

## Miss-A-Nail Technique for Neck of Femur Fracture: A Bitter Lesson

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### Introduction

Antegrade nailing is considered the “gold standard” in treating femoral shaft fractures.<sup>1</sup> However, the chance of femur neck fracture through a piriformis entry is 1%.<sup>2</sup> We report a case of femur fracture treated with antegrade nail complicated with iatrogenic neck of femur fracture done “Miss-a-nail” technique.

### Report

A 27-year-old man had sustained a closed right proximal third femur fracture Winquist 1 from motor vehicle accident. An antegrade nailing for the right femur was done however complicated ipsilateral neck of femur fracture. It was only identified post operatively after the checked x-ray. Miss-a-nail screw fixation with 3 cannulated screws diameter 6.5mm and cerclage of the femur was done. Serial follow up x-rays done union of the femur neck and shaft. CT scan was done confirmed the union of femur neck. Patient able return to work 6 months post trauma.

### Discussion

The technical aspects which contribute to femoral neck fracture are determining the precise entry point, creating multiple trial drill holes, forceful introduction of the awl, the orientation of the awl and the orientation of nail at insertion and diameter of the nail.<sup>2</sup> Miss-the-nail technique done for fracture neck of femur while nailing because it is minimally invasive procedure, reduction can be achieved with minimal traction and internal rotation, shorter duration procedure hence avoids further morbidity.<sup>2</sup>



**Fig 1:** X-rays after nailing with neck fracture (A, B)

**Figure 2:** After screw fixation Miss-A-nail technique (C, D), CT post neck femur fracture € CT showing the union of femur neck (F).

### Conclusion

Surgeons must be vigilant of the intra-op complications of femoral shaft fractures during nailing, the most important being neck of femur fracture and miss-a nail technique is appropriate way of fixation of such fractures with intramedullary nail in situ.

### Reference

1. Kow RY, et al Miss-A-Nail Technique for Neck of Femur Screw Fixation: It Is Easier Said Than Done. *Malays Orthop J.* 2020
2. Cyril J, et al. Femoral Neck Fracture Iatrogenic during Ante grade; *AJMRD;* 2019