

Treatment of Acute Posterior Cruciate Ligament Avulsion Fracture Using Anchor Suture: A Case Report

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INTRODUCTION:

Avulsion fracture of the posterior cruciate ligament (PCL) is an injury which requires fixation aiming to achieve anatomical reduction. Many surgical treatments are available, from the conventional open reduction and internal fixation with screws, to the means of arthroscopic surgery. Arthroscopic surgery required specialised equipment and expertises, while screw fixation had risks of fracture fragment fragmentation and unsuitable for small or comminuted fracture¹. Here, we presented an approach to treat PCL avulsion fracture using open reduction and anchor suture.

REPORT:

This is a case of a 22 year old man who was involved in a motorbike accident and sustained left PCL avulsion fracture with an open fracture of left proximal tibia. The open fracture was addressed initially with wound debridement and left tibia external fixation.

A CT knee was done which shows a comminuted fracture with posterior displacement (Figure 1). He was then planned for anchor suture for the PCL avulsion fracture, and conversion to cross knee external fixation.

Posteromedial approach was used. Partial synovectomy and opening of posterior capsule were performed to expose the fracture site. Jig was applied and K wire was inserted from anterior tibia through to the fracture site. Reaming was done and suture was passed through and tightened with buttons in anterior drawer position.

Post operatively, xray shows anatomical reduction and during clinic appointment, bony union was seen (Figure 2)

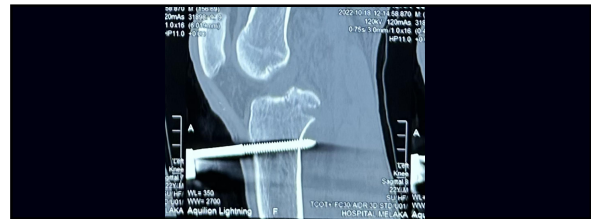


Figure 1: CT left knee

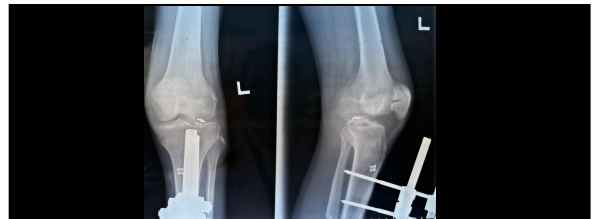


Figure 2: 3-month post-operative X-ray

CONCLUSION:

PCL avulsion fracture possess surgical dilemma in choosing the right surgical technique. Anchor suture is an established technique for acromioclavicular joint repair². We applied this technique for fixation of a PCL avulsion fracture and had shown promising result in achieving anatomical reduction and bony union. Its advantage is it uses the widely known posteromedial approach, and allows fixation of small and comminuted fracture.

REFERENCES:

1. Lee et al, Clin Orthop Surg, 2015 Dec.
2. Gwinner et. al, Arthrosc Tech. 2014 Jun