

## Small Can Be Deceiving ; A Case Report Of Patella Sleeve Fracture

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### INTRODUCTION:

Patella sleeve fractures are rare, only 1% of patella fractures occur in the immature skeleton<sup>[1]</sup>. This is an avulsion of a small bony fragment from the distal pole of the patella, together with its articular cartilage, periosteum, and retinaculum, which is pulled off from the main body of the structure<sup>[2]</sup>.

### REPORT:

We report a case of patella sleeve fracture in a 15 year old boy presented with acute pain, hemarthrosis of right knee and unable to perform straight-leg raised after a sport injury with knee hyperflexed. Approximately 10cc of blood was aspirated from the injured knee. No high riding patella seen from radiograph, Insall-Salvati ratio of 0.9. Ultrasound shows patella tendon tear. He was schedule for patella tenodesis.

### CONCLUSION:

Patella sleeve fracture commonly occurs in males of age 8-12 years old. Diagnosis is difficult both clinically and radiologically which leads to risk of being misdiagnosed. Common mechanism of injury is caused by an acute powerful contraction of the quadriceps with the knee flexed, usually during sports<sup>[3]</sup>. Often only fleck of bone is seen on the radiograph, giving a falsely benign appearance<sup>[1]</sup>. Ultrasound is very helpful. A high-riding patella and hemarthrosis are important signs to aid in diagnosing this fracture<sup>[4]</sup>. Delayed treatment can result in permanent disability with patella alta, instability, extensor lag, quadriceps wasting, osteochondral damage and ossification in the stretched patella tendon giving rise to patella magna<sup>[4]</sup>.

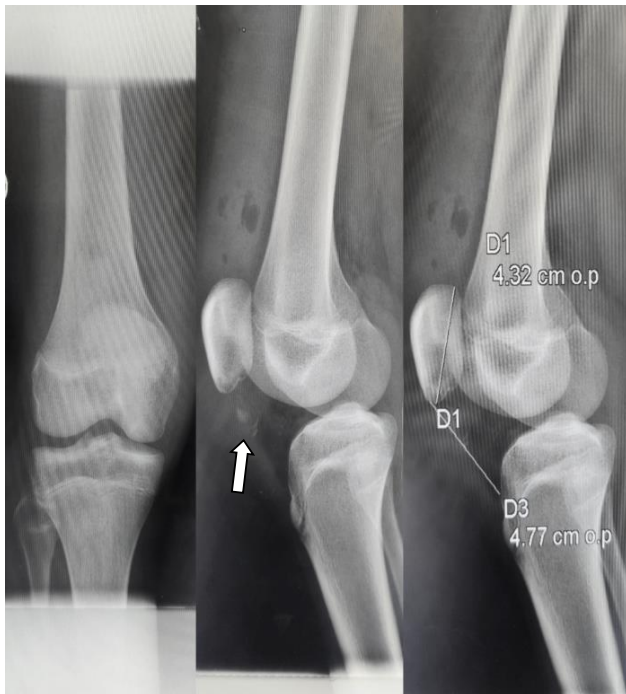


FIGURE 1 : Radiographs of displaced sleeve fracture (fleck of distal fragment bone as indicated by an arrow) without high riding patella.

### REFERENCES:

1. Canale S. T et al. Campbell's Operative Orthopaedics. Thirteenth ed. Elsevier 2017.
2. Sponseller PD, Beaty JH. Fractures and dislocations of the knee. In: Rockwood CA Jr, Wilkins KE, Beaty JH, editors. Fractures of the patella in children, Vol. 3. Philadelphia: Lippincott Williams and Wilkins (1996). p. 1284–90.
3. Wu CD, Huang SC, Liu TK. Sleeve fracture of the patella in children: a report of five cases. The American Journal of Sports Medicine. 1991 Sep;19(5):525-8.
4. Lin SY, Lin WC, Wang JW. Inferior sleeve fracture of the patella. Journal of the Chinese Medical Association. 2011 Feb 1;74(2):98-101.