

## **Screw versus Suture-Button Fixation for the Latarjet Procedure: A Systematic Review of Clinical Outcomes**

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**INTRODUCTION:** The Latarjet procedure (coracoid transfer) is often used to treat recurrent glenohumeral instability in the presence of glenoid bone loss. Fixation of the coracoid on the anterior glenoid may be performed either with a screw or suture-button. The purpose of this study was to perform a systematic review to compare clinical outcomes of patients undergoing the Latarjet procedure with screw versus suture-button fixation.

**METHODS:** A systematic review was performed by searching PubMed, the Cochrane Library, and Embase to identify clinical studies directly comparing screw versus suture-button fixation for the Latarjet procedure. The search terms used were: *shoulder screw suture button*. Patients were evaluated based on reoperation rate, complication rate, recurrent instability, radiological outcomes, and patient-reported outcomes (PROs; Walch-Duplay Score, American Shoulder and Elbow Society [ASES] score, modified Rowe score, Subjective Shoulder Value (SSV), and Visual Analog Score (VAS). Graft and screw position were assessed on 2-dimensional (2-D) and 3-dimensional (3-D) computed tomography (CT).

### **RESULTS:**

Seven studies (1 level II, 6 level III) met inclusion criteria, including a total of 845 patients undergoing the Latarjet procedure with screw fixation (Group A) and 279 patients with suture-button fixation (Group B). Patient age averaged 27.4 and 26.4 years in Groups A and B, respectively. The mean follow-up time was 28.5 months. The average body mass index (BMI) was 24.6 kg/m<sup>2</sup> and the overall percentage of males was 83.3%. The average preoperative glenoid bone defect was 14.0% in Group A and 13.6% in Group B. The average number of shoulder dislocations prior to surgery was 9.1 in Group A and 8.0 in Group B. One study reported significantly lower Visual Analog Scale (VAS) pain scores for Group B compared with Group A (1.5 vs. 1.2, p=0.003). No other studies reported significant differences in any PROs between groups. There was no significant difference in horizontal or vertical graft position, graft union rate, or overall complication rate between groups. There was a significantly higher overall reoperation rate in Group A (4.3%) compared to Group B (0.5%) (p<0.01). Group B had a significantly higher recurrent instability rate (5.1%) compared to Group A (1.7%) (p<0.01).

### **DISCUSSION AND CONCLUSION:**

This study provides evidence that screw fixation for the Latarjet procedure results in a lower risk of recurrent instability compared to suture-button fixation, but with a higher reoperation rate mainly due to hardware-related complications.