



# Research Week 2020

## Hold My Beer: Intoxication past the legal limit does not drive differences in acetabular fracture pattern

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### Keywords

Acetabulum, Fractures, Trauma

### Abstract

#### Purpose

Trauma patients frequently have social challenges, among them alcohol intoxication, at the time of their injury. The fracture literature does not contain any thorough analyses of injury and fracture characteristics of the intoxicated. We took shots at characterizing the fracture patterns and injury characteristics evident in intoxicated patients with acetabular fractures compared to sober peers.

#### Methods

All patients receiving unilateral acetabular fixation presenting at our Level 1 trauma facility with measured admission BAL were examined (2008-18; n=371). Charts were reviewed for demographic and injury data, including blood alcohol level (BAL) upon admission. Injury radiographs were interpreted by a fellowship trained traumatologist to classify fracture patterns utilizing the Judet & Letournel system. Intoxication status (defined as BAL >0.08) and fracture patterns were analyzed using descriptive statistics, such as contingency tables, and unpaired T-tests.

#### Results

39 patients (10.5%) were intoxicated above the legal limit upon admission with acetabular fractures. This group was younger (41 yrs v 51 yrs,  $p<0.01$ ), included more smokers (71 v 37%,  $p<0.01$ ), and experienced high energy mechanisms (e.g. motor vehicle collisions, 67% vs 49%,  $p<0.01$ ). There was no significant difference between elementary and associated patterns in the sober vs intoxicated groups (38% elementary vs 33%,  $p=0.63$ ). Additionally, there was no difference in reoperation rates at one year.

#### Conclusion

Intoxicated patients are more likely to be young smokers who are involved in high energy mechanisms than patients who abstain. There are no clear fracture patterns associated with patients who could not pass a legal sobriety test.

Total

Elementary

Associated

Intoxicated

39

15 (38%)

24 (62%)

Sober

332

110 (33%)

222 (66%)

