

Just A Tibial Tuberosity Avulsion Fracture? Look Again.

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INTRODUCTION:

Tibial tuberosity avulsion fractures are uncommon injuries in adolescence which account for under 1% of epiphyseal injuries. This in combination with a concomitant patella ligament avulsion is rare with only a few cases being reported. We present a case of an avulsion fracture of tibial tuberosity with an associated patella ligament avulsion and his treatment up to 3 months post-trauma.

REPORT:

A 15-year-old boy complained of left knee pain for 2 days after being tackled during rugby. Examinations revealed mild swelling and tenderness at the tibial tuberosity, with passive range of motion (ROM) of 0-70° of flexion and loss of active knee extension. Knee radiographs revealed an avulsion fracture of the tibial tuberosity (Ogden Type III). Patient was counselled for open reduction and screw fixation of the left tibial tuberosity. Upon exploration intra-operatively, we noted that the patella ligament was avulsed at its tibial insertion point and impinged beneath the tibial tuberosity fragment. Surgery proceeded with fracture reduction and fixation with 3x4.0mm cannulated half-threaded screws. The avulsed patella tendon was addressed using Krackow stitches with Ethibond 2 sutures and secured to the tibia via a transverse drill hole. Post-surgery, the knee was kept in full extension with a cylinder cast allowing partial weight bearing ambulation initially. 4 weeks after surgery, he was put on a hinged knee brace and full weight bearing permitted with commencement of physiotherapy. He was reviewed fortnightly with knee radiographs, and permissible ROM gradually increased by 30° each visit. At 3 months post-op, he was able to achieve up to 120° of flexion with radiographs demonstrating fracture union.



Figure 1: Trauma radiographs



Figure 2: Post-operative radiographs

CONCLUSION:

Avulsion injuries of the tibial tuberosity are rare and even more scarce when concomitantly accompanied by a patella ligament avulsion. This uncommon injury pattern results in an inherently unstable, incompetent extensor mechanism which necessitates surgical intervention. A thorough clinical and radiographic evaluation should be undertaken with high suspicion of patella ligament avulsion to avoid mismanagement of the injury.

REFERENCES:

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