

RETROGRADE CEPHALOMEDULLARY NAIL REMOVAL TECHNIQUE IN PERIPROSTHETIC DISTAL FEMUR FRACTURE

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Introduction: As the number of motorcyclists in Malaysia are vast, road traffic accidents (RTA) with high energy fractures are common. We would like to share a case of a 54-year-old male motorcyclist who unfortunately met an RTA sustaining an open comminuted right distal femur periprosthetic fracture. He had undergone a standard piriformis entry intra medullary nailing (IMN) for a simple transverse mid-diaphyseal right femur fracture 10 years ago. Open fractures require good debridement and thorough washout to ensure removal of contaminants potentially leading to nasty infections.^{1,2} Preliminary reduction and fixation of intra-articular fragments with partially threaded cancellous screws (lagging technique by design) ³ and temporary tibial skeletal traction ensures easier definitive fixation with distal femur locking plate once soft tissue is optimized.^{1,2}

Discussion: Older generation IMN of the femur with piriformis entry point poses specific complexities during implant removal. In this instance, removal is necessary as patient has an intra-articular periprosthetic fracture of the femur distally requiring anatomical reduction and fixation. Leaving the nail in-situ would prevent proximal plate screws to hit nail during fixation. Nail was knocked out using a retrograde technique from the fracture site using a solid bone impactor and mallet. Once the proximal part of the nail is prominent, removal jig was assembled, and nail was removed.

Conclusion: Deep embedded piriformis entry IMN femoral nails with bony ingrowth makes assembly of removal jig difficult. In view of the ability to access the distal part of IMN from the fracture site, careful retrograde pushing of nail to make the proximal part of nail prominent for removal jig assembly could be a useful technique.