

# Rare Case Of Periprosthetic Fracture In A Femur With Retrograde Intramedullary Nail

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## INTRODUCTION:

Intramedullary nailing of the diaphyseal fracture of the femur has become the standard fixation and treatment of choice (1). Retrograde intramedullary nailing for distal femoral fracture has been reported to give good results and be an effective stabilization method (2). Literature published evaluating the complications associated with this method focus on knee pain, malunion, infection, and septic arthritis of the knee (3). Subtrochanteric and pertrochanteric fractures post retrograde intramedullary nailing of femur has been infrequently reported (4). We describe a case of a 73 years old gentleman who sustained a closed intertrochanteric femur fracture at the proximal end of a retrograde femoral nail, which required surgical stabilization.

## CASE REPORT

A 73 years old gentleman fell down at home in the kitchen and was brought to the hospital. He complained of left hip pain, and radiographic evaluation showed intertrochanteric femur fracture at the proximal end of the previous retrograde intramedullary femoral nail. The retrograde nail of the femur was done 5 years ago. Two half threaded cannulated screws of 6.5mm diameter were used for fracture stabilization. Patient was discharged well and mobilized with non-weight bearing crutches. After two and a half months, patient is able to fully weight bear and there was no complications seen during the 6 months follow up.



## DISCUSSIONS:

Some of the complications associated with retrograde intramedullary nailing are knee pain, septic arthritis of the knee, heterotopic

ossification and altered patellofemoral mechanics. (5). Subtrochanteric stress zones, which arises secondary to the proximal locking screws in retrograde femoral nailing is also one of the complications (6). Placing the retrograde nail end proximal to the level of lesser trochanter can reduce this complication (7). McLaurin et al report suggested that the tip of the proximal tip of the retrograde nail be placed at or above the level of lesser trochanter as they found there is lower mean load to failure with the use of shorter intramedullary nails. (8) In our patient, the fracture has occurred at the intertrochanteric level of the femur due to trauma years after the retrograde nail of femur was done and the fracture was slightly above the tip of the retrograde femoral nail, which was above the level of lesser trochanter.

## CONCLUSION:

Stabilization of this fracture could have been achieved with retention of the initial retrograde nail, or with removal of the retrograde nail and fixation of the intertrochanteric fracture. We opted for fixing the fracture by retaining the retrograde nail.

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