

## Patient Outcomes After Combined Open Reduction and Internal Fixation and Acute Total Hip Arthroplasty for Acetabular Fractures

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**Purpose:** Due to poor bone quality, significant marginal impaction, and preexisting arthritis, geriatric acetabular fractures are sometimes managed with combined open reduction and internal fixation (ORIF) and acute total hip arthroplasty (THA) despite reports that there may be higher complication and revision rates. Recent review articles offer no conclusions on the efficacy of this treatment, and little is available on patient outcomes. The purpose of this study was to evaluate postoperative outcomes and complication rates of a combined approach for acetabular fractures compared to ORIF alone. Our hypothesis is that elderly patients treated with the combined approach will have better overall outcomes/ satisfaction with lower secondary procedures than those treated with ORIF alone.

**Methods:** After IRB approval, a retrospective medical record review identified patients who underwent ORIF/ acute THA for acetabular fracture over a 10-year period. This initial search identified 341 patients. Patients undergoing ORIF and later conversion to THA or ORIF without arthroplasty were excluded; 28 patients remained. Demographic data, fracture type, complications, and length of follow-up were collected. Patients were contacted and given a questionnaire via telephone to determine current function, satisfaction, and secondary surgeries. Hip Disability and Osteoarthritis Outcome Score, Joint Replacement (HOOS, JR) and Patient-Reported Outcomes Measurement Information System (PROMIS)-Physical Function scores were obtained.

**Results:** Major reoperations occurred in 4 (16.7%) of 24 patients at an average of 1.45 years. Infection was the most common complication, seen in 3 patients (12.5%). Two patients (8.3%) have undergone component removal/ antibiotic spacer placement and are currently awaiting reimplantation. One patient (4.2%) has completed two-stage revision. The remaining revision (4.2%; 1 of 24) was performed for recurrent instability. Of the 28 patients, 18 (10 men and 8 women) completed the survey. Six were deceased; however, no failures were seen at a mean time to death of 1.4 years. Three patients could not be reached, and 1 declined. Mean age was 70.2 years. Mean clinical follow-up was 363 days and mean phone follow-up was 1612 days (4.4 years). Patients reported their mean overall satisfaction score as 3.78 (1 = unsatisfied, 5 = very satisfied). Women were more satisfied (4.1) than men (3.5). Mean HOOS, JR interval hip score was 47.2%. Mean HOOS, JR interval hip scores between male (48.9%) and female (45.1%) were not significantly different. Mean PROMIS-Physical Function score was 27.9 and was not significantly different between sexes.

**Conclusion:** ORIF and acute THA is a reasonable option for complex geriatric acetabular fractures. Previous studies have demonstrated reoperation rates of at least 20% for elderly patients treated with ORIF alone, and conversion rates to THA of up to 50%. Our study demonstrated a similar yet slightly lower reoperation rate (16.7%) as previous studies, with acceptable outcome scores at 4.4 years. A combined approach should be considered in complex, elderly acetabular fractures.