

## Case Report: The Advantage Of Open Reduction Vs. Closed Reduction In Acromioclavicular Joint Dislocation

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### INTRODUCTION:

Acromioclavicular joint dislocations account for approximately 9 - 12% of all shoulder injuries. Treatment depends on the severity, with low-grade injuries (Rockwood I-II) typically managed conservatively and high-grade injuries (Rockwood IV-VI) often requiring surgical intervention. While closed reduction is less invasive, it has a higher failure rate in severe cases. Open reduction provides direct visualization, stable fixation, and better long-term outcomes.

### REPORT:

A 41-year-old Malay male, with underlying diabetes mellitus, hypertension and , presented to the emergency department with left shoulder pain and deformity following a fall due to a misstep while walking down stairs. Physical examination revealed a prominent distal clavicle, pain on palpation of the AC joint, and a positive cross-arm adduction test. Radiographic imaging confirmed a Rockwood Type V AC joint dislocation with significant coracoclavicular ligament disruption.



**Figure 1.**

Initially the patient was treated conservatively by immobilization using an arm sling. However, follow-up imaging at two weeks showed loss of reduction, persistent pain, and difficulty

performing daily activities. Given the instability, a decision was made to proceed with surgical intervention.

A minimally invasive tight rope of left ACJ was performed. However, post-reduction imaging showed that anatomic alignment was not achieved. The clavicle remained significantly displaced post operatively.



**Figure 2.**

### CONCLUSION:

Minimally invasive reduction techniques may be inadequate for high-grade AC joint dislocations, as they often fail to achieve and maintain reduction. Open reduction with internal fixation offers superior stability, prevents recurrence, and optimizes functional recovery.

### REFERENCES:

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2. Liu, S., Li, C., Song, Z. et al. Comparison of open reduction and fixation with hook plate and modified closed reduction and fixation with tightrope loop plate for treatment of rockwood type III acromioclavicular joint dislocation. *BMC Musculoskelet Disord* **23**, 301 (2022). <https://doi.org/10.1186/s12891-022-05261-5>