

Acetabular Fractures Treated with Open Reduction and Internal Fixation and Acute Total Hip Arthroplasty: Follow-up of 42 Patients After 1 to 20 Years*Ragnhild Løven Kirkeboe, MD; Jan Erik Madsen, MD; Lars Nordsletten, MD;**John Clarke-Jenssen, MD**Oslo University Hospital Ullevaal, Oslo, Norway*

Purpose: Geriatric acetabular fractures are associated with substantial joint impaction and comminution, features previously shown to be prognostic of a poor result. Thus, a combined procedure of open reduction and internal fixation (ORIF) and acute total hip arthroplasty (THA) can be a good option when the joint cannot be adequately reconstructed. We report short- to medium-term outcome of the results of patients treated with this combined procedure at Oslo University Hospital Ullevaal.

Methods: 56 cases treated with ORIF and acute THA from January 1, 2000 to December 31, 2019 were identified. Seven cases treated for periprosthetic fractures were excluded. One patient was a foreign citizen and one was treated with only THA; both were excluded. Five patients died within 3 months after surgery, leaving 42 cases treated for an acute acetabular fracture available for follow-up. Mean age was 68 years (range, 37-87). There were 36 men and 11 women. Mean follow-up was 2.8 years (range, 1-16). The majority of fractures involved the anterior column. The most common mechanisms of injury were fall from standing height (n = 36) and motor vehicle accidents (n = 11). Six were polytrauma cases. Medical comorbidities were common.

Results: Of the 48 cases treated for a nonreconstructable acetabular fracture, 42 had their implant intact at follow-up. Six patients were deceased within 3 months after surgery, all of whom were categorized as American Society of Anesthesiologists (ASA) class 4 by an anesthesiologist preoperatively. Four cases developed postoperative infections within 3 months after surgery; all four were ASA 4 patients. Two were treated with soft-tissue debridement and retained the implant; 2 needed multiple revisions and removal of the THA. One dislocation was treated with closed reduction with no further revision required. All four cases treated for postoperative infection were deceased within 3 months. At the latest follow-up, 28 patients were ambulatory without a walking aid. Harris Hip Score (HHS) at follow-up was available for 36 patients. Median HHS was 82 (range, 51-100).

Conclusion: ORIF and acute THA for select geriatric acetabular fractures can be performed with good results. In this cohort, mean HHS was 82 at latest follow-up. ASA class 4 patients are at high risk for severe complications and death, and other treatment options should be preferred in this group.