

Arthroscopic Fixation of Posterior Cruciate Ligament Avulsion Fracture through Posterior Trans Septal Portal Using Button Fixation Device: Mini Tight Rope

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Abstract : Posterior cruciate ligament (PCL) avulsion fractures is a rare condition and commonly mismanaged. Surgical reattachment has been shown to produce better result compared with conservative management. Only few techniques are reported in arthroscopic fixation of PCL Avulsion Fracture and they are complex. We describe a new technique in fixation of the PCL Avulsion fracture through a posterior trans septal portal using button fixation device (Mini Tight Rope). Eighteen patients with an isolated posterior cruciate ligament avulsion fracture were operated under arthroscopy. Standard Antero Medial Portal and Antero Lateral portals made and additional Postero Medial and Postero Lateral portals made and trans Septal portal established. Avulsion fracture identified, elevated, prepared. Reduction achieved using PCL Tibial guide (Arthrex) and fixation was achieved using Mini Tight Rope, Arthrex (2 buttons with a suture). Reduction confirmed using probe and Image intensifier. Postoperative assessment made clinically and radiologically. 15 patients had good to excellent results with no posterior sag or instability. The range of motion was normal. No complications were recorded per operatively. 2 patients had comminution of the fragment while drilling, for one patient it was managed by suturing technique and the second patient PCL Reconstruction was done. One patient had persistent instability with poor outcome. Establishing trans septal portal helps in better visualization of the posterior compartment of the knee. Assessment of the bony fragment, preparation of the bone bed and it protects from injury to posterior neurovascular structures. Fixation using the button with suture (Mini Tight Rope) is stable and easily reproducible for PCL Avulsion fracture with single large fragment.

Keywords : PCL avulsion, arthroscopy, transeptal, minitight rope technique

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