

Peri-implant Femur Fracture with Obliterated Intra-medullary Canal; A Case Report on Fixation Choice and Techniques.

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INTRODUCTION:

Peri-implant fracture can be challenging to treat. Multiple intraoperative complication during implant removal and fracture fixation must be anticipated, and proper planning has to be done prior to procedure for better outcome. As such, we would like to present a case of peri-implant femur fracture.

REPORT:

We presented a case of 51-years-old gentleman who sustained a closed comminuted subtrochanteric peri-implant fracture of the left femur. 28 years ago, he had sustained left midshaft femur fracture which was treated surgically. Blood investigations were normal and there was no sign or symptoms that suggest infection or malignancy. Removal of implant and reconstruction nail of left femur were commenced in a lateral decubitus position. Previous implants were removed, recanalization of obliterated intramedullary canal of femur was achieved with 4.5mm drill-bit followed by sequential reaming. Intra-medullary nail was inserted afterwards. After 4 months, serial imaging shows expected fracture healing with bridging callous formation and patient is ambulating well.

Figure 1: Pre-operative X-ray

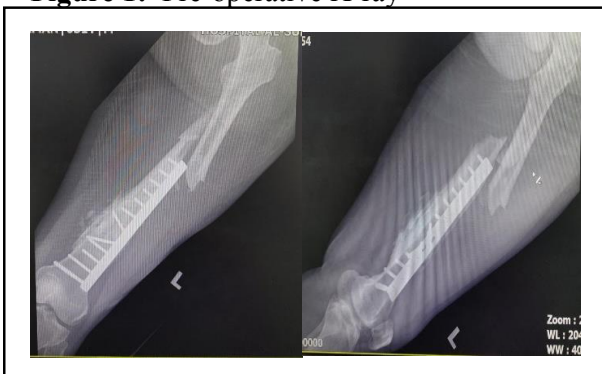


Figure 2: X-ray done at 4 months post operation

CONCLUSION:

Intramedullary nailing is recommended in treating peri-implant femur fracture because it spans the whole femur, therefore providing a stable medium for fracture healing¹. One of the main concerns of choosing nail fixation was the obliterated intramedullary canal. Nailing in lateral decubitus position is advantageous in this case as it is easier to set up and provides an excellent starting point which can reduce risk of iatrogenic fracture comminution and varus malalignment. Furthermore, it also provides a secure access for intramedullary re-canalization technique using a drill-bit.

In conclusion, peri-implant femur fixation requires thorough planning and fine execution to achieve a good outcome. Many surgical techniques and implant fixations are available to suit the surgeon needs and experience.

REFERENCES:

¹Bidolegui, Fernando, et al. "Peri-implant femoral fractures: Challenges, outcomes and proposal of a treatment algorithm." *Chinese Journal of Traumatology* (2022).