

Long-Term Recovery Trajectory of Patient-Reported Outcomes Following Acetabular Fractures

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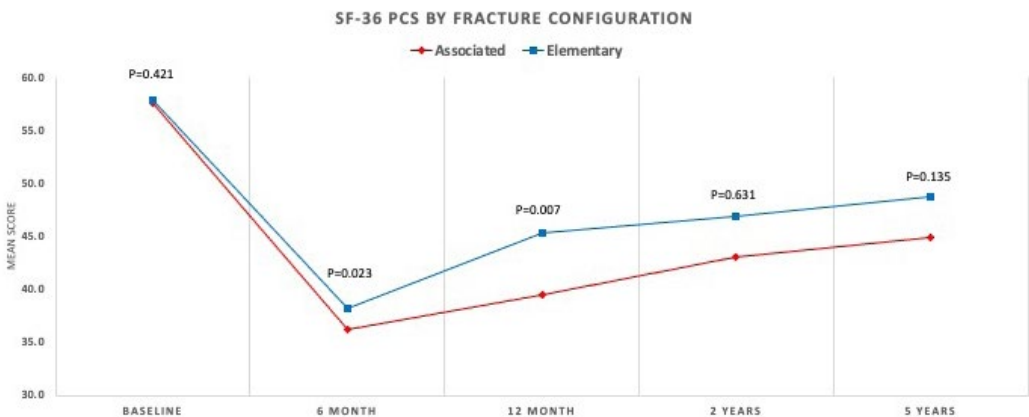
Purpose: Acetabular fractures are associated with long term morbidity. This prospective cohort study seeks to understand the recovery trajectory over 5 years.

Methods: Longitudinal follow-up of surgical acetabular fractures occurred between 2004-2019. The 36-Item Short-Form Health Survey (SF-36) physical component score (PCS) was recorded at 6,12,24 and 60 months post-operatively. Comparative analyses were performed for elementary and associated fracture patterns. The minimal clinically important difference (MCID) and patients achieving this change was determined. The rate of, and time to, conversion to total hip arthroplasty (THA) is reported.

Results: We identified 253 fractures (251 patients), with a 4:1 male preponderance and mean age of 46.1 ± 16.4 years. Associated fracture patterns accounted for 143 / 253 (56.5%). Trajectory analysis showed all time points had significant disability versus baseline ($P < 0.001$; Figure 1). Elementary fractures had higher SF-36 PCS at 6 ($P = 0.023$) and 12 ($P = 0.007$) months compared to associated subtypes, but not at 2 ($P = 0.135$) or 5 years ($P = 0.631$). A total of 37.3% of patients improved at least 1 MCID between 6 months and 1 year, 26.9% between 1 and 2 years, and 23.2% between 2 and 5 years. A significant proportion failed to return within 1 MCID of baseline at 2 (70%) and 5 years (65%). Conversion to THA occurred in 13.1% patients: 11 / 110 elementary and 22 / 143 associated fractures. Approximately two-thirds (63.6%) were performed within 2 years of index surgery.

Conclusion: Acetabular fractures significantly impact physical function and recovery trajectory is long—often beyond 1 year. 65% of patients had persistent clinically relevant disability long term.

Mean comparative SF-36 Physical Component Scores by fracture subtype at each timepoint.



The FDA has stated that it is the responsibility of the physician to determine the FDA clearance status of each drug or medical device they wish to use in clinical practice.