

## Minimally Invasive Arthroscopic-Assisted Approach In ACL & PCL Footprint Avulsion Fracture Fixation In A Dislocated Knee.

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### INTRODUCTION:

Avulsion fracture of the cruciates ligaments (ACL & PCL) are not uncommon following a high energy trauma to the knee. It's important to fix it early especially in a dislocated/subluxated knee as to provide stability to prevent further translation that can compromise the nearby neurovascular bundles.

### REPORT:

A 42 years old male had a motor-vehicle accident, presented with pain and swollen left knee. Clinically, the left knee was swollen with intact neurovascular status. Initial plain radiograph showed a left knee dislocation which was reduced and immobilized. Noted also there was a fracture involving the left tibial spine.

Examination under anesthesia, revealed a grade 1 ADT, grade 2 PDT, grade 2 Varus Stress Test, grade 2 PLDT and a 'clunk' Pivot Shift Test. Arthroscopic examination showed fracture at the central part of the left tibial plateau from the ACL footprint extending all the way posteriorly until the PCL footprint. There was also medial and lateral meniscus roots tear noted. We proceeded with arthroscopic-assisted fibre-tape pull down technique for the ACL footprint avulsion, Tight-rope button fixation for the PCL avulsion fracture, and pull-down suture technique for the roots of medial and lateral meniscus tear.

Post-operatively, he was immobilized with backslab with posterior-tibial support (PTS) for 2 weeks, and change to full length cast for the next 1 month. After that, he was put on Dynamic PCL brace for another 6 weeks.

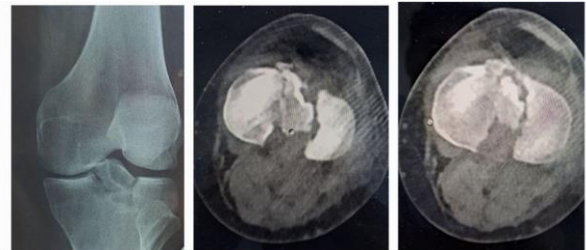


Figure 1: Pre-op images of left knee



Figure 2: Post-op images of left knee

### CONCLUSION:

A minimally-invasive arthroscopic assisted procedure in a dislocated or subluxated knee, is one of a method worth considering in an attempt to provide a relatively stable knee to prevent further neurovascular injury. With this method, we can avoid putting patient on external fixator for extended period, or even do an open reduction internal fixation procedure to an already at risk/unstable knee.

### REFERENCES:

1. Littlejohn S.G. Arthroscopic repair of a posterior cruciate ligament avulsion. *Arthroscopy*. 2010;11:235–238.