

Revising Our Ideas on Revisions: Non-Contact Bridging Plate Fixation of Vancouver B1 and B2 Periprosthetic Femoral Fractures

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Abstract : Background: Periprosthetic femoral fractures (PFF) in association with hip hemiarthroplasty or total hip arthroplasty is a common and serious complication. In the Vancouver Classification system algorithm, B1 fractures should be treated with Open Reduction and Internal Fixation (ORIF) and preferentially revised in combination with ORIF if B2 or B3. This study aims to assess patient outcomes after plate osteosynthesis alone for Vancouver B1 and B2 fractures. The main outcome is the 1-year re-revision rate, and secondary outcomes are 30-day and 1-year mortality. Method: This is a retrospective single-centre case-series review from January 2016 to June 2021. Vancouver B1 and B2, non-malignancy fractures in adults over 18 years of age treated with polyaxial Non-Contact Bridging plate osteosynthesis, have been included. Outcomes were gathered from electronic notes and radiographs. Results: There were 50 B1 and 64 B2 fractures. 26 B2 fractures were managed with ORIF and revision, 39 ORIF alone. Of the revision group, one died within 30 days (3.8%), one at one year (3.8%), and two were revised within one year (7.7). Of the B2 ORIF group, three died within 30-day mortality (7.96%), eight at one year (21.1%), and 0 were revised in 1 year. Conclusion: This study has demonstrated that satisfactory outcomes can be achieved with ORIF, excluding revision in the management of B2 fractures.

Keywords : arthroplasty, bridging plate, periprosthetic fracture, revision surgery

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