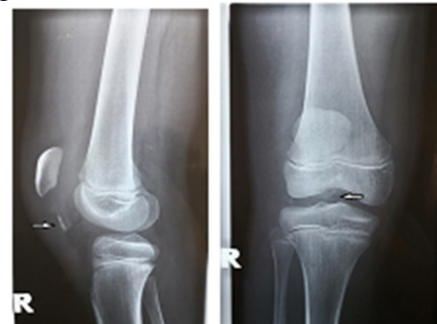


Figure 2

