Comparison of Outcomes and Complications following Anterior Shoulder Bony Stabilization Procedures: A Matched Comparison between Latarjet vs Distal Tibia Allograft fixation

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INTRODUCTION:
The Latarjet procedure (LP) and distal tibial allograft (DTA) are treatment options for recurrent shoulder instability in the setting of critical unipolar or bipolar bone loss. Outcomes of both LP and DTA have been studied independently throughout literature. However, very few studies exist comparing the two. The purpose of this study was to compare clinical outcomes and complication profile of patients undergoing primary bony stabilization procedure with either Latarjet or distal tibia allograft.
METHODS:
A retrospective review of patients who underwent Latarjet procedure or distal tibia allograft procedure for anterior shoulder instability from August 2010 to April 2023 at a single academic medical institution was conducted. Patients with a minimum of 30-day follow-up were included in the final analysis. Demographic variables, including patient sex, age at the time of surgery (age), body mass index (BMI), tobacco use status, and range of motion [forward elevation (FE), external rotation (ER), and internal rotation (IR)], pre- and post- Patient-reported Outcome Measures (PROMIS) scores and time to final follow-up were collected. Pre-operative glenoid bone loss was calculated from CT imaging using the accepted best-fit circle method questionnaires. The primary outcome of the study was recurrent instability (dislocation or subluxation). Additionally, complications were compared between the two groups.
RESULTS:
A total of 32 patients who underwent DTA were compared to 32 who underwent LP and were then matched into cohorts based on age, < 30 and >30 years of age. The two groups were similar with respect to the demographic variables, glenoid bone loss, history of prior shoulder surgery. Overall, there was no significant difference in the recurrence rate between the two treatment groups. In patients <30 years, patients in the DTA group had significantly lower FE (LP: 160º ± 15º vs. DTA: 144º ± 26º, P <0.05*)* but there was no significant difference in the change in PROMIS scores, and overall complications were comparable. In patients >30 years, patients in the DTA group had lower FE (LP: 160º ± 27º vs DTA: 141º ± 27º, P < 0.09*)* but no differences in functional outcomes between groups, or differences in complications (P>0,05).
DISCUSSION AND CONCLUSION:
This study found both primary Latarjet and DTA resulted in comparable low recurrence rate for the treatment of primary recurrent shoulder instability in the setting of bone loss. Patients with Latarjet procedure had greater forward elevation but other outcome measures and complication rate was comparable. Latarjet and distal tibial allograft are safe and effective procedures for anterior instability, regardless of patient age.