

## **ORIF of Glenoid Fractures is Associated with a High Complication Rate**

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**INTRODUCTION:** Scapular fractures account for less than 1% of fractures and fractures of the glenoid specifically have a prevalence of 0.1% (10% of scapular fractures). These fractures are often the result of high-energy trauma such as motor vehicle collisions and falls from a great height, where the humerus is driven into the glenoid fossa. Given the articular nature of these fractures, the vast majority of these fractures are treated operatively. The purpose of this study was to assess the outcomes of glenoid fractures over a 10 year period.

**METHODS:** A retrospective review was completed to identify patients treated for glenoid fractures over a ten-year period at a Level 1 Trauma center. Data obtained included age, sex, initial intake assessment, treatment details, post-treatment range of motion, if any operative interventions were converted to total shoulder procedures, outcomes, and any complications. Simple statistics were performed.

### **RESULTS:**

Twenty-nine patients with an average age of 42.36 years (SD: 14.77; Range: 19.07-69.01 years) were identified. The most common mechanisms of injury were motor vehicle collisions (N=6, 20.7%) and falls from a height (N=6, 20.7%). Twenty-one of the patients had concomitant injuries (72.4%), the most common of which were scapular fractures (N=12, 41.37%) and rib fractures (N=6, 20.68%).

All but one of the patients were treated operatively. There were 6 complications for a complication rate of 21.4%. Complications included wound healing issues, a return to the operating room due to subluxation of the glenohumeral joint, neuropathy of the ulnar nerve distribution, a nearly ankylosed shoulder joint, backing out of a K-wire necessitating removal, and a return to the OR for a new associated scapular fracture.

**DISCUSSION AND CONCLUSION:** Glenoid fractures occur due to high energy mechanisms of injury and are typically treated with operative intervention. Surgeons must recognize and counsel patients regarding the high complication rate associated with the treatment of these fractures. Further research into glenoid fractures and prevention of the complications associated with their treatment is warranted.