

Intra-Operative Tibial Periprosthetic Fracture During Total Knee Arthroplasty: A Case Report

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INTRODUCTION:

Total knee arthroplasty (TKA) is the main treatment for the advanced degenerative joint disease. It is usually a straight forward procedure, however intra-operative complication such as fracture of the tibial plateau is a known complication and can occur unexpectedly.¹

CASE REPORT:

We present a case of 65 year-old housewife, admitted for elective left TKA. Pre-operative assessment was fairly insignificant. In view of standard presentation of varus left knee, we did not anticipate outstanding technical difficulty during the TKA procedure.

Intra-operatively, the overall TKA procedure was uneventful up until the preparation of the tibia component. There was a non-contained fracture occurred at antero-lateral aspect of left tibial plateau following impaction with tibial fin punch guide. Since we did not have a tibial stem or wedge readily available in our inventory, we improvised to stabilize the fracture fragment with two 4.5mm full threaded cancellous screw, in posterolateral and anteromedial direction. We also augment the whole construct with 1.0mm cerclage wire in order for the fracture to remain stable from axial loading during the impaction/cementation of the tibial component.

The patient was advised for protected weight bearing post-operatively. Following favorable X-ray review she was allowed to full weight bearing at 8 weeks post-operatively.

DISCUSSIONS:

Intraoperative periprosthetic fracture in tibia is more common than femur, however it is still rare because of strong and dense bone in proximal tibia with incidence is relatively higher in revision surgery. In this case, the fracture can be classified as type IC², where additional stability using long stem implant that traverses the fracture site is suggested in type IC.³



Figure 1: Fracture at antero-lateral aspect of left tibial plateau and fixation with screws and cerclage wire.

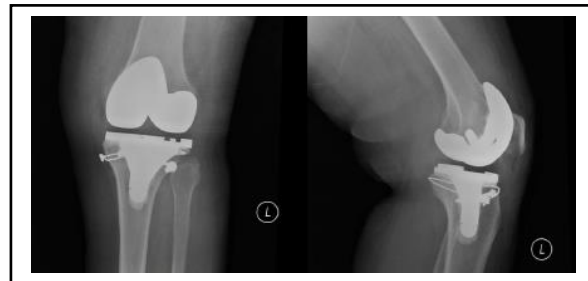


Figure 2: Post operative AP and lateral radiograph of left knee.

Unfortunately there was no long stem implant for the tibia available, thus fixation with screws and cerclage wire were opted which gave reasonably stable construct.

CONCLUSION:

Unexpected intra-operative complication can be overcome with some ingenuity and by improvising the readily available resources.

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