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Case Report and Review of the Literature

Self-Made Minimally Invasive Broken Nail Extractor for Distal Broken Segment of Cannulated Intramedullary Nails: One Case Application Report and Literature Review

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ABSTRACT

Introduction: Successful minimally invasive extraction of a broken intramedullary distal piece of the nail is very challenging. We herein report a simple and reproducible technique of extraction of broken cannulated intramedullary nails using a self-made minimally invasive broken nail extractor.

Case Presentation: We present a 48-year-old male patient who was admitted to our hospital for internal implant removal, whose right tibial fracture had healed, and a broken intramedullary nail was retained at the distal of the tibia for 12 years. The preoperative X-ray films showed the broken intramedullary nail was cannulated and the outer diameter is 10 mm, larger than the isthmus of the medullary cavity.

Results: After reaming with Φ 11 mm drill, the self-made broken nail extractor was inserted into the medullary cavity from the nail entry point and passed through the canal of the broken nail, and successfully pulled out the broken nail.

Conclusion: Our technique is a simple, reproducible alternative that has a high extraction success rate for the distal broken segments of cannulated intramedullary nails.

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