

## TITANIUM PATELLA CLAW PLATE AN ALTERNATIVE FOR FAILED TENSION BAND WIRING IN PATELLA FRACTURES: CASE SERIES

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**Introduction:** Tension band wiring (TBW) construct have been the most commonly approach to fixation with cerclage wiring for comminuted patella fractures however, some complications for examples hardware penetration, broken and migration k-wire, failure of the construct, fracture gap opening, and nonunion fracture maybe unavoidable. We reported our experienced of 5 patients who failed TBW construct and revision surgery was done with Titanium patella claw plate with good clinical outcomes.

**Discussion:** Total of 5 patients average age from 35 to 65 years old who had failed in primary fixation using TBW were subjected for Titanium patella claw plate. 3 out of 5 patients, the TBW construct failed before union occurred (1 broken implant, 1 surgical site infection with hardware irritation, 1 K-wire migration), however another 2 patients end up with nonunion after 6 months of follow up. All patient underwent revision surgery with open reduction using previous surgical incision. The patella fractures were provisionally reduced and confirmed with image intensifier and the fixed with suitable size of Titanium patella claw plate. The claws were adjusted with special forceps. Finally, after adequate compression achieved, the centre part of the patella claw plate will be locked with 2 locking screws to prevent rotational failure. Post fixation, knee manipulation in flexion and extension was done to check the stability of the construct. After operation, the knee is splinted for 2 weeks for wound healing and passive joint flexion and extension began 1 week once wound healed. Patient were reviewed for clinical and radiological assessment for 1, 3, 6 months after the operation. All patella fracture united within 3 months with good ROM knee. No postoperative complications were seen. All patients return back to functional activity within 6 months.

**Conclusion:** Titanium patella claw plate can provide good outcome effect and relatively simple and minimally invasive procedure as an alternative to traditional tension band technique for primary treatment of patella fractures.