

Delayed THA for Acetabular Fractures in the Elderly: a PearlDiver Study

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INTRODUCTION:

Common options to treat acetabular fractures in elderly patients include open reduction internal fixation (ORIF), acute total hip arthroplasty (acute THA), and delayed total hip arthroplasty (delayed THA). This study aims to identify the procedure with the lowest reoperation rate at two-years post operatively.

METHODS:

A review of the PearlDiver Dataset from 2015 to 2018 was completed for patients age 60 and older with acetabular fractures. ICD-10 procedure codes were used to create the ORIF, acute THA (THA within 1 month of fracture), and delayed THA (1 month to 1 year of fracture) study groups for analysis. The primary outcome was reoperation within two years of surgery. Reoperations included revision THA, removal of hardware, arthrodesis, removal of heterotopic ossification, hemiarthroplasty, irrigation and debridement, and removal of hardware/placement of antibiotic spacer.

RESULTS:

There were 564 ORIF patients, 435 acute THA patients, and 350 delayed THA patients aged 60 and older. The THA groups had a higher proportion of patients aged 75 and above (acute THA 43.2%, delayed THA, 40.3%, ORIF 31.2%), female patients (acute THA 66.7%, delayed THA 61.1%, ORIF 36.3%), and obese patients (acute THA 27.8%, delayed THA 32.6%, ORIF 21.8%) than the ORIF group. Median time-to-surgery was 3 days in ORIF group, 7 days in acute THA group, and 133 days in the delayed THA group. The two-year reoperation rate was 17.4% in the ORIF group, 10.8% in the acute THA group, and 4.0% in the delayed THA group ($p < 0.001$). Revision occurred in 11.0% of ORIF, 8.3% of acute THA, and 4.0% of delayed THA patients ($p < 0.001$).

DISCUSSION AND CONCLUSION:

Delayed total hip arthroplasty appears to be a viable treatment option for acetabular fractures in elderly patients and is associated with lower rates of two-year reoperation than ORIF or acute THA.