

## TO FIX OR NOT TO FIX? POSTERIOR CRUCIATE LIGAMENT AVULSION FRACTURE IN PAEDIATRIC

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### INTRODUCTION

The posterior cruciate ligament (PCL) is one of the primary stabilizers of the knee. The elasticity of the ligaments and relative weakness of the hypertrophic zone of the physis and the bone in children predispose them to osteochondral avulsion fractures than intrasubstance injuries of ligaments. Isolated PCL avulsion from the tibial attachment is a rare occurrence.

### REPORT:

14 years old boy presented with pain over left knee and unable to ambulate due to alleged motor vehicle accident. On examination of the knee, there was a tenderness over posterior proximal tibia and special test were not done due to pain.

CT Scan shown the PCL avulsion in Fig. 1 with the diameter of the fracture is 13mm

Fig 1



Fig 2



This patient was treated conservatively with cylinder cast with 15 degree flexion with anterior translation force applied while cast hardened for 6 weeks. After 6 weeks, we opened the cast and patient showed no tenderness over proximal tibia and xray Fig 2. showed callus formation. Then, patient was allow to weight bearing as tolerated and sent to physiotherapy for quadriceps strengthening. After 3 months post trauma, patient was ambulating well.

### DISCUSSION:

The management of pcl avulsion injuries is depends on size of fragments. In this case, the fragment is too small to fix with screw which can break the fragments. Screw fixation provided risk to physeal growth disturbances. Physeal sparing reconstruction can cause disturbance to physeal as case reported (1). Study also shown 21% after PCL reconstruction having osteoarthritis (2). Report demonstrate that PCL avulsion fracture can be treated conservatively in selected cases with good results, avoiding potential surgical - related complications injury (3).

### CONCLUSION

PCL avulsion fracture is better treated conservatively which can avoid potential surgical complication.

### REFERENCE

- 1) Complications after Epiphyseal reconstruction of the ACL in prepubescent children Koch,2014
- 2) Outcomes of Pediatric Posterior Cruciate Ligament Reconstruction: A Systematic Review, Michael,2021
- 3) Pediatric Posterior Cruciate Ligament Avulsion Fracture of the Tibial Insertion: Case Report and Review of the Literature, Yannick,2017