

Case Report – Bent Intramedullary Nail: Alternative Way Of Removal In One Piece

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INTRODUCTION

Intramedullary nail has remained a gold standard in fixation of femur shaft fracture.¹ Bent intramedullary nail especially those made of stainless-steel poses a great challenge to orthopaedic surgeon. Here we present a case of removing a bent intramedullary nail in one piece with its surgical technique.

MATERIAL AND METHODS

Mr. N is a young active adult who was presented to the casualty after sustained a fall in the bathroom. X-ray on arrivals showed that there is fracture of the mid-shaft of left femur with bent intramedullary nail in-situ. The angle of the bent nail is 38 degrees with the apex pointing laterally.

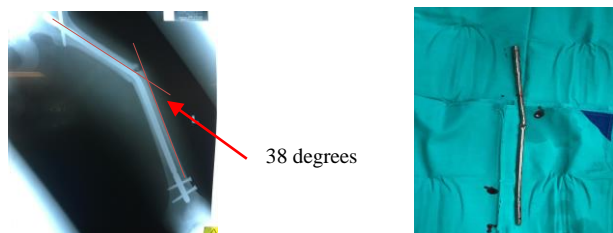


Figure 1: Bent steel nail

Mr. N was subsequently planned for removal of the bent stainless-steel nail and reinsertion of intramedullary nail under traction table. Jumbo cutter was applied at the apex of angulation under image intensifier guidance and sectioned only half of the diameter of the nail. The nail was then removed in one piece using nail extraction tool. The bent nail was able to be straighten throughout the removal process.

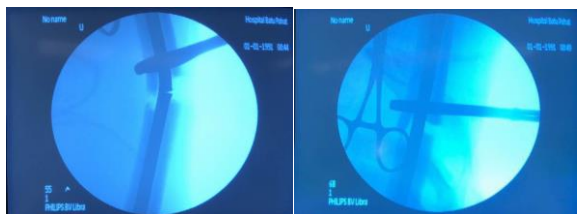


Figure 2: Image intensifier showing straightened nail after sectioning half the diameter using jumbo cutter

RESULTS

A new intramedullary nail was then reinserted with patient on traction table. Fracture has united after six months of operation with good range of motion of the knee.

DISCUSSIONS

Removing a bent intramedullary nail is very difficult. Few methods have been described in literature such as (a) in situ straightening via external force,² (b) sectioning nail into two piece using high speed burr or diamond edge blades,³ (c) sectioning nail to half its diameter using drill.⁴ The advantage of our method is cost effective as only jumbo cutter is required and nail was able to remove in one piece. There is also minimal soft tissue thermal injury and metal debris. Operation time is relatively faster as both the removal and reinsertion can be done under traction table without the need of repositioning patient.

CONCLUSION

Dealing with such case poses a great challenge for orthopaedic surgeon. Hence a thorough pre-operative planning and unique surgical approach are required to provide good outcome for patient.

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