

2 in 1 : Augmentation Plating in Segmental Femoral Shaft Fracture

¹Soo-Lin Teo; ²M.Hussin AR

¹Orthopaedic Department, Hospital Canselor Tuanku Muhriz, Cheras , Kuala Lumpur, Malaysia

²Orthopaedic Department, Hospital Sultan Idris Shah, Serdang, Selangor, Malaysia

INTRODUCTION:

Segmental long bone fractures associated with nonunion or delayed union are often a result of high-energy trauma, with extensive soft tissue injuries and blood supply disruption. [1,2] To combat this, incorporation of plating prior to intramedullary nailing (IMN) fixation of segmental femoral shaft fracture can be done. Here, we report a case with such fixation.

REPORT:

A healthy 24-year-old male presented with closed segmental fracture left femur (AO/OTA classification 32-C2) after road traffic accident. Neurovascular was intact. High tibial pin was inserted on day 2 admission. After 2 weeks, open reduction and unicortical plating of middle and distal fracture segment was done prior IMN. (figure 1b, c) Intraoperatively uneventful. Post operatively, patient was made partial weight bearing with the aid of crutches. Range of movement of knee and hip was full. He was then allowed full weight bearing when bridging callus was seen on the femur radiographs upon follow up at 3 weeks post operatively. However, we noted distal femoral locking screw backed out during subsequent follow up at 3months post-operative due to short screw length. (figure 1d, e) Patient was still able to bear weight with complaint of prominent screw at the distal thigh. Removal of distal locking screw was arranged afterwards and he was discharged well after that. (figure 2)

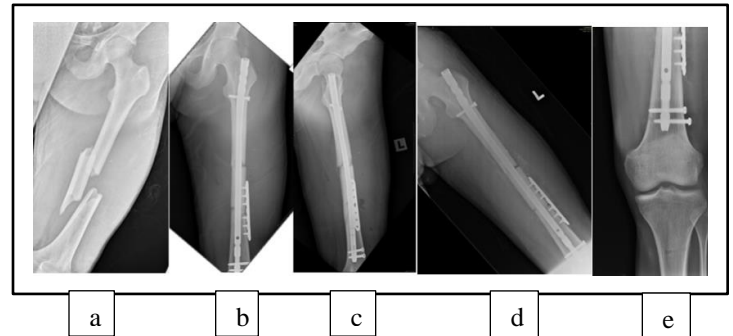


Figure 1: X-rays (a) Pre-operative, (b, c) operation day, 3 weeks post-operative

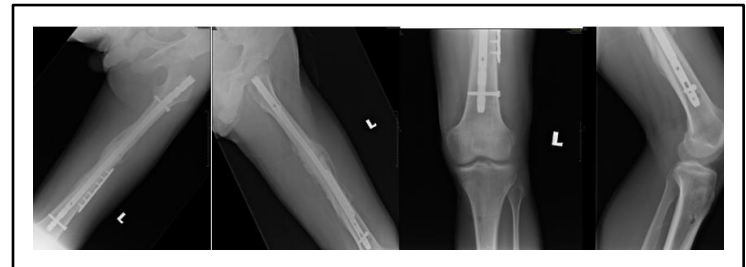


Figure 2: X-rays post removal of distal most locking screw

CONCLUSION:

Augmentation plating prior to intramedullary nailing is reliable with shorter operation time and facilitate union without increasing risk of infection.

REFERENCES:

1. Odelberg-Johnson G. On Fractures of the Proximal Portion of the Radius and Their Causes. *Acta Radiologica*. 1924 Jan;3(1):45–53.
2. Nayagam S. Principles of fractures. In: Solomon L, Warwick D, Nagayam S, editors. *Apley's System of Orthopaedics and Fractures*. 9th ed. London: Hodder Arnold; 2010. p. 695