Ace Up The Sleeve ; A Case Report of Patella Tenodesis For Patella Sleeve Fracture

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INTRODUCTION:

Patella sleeve fractures are uncommon. Injury to the inferior pole of patella puts a threat of avascular necrosis of the proximal pole as blood supply of the immature patella comes predominantly from the anterior surface of the distal pole[1].

REPORT:

A 15 year old boy sustained a right patella sleeve fracture due to sports injury. Intraoperatively shows patellar articular cartilage and a large portion of the anterior periosteum with small bone fragments were avulsed from the inferior pole of patella . Patella tenodesis ; open reduction and articular cartilage along with patellar tendon were reconstructed by attaching the body of the patella with double loaded anchor suture via transosseous tunneling.

Cylinder cast applied for 1 month , subsequently allowed full weight bearing and started on physiotherapy. He is able to achieve good muscle bulk with full active range of movement of right knee after 5 months with normal gait.

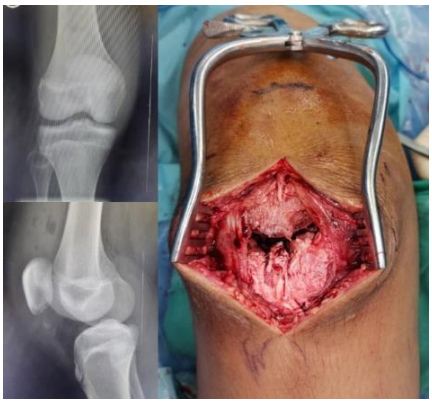

Figure 1 : Avulsed patella tendon and periosteum

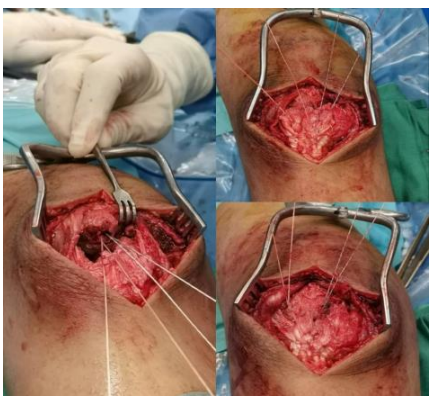

Figure 2 : Transosseous double loaded anchor sutures

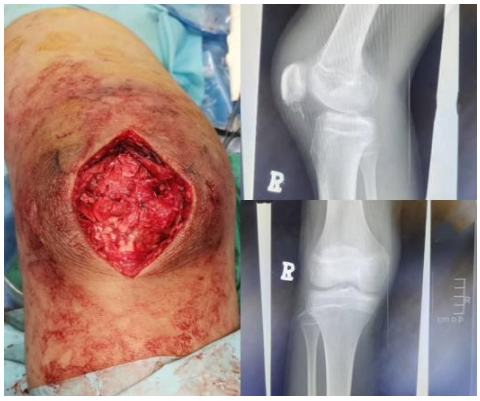

Figure 3 : Post patella tenodesis

CONCLUSION:

There has not yet been a single identified type of internal fixation that is sufficiently accepted for wide use[2]. Patellar sleeve fracture treatment depends on the type of fracture, integrity of the extensor mechanism, and congruity of the articular surface. Treatment options include open reduction and internal fixation with transosseous nonabsorbable sutures, absorbable anchor sutures, and tension band wiring with sutures and metal[1]. For displaced fractures, early surgical intervention produces better outcome. If surgery is performed properly without delay, the results are usually good, but limitation of knee flexion is common[3].

REFERENCES:

1. Guy, Stephen Paul, et al. "Bilateral sleeve fracture of the inferior poles of the patella in a healthy child: case report and review of the literature." Advances in Orthopedics 2011 (2011).
2. Zhu, Wanbo, et al. "Design and Validation of a Smile Necklace Plate for Treating Inferior Patellar Pole Avulsion Fractures: A Review and Hypothesis." Orthopaedic Surgery 14.11 (2022): 2799-2808.
3. Gao GX, Mahadev A, Lee EH. Sleeve fracture of the patella in children. Journal of Orthopaedic Surgery. 2008 Apr;16(1):43-6.