

EXPERIENCE OF DUAL PLATING IN SU 3 PERIPROSTHETIC DISTAL FEMUR FRACTURE POST TKR

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INTRODUCTION:

The incidence of periprosthetic fracture following TKR has been increasing as reflective of more aging population undergoing knee replacement. Risk factors include osteoporosis, female sex, elderly, rheumatoid arthritis, steroid use, and anterior femoral notching⁽¹⁾. Most commonly the fracture involves supracondylar femur and the 'Su' Classification is used based on fracture location in relation of femoral component to aid management. Various fixation techniques have been described include from intramedullary nail, locking plate and even revision arthroplasty. Submuscular plate placement preserving periosteum also reported good healing and achieve union in expected time frame. Here we are presenting a case of periprosthetic fracture distal femur who underwent dual plate fixation in our center.

REPORT:

81 years old Chinese lady with history of primary right TKR done 10 years ago presented with alleged fall due to slippery floor. Post trauma she complained of pain over right knee and came to emergency department. Further assessment noted she has periprosthetic fracture distal femur (Su 3). She was planned for dual plate fixation over right distal femur. Midline medial parapatellar approach was used. Intraoperatively noted no femoral component loosening, insert polyethylene good, able to achieve anatomical reduction and hold with K-wires. Dual plate using distal femoral locking plate supplemented by tomofix medial distal femur locking plate(Synthes) done. Bone loss over anterior flange of femoral component was packed with iliac bone graft. Post operatively patient tolerated well and started passive ROM immediately and on protected weight bearing after 2 months. Patient recovered well and able to ambulate without aid later and x-ray noted fracture united.

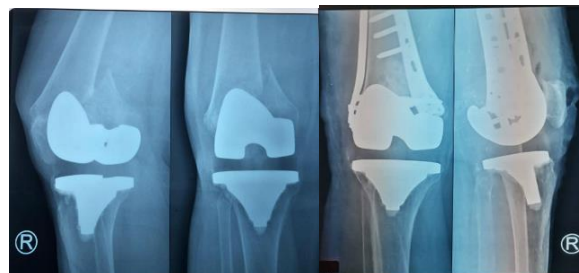


Figure 1: Xray Right Knee (Pre and Post Op)

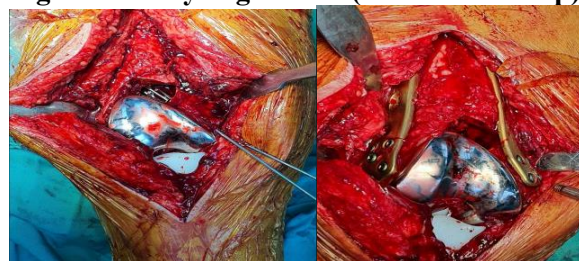


Figure 2: Intraoperative Image Right Knee (Left: Fracture, Right: Post Plate Fixation)

CONCLUSION:

Periprosthetic distal femur fracture constitutes difficult treatment dilemma. Factors such as fracture configuration (Su classification), implant stability and bone quality are taken into consideration. Intramedullary nail and locking plate remain preferred treatment options. A dual locking plate of the distal femur is opted for our patient via previous midline medial parapatellar approach. It provides clear view of the fracture configuration hence good reduction can be achieved, ability to adequately evaluate components stability in case a revision surgery is needed in which the approach allows extension. Dual locking plate is opted to prevent loss of reduction and varus collapse of the distal femur which may lead to lost of fixation due to multiple vulnerable risk factors: osteoporotic bone, Su3 fracture pattern.

REFERENCES:

1. Kim K-I, Egol KA, Hozack WJ, Parvizi J. Periprosthetic fractures after total knee arthroplasties. Clin Orthop Relat Res. 2006;446:167-75.