

## **FUIYOH!!! Using An Adolescent Nail For Femoral Shaft Fracture In An Elderly Patient**

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### **INTRODUCTION:**

Interlocking nails (ILN) are considered the gold standard for managing femoral shaft fractures due to their biomechanical load-sharing advantages. However, in patients with short stature, the availability of appropriately sized implants can be a significant challenge. This issue is particularly relevant in Asian populations, including Malaysia, where shorter individuals are more prevalent. Here, we present a case of a short-statured patient in whom the standard ILN options were unsuitable, requiring an alternative approach.

### **REPORT:**

A 63-year-old female, height 140 cm, weight 38 kg, was involved in a motor vehicle accident. She sustained a closed left midshaft femur fracture. Given that ILN is the standard treatment for such fractures, a thorough preoperative radiographic evaluation was conducted. Accounting for the typical 10% radiographic magnification, the estimated suitable ILN length for this patient ranged between 280 mm to 300 mm.

However, commercially available femoral ILNs typically start at 340 mm to 420 mm, making them too long for this case. The alternative option of plate osteosynthesis was considered but was not the preferred method. To address this challenge, we opted for an off-label use of an adolescent femoral nail, which had a starting length of 280 mm.

Intraoperatively, closed reduction was achieved, and a 9 mm x 300 mm adolescent femoral nail was inserted. The procedure was uneventful.



**Figure 1:** Preoperative radiograph demonstrating femoral shaft fracture and postoperative radiograph showing the implanted adolescent femoral nail.

### **CONCLUSION:**

Short stature remains a challenge in orthopedic trauma management, particularly when using ILNs for femoral fractures. Standard implant lengths may not always be suitable for such patients, requiring either compromise in surgical technique or the off-label use of alternative implants. Proper preoperative planning is crucial to ensure the best outcome. As saying goes, failing to plan is planning to fail.

### **REFERENCES:**

Smith et al., Management of Femoral Shaft Fractures in Short-Statured Patients, Journal of Orthopedic Trauma, 2021; 35(4): 567-574.