

## Navigating Challenges in Segmental Femur Fracture Management: Insights from Obesity-Related Complexities: A Case Report

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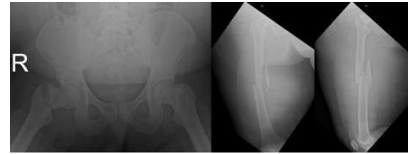
### INTRODUCTION:

Managing femur fractures in obese individuals poses significant challenges, especially when fractures involve both the shaft and ipsilateral pertrochanteric region.

### REPORT:

A 29-year-old male with a body mass index of 55.5 kg/m<sup>2</sup> and a weight of 170 kg was involved in a road traffic accident, resulting in a segmental femur fracture comprising an Evan's type 2 intertrochanteric fracture and a Winkvist's type 4 midshaft fracture, coupled with a knee laceration. Upon admission, the patient underwent surgical intervention on the same day. Anesthesia induction proved challenging due to thick soft tissue, necessitating a switch to general anesthesia. Despite difficulties in limb positioning and soft tissue interference during fixation, meticulous open reduction and fixation were achieved using cephalomedullary nailing. Postoperative management included addressing a posterior cruciate ligament injury, initiating weight-bearing training, and thromboembolism prophylaxis with aspirin.

Obesity-related fractures pose unique considerations, including challenges related to bone mineral density and soft tissue, which require tailored surgical approaches. While retrograde nailing coupled with proximal femoral screw fixation has been reported as an approach for similar complexities, in this instance, cephalomedullary nailing was selected due to concerns about contamination from the knee laceration, along with achieving an acceptable operative duration and irradiation dose.



**Figure 1:** Segmental fracture right femur at pertrochanteric and midshaft



**Figure 2:** Thigh circumference measuring 110cm and the dense soft tissue occupied the entire depth of the working area within the nail-jig system



**Figure 3:** Bony union evident at 3 months post-surgery.

### CONCLUSION:

This case underscores the importance of meticulous planning, adaptable surgical techniques, and comprehensive postoperative management for successful outcomes in managing femur fractures in severely obese patients.

### REFERENCES:

1. Tucker MC et al. Results of femoral intramedullary nailing in patients who are obese versus those who are not obese: a prospective multicenter comparison study. *J Orthop Trauma.* 2007;21(8):523-9.
2. Streubel PN et al. Management of femur shaft fractures in obese patients. *Orthop Clin North Am.* 2011;42(1):21-35.