

Vertical Cerclage Wiring Augmented with Miniplate for Inferior Patella Pole Fracture

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INTRODUCTION:

Several techniques have been described for the fixation of the inferior patella pole fracture including separate vertical wires with or without cerclage wire, augmented Krachow suturing, plate fixation, removal of inferior pole of patella followed by patella tendon reconstruction using transosseous sutures or suture anchors.

We are presenting a case of vertical wiring fixation augmented with miniplate.

REPORT:

55 years old male, sustained road traffic accident and complained of right knee pain and swelling. There were no other injuries. Radiographs showed right inferior patella pole fracture.

Intraoperatively, patient was under spinal anaesthesia in supine position. Tourniquet was used. The fracture site was approach through a midline incision. Haematoma was cleared and joint washout was done. Three drill holes were made over the patella along the vertical axis separating the patella into equal 4-part in the proximal fragment. A 1.0mm cerclage wire was passed through each drill hole. A 4-hole 2.0mm miniplate was passed deep to patella tendon distal to the inferior pole of patella. The medial most and the lateral most wires were then passed through the screw hole of the miniplate at both ends. The middle wire was passed deep to the miniplate and wrap over the miniplate. Reduction was done and checked under image intensifier (**Fig. 1**). The wires were tensioned.

Postoperatively, full weight bearing was allowed, and knee range of motion exercise commenced on day two postoperatively. Fracture was united at 6 weeks. Knee range of motion was 0-130 degrees at final follow-up. There were no complications.



Figure 1: Intraoperative pictures and II images

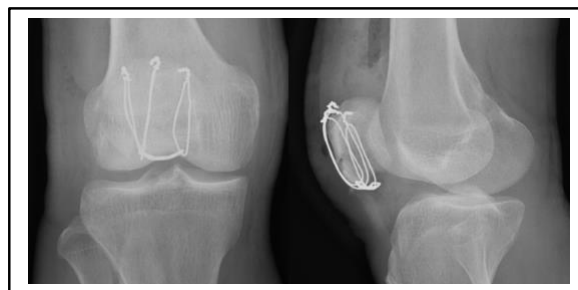


Figure 2: Postoperative radiographs.

CONCLUSION:

Vertical wiring with augmented miniplate will prevent wire cutout in inferior patella pole fracture. This fixation construct allows patients to start weight bearing and range of motion early.

REFERENCES:

- 1.Cho, JW., Kim, J., Cho, WT. *et al.* Comminuted inferior pole fracture of patella can be successfully treated with rim-plate-augmented separate vertical wiring. *Arch Orthop Trauma Surg* **138**, 195–202 (2018).