

Fragment-Specific Fixation Technique Using 2.7-mm Variable-Angle Locking Compression Plates for Comminuted Posterior Wall Acetabular Fractures: A Novel Surgical Technique

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Purpose: The purposes of the study were to introduce a fragment-specific surgical fixation technique using multiple 2.7-mm variable-angle locking compression plates (VA LCPs) in comminuted posterior wall acetabular fractures and report its clinical results.

Methods: Among the 68 patients, 23 with comminuted posterior wall fractures with ≥ 3 fragments in the CT scan and no column involvement with a minimum follow-up duration of 12 months were enrolled in this study. We evaluated the clinical results after the treatment of comminuted posterior wall acetabular fractures via the fragment-specific fixation technique using 2.7-mm VA LCPs retrospectively.

Results: The average duration of follow-up was 26.8 months. Anatomical reduction was achieved in 18 patients. Imperfect reduction was achieved in 5 patients. 22 patients achieved fracture union and 1 patient underwent revision surgery due to acute postoperative infection. There were no complications, including loss of reduction, fixative failures, sciatic nerve palsy, heterotopic ossification, and early posttraumatic arthritis among 22 patients. The average functional outcome was measured as "very good".

Conclusion: Fragment-specific fixation technique using 2.7-mm VA LCPs for comminuted posterior wall acetabular fractures could be an acceptable alternative means of surgical fixation.

