**Outcomes of Acetabular Fracture Fixation with a Minimum 5 Years Follow-up: A Retrospective Study of 87 Cases in a Single Center**

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**Purpose:** Successful outcome from acetabular fracture fixation is multifactorial. Long-term results are not frequently reported. The aims of the study to evaluate the long-term results of open reduction and internal fixation in a large series of acetabular fractures with a minimum 5-year follow-up and to identify the risk factors associated with a poor outcome.

**Methods:** We analyzed 190 displaced acetabular fractures managed surgically between 1998 and 2014 in an orthopaedic trauma unit. Patients were followed for a minimum of 5 years; those who had associated pelvic ring injury, had developed infection, needed revisional surgery, and were lost to follow-up were excluded from the study, leaving 87 patients with a mean of 124 months (range, 60-261) for the follow-up period. The primary outcomes are survivorship of hip joint as posttraumatic osteoarthritis using the Matta scoring system and divided into success and failure groups for identifying the affected risk factors. The other assessments evaluated were general demographics, the status of fractures, postoperative Matta radiological outcome grading, and other complications.

**Results:** Overall, the rate of secondary osteoarthritis (defined as fair and poor score according to the Matta scoring system) was 28.7% (25 out of 87 patients). When comparing successful and failed groups, significant independent negative predictors were high age at the time of injury, presence of acetabular impaction and hip dislocation, severe initial displacement of the articular surface, and poor reduction of Matta's radiological outcome grading. The presence of preoperative intra-articular fragments and femoral head fracture had no statistical effect on the difference between the two groups.

**Conclusion:** When analyzing patients who could be followed up for more than 5 years, open reduction and internal fixation of displaced acetabular fractures were able to successfully prevent posttraumatic osteoarthritis in 71.3%. The results represent comparative data for any future and past studies on the outcome of surgical fixation of acetabular fractures.