

Minimally Invasive Technique: Management Of A Failed Femoral Plate In An Obese Patient

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INTRODUCTION:

Plate osteosynthesis at the femoral shaft is being done in selected patients. We report a case of implant failure of right femur after a broad low contact dynamic compression plate (LC-DCP) insertion in an obese patient.

CASE REPORT:

Miss NH, a 27-year-old Malay lady with a body mass index of 34.4 kg/m², presented with a failed LC-DCP of right femur two months post-surgery. We manage to remove the bent plate using a minimally invasive technique and subsequently insert an antegrade intramedullary nail to stabilize the fracture. The patient recovered fully with no complication.



Figure 1-A shows the periprosthetic implant fracture at the patient's right femur. Picture 1-B shows the pre-operative preparation of the patient. Figure 1-C shows the technique of proximal screw removal.



Figure 2-D shows an intramedullary nail (IMN) locking sleeve was attached to the head of the proximal screws and removed with a 4.5 mm large fragment hexagonal screw driver. 2-E shows the technique of plate removal intraoperatively. Figure 2-F shows the removed bent plate.



Figure 3-G shows the wound of the patient after removal of the bent plate. Note that only two stab incisions were made to remove the four proximal screws. Figure 3-H shows the post-operative radiograph of the patient's right femur, after an intramedullary nail insertion. Figure 3-I shows the wound of the patient 6 months post-operation with minimal scar.



The patient recovered fully 6 months post-operative.

DISCUSSIONS:

Our technique of removal is biologically-compliant and cosmetically-friendly compared to a conventional open technique. By using this method, we manage to avoid a "second-hit" on soft tissues and scar formation besides avoiding the complications of hematoma formation, infection and neurovascular injury.

CONCLUSION:

Management of an implant failure of femur in an obese patient can be challenging but it can be done with proper planning and understanding of the basic science of a fracture management.