

Outcome of Acetabular Fractures with a Posterior Dislocation

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Purpose: Acetabular fractures with a dislocation of the femoral head are a subgroup assumed to result in worse outcomes, but there are few studies documenting the natural history and long-term patient-reported outcomes. The aim of this study was to evaluate the clinical outcomes and complications following an acetabular fracture associated with a posterior hip dislocation.

Methods: Our unit provides definitive orthopaedic treatment for a catchment population of 1.2 million. Data on all patients admitted to the trauma unit are collected prospectively at time of presentation. We retrospectively reviewed database records for patient characteristics, complications, predictors of poor outcome, and requirement for further surgery. Long-term patient outcomes were measured using the Oxford hip score and Short Form-12 (SF-12) health survey.

Results: A total of 99 patients were treated. Internal fixation was performed in the majority (n = 87), 10 were managed conservatively, and 2 underwent primary arthroplasty. Following fixation a conversion to arthroplasty was required in 20% of cases at a median time of 2 years from injury. Increasing age was associated with conversion to arthroplasty (P = 0.049) and in a shorter length of time (P = 0.036). At a median follow up of 12.4 years (range, 5-25) patient-reported outcomes (n = 53) revealed both groups of patients had substantial disability with mean Oxford hip scores less than normal. In those patients who kept their native hip post injury only half of the cohort reported normal hip scores. Those conservatively managed had better hip scores than those post ORIF (open reduction and internal fixation), but this failed to reach significance (P = 0.13). Age at time of injury did not appear to influence the Oxford hip score. Hip scores were similar for patients before and after 10 years post injury (P = 0.76). There were no obvious differences between fracture classification subtypes. The mean Oxford hip score was similar between the native hip and conversion groups (P = 0.256). SF-12 scores were below average for both groups with the physical score more affected than the mental. The requirement for use of walking aids was high in both groups, with the majority (79%) in those converted to total hip arthroplasty (THA) requiring one.

Conclusion: Our study suggests that acetabular fracture dislocations are associated with poor functional outcomes and high conversion rate to THA. Increasing age is a strong predictor for secondary osteoarthritis following ORIF and in a shorter length of time. Recognition of high-risk patients for failure following ORIF may allow better selection for a combined acetabular reconstruction and THA given the poor patient-reported outcomes we found after secondary conversion to arthroplasty.