

Patient-Reported Outcome Measures of Surgically Treated Acetabular Fractures Without C-Arm in Ethiopia

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Purpose: In resource-limited settings, complex fractures like acetabular fractures will have to be fixed in the absence of standard equipment and intraoperative imaging. The purpose of this study is to assess Patient-Reported Outcome Measures (PROMs) and modified Harris Hip Scores (mHHS) of patients treated in Black Lion Hospital, Addis Ababa, Ethiopia by a single fellowship-trained surgeon with a minimum of 2 years postoperative follow-up. The hypothesis of this study was in the hands of well-trained surgeons, comparable clinical outcomes can be achieved by fixation of the acetabulum in limited resources in the absence of C-arm imaging intraoperatively to standard settings.

Methods: A Short Form-36 health survey (SF-36) and mHHS questionnaire was translated to Amharic and given to patients who underwent acetabular fixation between January, 2016 and December, 2017. The 8 dimensions included in the SF-36 questionnaire were physical function, social function, role limitations due to physical and emotional problems, bodily pain, vitality, and mental and general health perception of the patients. There was a minimum follow-up of 2 years. Acetabular fracture types were based on the Judet and Letournel classification. All statistical analysis was performed on SPSS software (IBM).

Results: A total of 202 acetabulum fractures were treated during the 2 years of study period, of which 107 were operated without C-arm with 85% 2-year follow-up rate. The mean age at surgery was 35 years with delay in surgery ranging from few hours to 148 days. Majority of the fractures were associated groups (68.2%), with overall 28% associated both-column acetabulum fracture patterns. From the simple fractures, posterior wall (14%) was the most common. The 2-year mean mHHS was 91.25 and the good to excellent outcome international knee score was 88.6% in our study with Matta's study showing 80% at 20 years. Majority of the patients showed excellent physical function on their SF-36 and they have comparable SF-36 scores with mHHS except for social function.

Conclusion: Comparable patient-reported clinical outcomes could be achieved in fixation of complex acetabulum fractures in resource-limited settings with proper surgical tactics of intervention with proper training and experience.