Decoding Anterior Shoulder Instability: Comparative Analysis of Surgical Strategies - Remplissage with Bone Graft vs. Bone Block Alone

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INTRODUCTION: Arthroscopic anatomic glenoid reconstruction (AAGR) has comparable efficacy to Bankart repair, and significantly lower recurrence rates. While AAGR is often paired with Bankart repair during surgery to address labrum, ligament, and bone damage, the outcomes of AAGR compared to AAGR with concurrent Bankart repair have not previously been compared in the literature. Purpose: To compare patient-reported outcomes and recurrence rates at a minimum of 2-year follow up in patients who received AAGR with concurrent Bankart repair to patients who received AAGR alone.

METHODS: This was a retrospective review of 245 consecutive patients who underwent AAGR with and without Bankart repair between 2013-2020. A 1:2 ratio was used to match patients who underwent AAGR alone to patients who underwent AAGR + Bankart repair during the same period, based on sex, BMI, age at time of surgery, and number of follow-up years. All patients had a minimum 2-year follow up. Data collected included demographics, pre- and postoperative Western Ontario Shoulder Instability (WOSI) Index and Disabilities of the Arm, Shoulder, and Hand (DASH) Scores, postoperative complications, and recurrence.

RESULTS: The demographics and preoperative outcome scores were similar between groups, with mean follow up of 4.7±2.3 years in the AAGR + Bankart group and 4.9±3.6 years in the AAGR group. The population was mostly male (75% of patients in each group). At a minimum 2-year follow up, all patients in the AAGR + Bankart group met the minimum clinically important difference in WOSI scores, compared to 50% of patients in the AAGR group; the between-groups difference was significant ($p<0.05$). The pre-to-postoperative improvement in WOSI scores in the AAGR + Bankart group was significantly better than the AAGR group ($p<0.01$). There were no postoperative complications observed in the AAGR + Bankart group, and no cases of recurrence. In the AAGR group 25% of patients reported postoperative complications, with no reported recurrences.

DISCUSSION AND CONCLUSION: Strong evidence is generated to support that performing AAGR with concurrent Bankart repair improves patient outcomes and lowers the incidence of postoperative complications.