Survivability of the Latarjet versus Anterior Glenoid Reconstruction in the Treatment of Shoulder Instability with Anterior Glenoid Bone Loss in the Active-Duty Military Population

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INTRODUCTION: Several operative management strategies exist for patients with instability following anterior glenoid bone loss. Two mainstays of therapy include the Latarjet procedure and Anterior Glenoid Reconstruction with free bone grafting. Both techniques have found success in treating glenohumeral instability and glenoid bone loss; however, neither has demonstrated definitive superiority. The aim of this study was to evaluate the survivability of patient reported outcome measures between patients having undergone either Latarjet or Anterior Glenoid Reconstruction (AGR) as treatment for anterior shoulder instability with glenoid bone loss in the Active-Duty Military population.

METHODS: A multicenter retrospective review was conducted of 92 patients' American Shoulder and Elbow Surgeons (ASES), and Single Assessment Numeric Evaluation (SANE) scores after undergoing either Latarjet or AGR between 2017 to 2022. Patients were included in analysis after a minimum of two years follow-up; patient reported outcome measures were collected at 2-year intervals. Student's t-tests were used to determine whether significant differences existed between Latarjet and AGT at 2-3 years, 3-4 years, or greater than 4 years postoperatively. Linear regression and z-tests were utilized to determine time dependency in patient reported outcome measures for both the Latarjet and AGR cohorts.

RESULTS:

In patients treated with Latarjet, results demonstrated a significant decrease in SANE scores over time (p=0.001); and there was a trend towards decreased ASES scores over time (p=0.07). Mean SANE scores at between 2-3 years follow up were 89.75 (SD=6.69) versus 65.6 (SD=21.7) at greater than 4 years. In patients treated with AGR, there was no significant difference in SANE and ASES scores over time (ΔSANE: p=0.43, ΔASES p=0.55).

When comparing the two groups, results demonstrated significantly decreased SANE scores after 4 years (p=0.02) after Latarjet compared to AGR. However, there was no significant difference in ASES scores at any time point.

DISCUSSION AND CONCLUSION:

These findings suggest that in Active-Duty Military patients, there may be a time dependent decrease in patient reported outcome measures after Latarjet compared to Anterior Glenoid Reconstruction when treating shoulder instability with anterior glenoid bone loss.

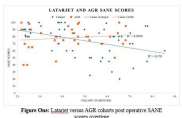

Figure One: Latarjet versus AGR cohorts post operative SANE scores overtime

Figure Three: Latarjet versus AGR cohorts post operative WOSI scores overtime

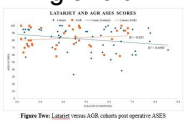

Figure Two: Latarjet versus AGR cohorts post operative ASES scores overtime

	SANE (SD)	ASES (SD)	WOSI (SD)
Lanzer Cohort	89.7 (6.7)	88.25 (21.4)	334.1 (201.0)
AGR Cohort	73.3 (24.1)	81.9 (22.1)	482.2 (179.8)
P-value	0.02	0.21	0.24

Table One: Average patient reported outcome metrics between 2-3 years postoperatively

	SANE (SD)	ASES (SD)	WOSI (SD)
Lanzer Cohort	65.6 (21.7)	77.1 (15.5)	550.9 (443.8)
AGR Cohort	83.1 (12.8)	84.8 (13.3)	392.4 (326.1)
P-value	0.02	0.14	0.11

Table Three: Average patient reported outcome metrics between 3-4 years postoperatively

	SANE (SD)	ASES (SD)	WOSI (SD)
Lanzer Cohort	83.3 (14.2)	86.7 (11.1)	471.4 (431.8)
AGR Cohort	77.5 (18.8)	78.7 (14.1)	386.8 (372.4)
P-value	0.39	0.19	0.66

Table Two: Average patient reported outcome metrics between 3-4 years postoperatively