

EXTRACTION OF INCARCERATED KUNTSCHER NAIL

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Introduction: Intramedullary nailing is a commonly done procedure in Trauma surgery, ever since the introduction of Kuntscher nail in 1940s. Though Kuntscher nail is rarely used these days, patients who underwent femoral nailing decades ago may present themselves with complications which necessitate removal of the nail. Often it is difficult to remove.

Discussion: 46 years old man presented with right thigh pain and swelling, with fever for the past 1 week. He had an open fracture midshaft of right femur and patella fracture 26 years ago, treated with Kuntscher femoral nail and cerclage of the patella. As he was in sepsis due to osteomyelitis of right femur, debridement and sequestrectomy of right femur was done with second operation done to remove the incarcerated nail. Direct lateral hip approach was performed. Oval hole made using burr drill at anterior side of femur below level of greater trochanter to expose the proximal end of the nail. Awl used to make entry point at piriformis in line with position of proximal end of k-nail that was visualized. Rigid reamer of increasing sizes utilized to enlarge the opening. Canal was cleared up using bone gouge for k-nail extraction. As the nail was rotated, proximal hole cannot be visualized, and carbide drill was used to make a new hole. Nail was successfully pulled out by hooking the newly made hole with whatever tools available. Post-operative x-rays shows no new fracture apart from the unicortical holes made. At 6 months follow up, CRP has normalized. Wound healed and patient able to fully weight bear with final x-rays shows union.

Conclusion: Kuntscher nail removal is difficult and need proper preoperative planning. It's only done when there's clear indication for removal. This method described helps to avoid fracture during extraction but must be done carefully as it is near femoral neck.