

# Abstracts Presented at the 36th Annual Meeting of the Arthroscopy Association of North America

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## Classification and Analysis of Attritional Glenoid Bone Loss in Recurrent Anterior Shoulder Instability

SS-01

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cognizant that the remaining bone fragment is unable to reconstitute glenoid bone stock. In addition, there was more attritional bone loss in patients with a longer duration of instability symptoms, indicating need for incorporating symptom duration in determining proper management.

## Arthroscopic Treatment for Shoulder Instability with Glenoid Bone Loss Using Distal Tibia Allograft Augmentation

SS-02

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**Introduction:** Proper recognition and treatment of glenoid bone loss (GBL) is important for successful management of anterior shoulder instability. Although GBL has been thoroughly described in the literature, there is also a fragment of bone that is usually displaced and often undergoes attrition that has been little described. Thus, the purposes of this study include (1) to evaluate ABL of the glenoid fragment in recurrent anterior shoulder instability and (2) correlate ABL with clinical history, fragment size and radiographic findings.

**Methods:** GBL was evaluated on 3-dimensional (3D) computed topography (CT) en face view, and measured as percent loss. The bone fragment size was measured and attrition of the fragment was determined by evaluating the amount remaining relative to the initial defect; patients were stratified into minimal (<34%), moderate (34-67%) and severe (>67%) attritional loss groups. Clinical history and demographics were correlated to ABL, and comparison of GBL and ABL was performed.

**Results:** The overall median percent GBL was 15.3% (IQR, 9.9% - 20.0%) with a mean (SD) percent GBL of 16.5% (9.0%). Study participants had a corresponding median percent ABL of 75.8% (IQR, 53.8% - 95.7%) and a mean (SD) percent ABL of 72.0% (24.4%). A total of 61.2% of patients (n=85) exhibited severe ABL, while 30% had moderate ABL and 8.6% had minimal ABL. The total time of instability was significantly associated with percent attritional bone loss ( $p<0.05$ ).

**Conclusion:** This study highlights that GBL, in most patients with recurrent anterior instability, presents with extensive attrition of the bone fragment independent of initial glenoid bone loss; therefore, surgeons should be

**Introduction:** The purpose of this study was to retrospectively analyze prospectively collected data to present the clinical and radiological short term outcomes of patients who underwent anatomic glenoid reconstruction using distal tibia allograft to treat shoulder instability with glenoid bone loss.

**Methods:** Over four years, 44 patients (31 patients were male and 13 female with mean age of 29.73 years) underwent arthroscopic stabilization with capsular-labral bankart repair and allograft bony augmentation of the glenoid for recurrent shoulder instability with significant bone loss by the same surgeon. 14 patients were revision cases of previous surgery. Preoperative and postoperative functional assessment was performed with the Western Ontario Shoulder Instability Index (WOSI) questionnaire, and radiological assessment was performed with radiographs and CT scans. Average followup time was 2 years.

**Results:** 97% (43/44) patients had no dislocations or subluxations at the most recent followup. The mean pre and postoperative WOSI scores were 40.54 and 72.65 respectively ( $p<0.001$ ). No patients developed nerve injury. One patient presented with hardware failure at 3 years postop. Two other patients had complete graft absorption and 6 patients had partial graft resorption but none symptoms of instability. The mean postoperative active shoulder range of motion was forward flexion 170.1o, abduction 168.9o, internal rotation 69.5o and