

PATELLA SLEEVE FRACTURE IN A 11 YEAR OLD BOY: A CASE REPORT

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INTRODUCTION:

Patella is a type of sesamoid bone , which ossifications starts at 3 years of age until 6 years old. It's a crucial part of extensor mechanism of the knee. The occurrence of a patella fracture in children is low , about 1% from all fractures. It occurs in patients between 8-12 years old as its characterised by separation of the cartilage sleeve from the ossified patella.

We report a case of a patella sleeve fracture in an eleven-year-old boy, who injured himself while participating in a sport event at his school. He landed directly on his knee in a flex position from a high jump.

REPORT:

We are reporting a case of an eleven-year-old boy who presented to our centre with pain and swelling of the left knee. He was participating in a high jump event at his school, whereby he landed on his knee in flex position. After clearing the height he heard a "pop" sound and felt extreme pain at the left knee. He was unable to fully extend the left knee .

On clinical assessment , he has marked knee swelling , tenderness along the knee joint and a palpable gap at the lower pole of patella. There was also loss of knee extensor mechanism .

Plain radiograph of the left knee revealed patella alta with small fleck of bones seen at the inferior pole of the patella.(fig.1)

He underwent emergency fixation of the left patella . Intra-operatively it was found that the inferior pole of the patella was avulsed.(fig.2) Tenodesis was performed using ethibond suture size 5 with Krakow method and pull through technique (fig 3).

Post operatively , he was put on above knee cast for 2 weeks , which later were change to knee brace for better rehabilitation purpose

Upon starting knee brace , we started him on static muscle exercises of the quadriceps.This is to train the extensor mechanism of the knee. During casting his knee is in full extension at 0 degree, after 2 weeks we allow 30 degree flexion , 60 degrees of flexion at 4 weeks , and after week 4 we allow full range of motion. All this movement is protected with a knee brace. The patient is currently back to full range of motion and able to weight bare on his own.



Figure 1: Lateral view of the plan radiographs denotes that there's high riding patella and a small osteochondral fragment lying distally to the patella.



Figure 2 : Intraoperative image, noted the avulsed lower pole of the left patella



Figure 3 : Post fixation with ethibond suture

CONCLUSION:

Patella sleeve fracture is a rare type of fracture to occur in paediatric age patient. Misdiagnosing this type of fracture can be a catastrophe due to its uncommon occurrence. Complication from a misdiagnosis case can be a morbidity to the patient, as per discuss above. In our patient , a surgical intervention is compulsory as the fracture is displace. Many surgical technique have been describe in other literature to treat a patella sleeve fracture, in our case a Krakow method suits best for the type of fracture .With strict rehabilitation regime , our patient was able to resume normal activity at 6 weeks post-op.

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