

Suprapatellar Tibial Nail, a case report

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Introduction

Extraarticular proximal tibia fractures account for approximately 5% to 11% of all tibial shaft fractures.¹ Malreduction resulting in procurvatum and valgus angulation is a common pitfall.¹ We discuss a case of a segmental tibial shaft fracture treated with an intramedullary device using a suprapatellar approach.

Case Report

A 56-year-old gentleman, presented acutely following a high velocity motor vehicle accident after which he sustained deformity and swelling over the left leg. Plain radiographs reveal a segmental fracture of the left tibia (proximal and distal third).



Fig 1: Post operative radiographs



A suprapatellar approach was used for intramedullary nailing of the left tibia. He was able to achieve full range of active movement of the knee immediately after surgery. 3 months after surgery, he was able to ambulate without aid and fully weight bear on his left leg.

Discussion

Proximal tibial shaft fractures were traditionally treated with a long proximal tibia plate which is associated with extensive soft tissue dissection and delayed weight bearing.

Studies have shown that a supra patellar approach have significantly lower rates of malalignment, post operative pain and better knee functional outcome.^{2,3} There was no clear evidence that a suprapatellar approach resulted in intra articular damage.³



Fig 2: Post operative radiographs



Conclusion

In conclusion, a suprapatellar approach to intramedullary tibial nailing should be considered in cases of extra articular tibial fractures. The benefits would allow patients to begin physiotherapy and early weight bearing.

References

- 1 Hiesterman, T., Babar X. S, Peter AC. "Intramedullary Nailing of Extraarticular Proximal Tibia Fractures." *American Academy of Orthopaedic Surgeon* 19, no. 11 (2011): 690–700.
- 2 Ponugoti, N, Branavan R. "Infrapatellar versus Suprapatellar Approach for Intramedullary Nailing of the Tibia: A Systematic Review and Meta-Analysis." *Journal of Orthopaedic Surgery and Research* 16, no. 1 (2021).
- 3 Umur, Levent, Enes Sari. "Dilemma of Supra- or Infrapatellar Tibial Nailing: Anterior Knee Pain vs. Intra-Articular Damage." *International Journal of Clinical Practice* 2022 (2022): 1–7.