The Timing is Crucial for Arthroscopic Bankart Repair, but Not Necessarily for Latarjet

Petar Golijanin, Paolo Spinello[1], Fabrizio Brindisino, Qais Zai, Matthew T Provencher, Giovanni Di Giacomo[2]
[1]Paolo Spinello, [2]CONCORDIA HOSPITAL

INTRODUCTION:

Numerous studies have investigated how glenoid bone loss affects decision making regarding arthroscopic Bankart procedures versus open bony augmentation procedure to the glenoid, but less is known about the appropriate timing for these procedures. The aim of this study is to compare clinical outcomes in younger patients who underwent Latarjet procedure versus arthroscopic bony Bankart repair for anterior shoulder instability and assess whether the timing of the procedure, glenoid bone loss, reaming bone fragment and number of pre-operative instability events affects the outcomes.

METHODS:

Retrospective review of 290 patients who underwent arthroscopic bony Bankart (ABBR)repair or open Latarjet was conducted. Patient demographics, number of preoperative dislocations, time from the first dislocation to surgery (elapsed time), age at first episode, preoperative Glenoid Bone Loss (GBL), Glenoid Bone Fragment (GBF) size, pre- and post-operative Western Ontario Shoulder Instability (WOSI) scores were recorded. At the final follow-up, WOSI scores and number of post-operative dislocations were recorded. Three dimensional CT scans were used to calculate GBL and GBF **(Figure 1)**. Statistical analysis included ANOVA for group comparisons, chi-square tests for recurrence rates, Spearman R correlations for relationships between key variables, and linear regression models to predict postoperative WOSI scores.

RESULTS:

Total of 243 patients underwent ABBR and 47 patients underwent Latarjet procedure. ABBR group had larger GBF (8.6% vs 5.5% $p<0.001$), smaller GBL (12.6% vs 16.3%, $p<0.001$), shorter elapsed time since the initial instability event (13.8 months vs 23.4 months, $p<0.001$), lesser number pre-operative dislocations (4.0 vs 7.3 instability events, $p<0.001$) and higher pre-operative WOSI scores (1154 vs1411 $p<0.001$). Postoperative WOSI scores were not statistically significant amongst the groups (387.5 vs 359.0, $p=0.11$) **(Table 1)**. Recurrence rate for Latarjet group was 2/47 (4.3%) versus 24/243 (9.9%) for ABBR but not statistically significant ($\chi 2 = 1.52$, $p = 0.2169$). the cohort was further divided in those who experienced recurrent instability versus those who did not, and showed that means elapsed time since the first dislocation was longer in those who had recurrence of instability regardless of the procedure that was performed (14.7 months vs 21.8 months, $p = 0.001$)

DISCUSSION AND CONCLUSION:

Patients who underwent ABBR had overall less pre-operative dislocations events and less elapsed time from the initial dislocation until the surgery. This highlights that in addition to preoperative GBL and GBF, additional factors are important to account for during pre-operative planning and decision making. Even though preoperative patient recoded outcomes were worse in the Latarjet group, postoperative patient recorded outcomes were not different amongst groups which further emphasizes the importance of selecting appropriate surgical intervention based on the pre-operative risk factors. Understanding, recognizing, and mitigating different risk factors while selecting appropriate surgery in order to minimize the chance for recurrent anterior shoulder instability is essential.