

Title: Arthroscopic Bankart Repair with Remplissage Yields Similar or Better Functional Outcomes than Latarjet, with Higher Return to Sport, Fewer Complications, and Comparably Low Recurrence Rates at 2-Year Follow-Up

Running Title: Remplissage vs Latarjet

Authors:

Jeffrey L. Horinek, MD¹

Mariano E. Menendez, MD²

Pablo Narbona, MD³

Alexandre Lädermann, MD⁴⁻⁶

Johannes Barth, MD⁷

Patrick J. Denard, MD¹

¹Oregon Shoulder Institute, Medford, OR USA

²Department of Shoulder and Elbow Surgery, Midwest Orthopedics at Rush, Chicago, IL, USA

³Department of Shoulder Surgery and Arthroscopy, Sanatorio Allende, Cardoba, Argentina

⁴ Division of Orthopaedics and Trauma Surgery, La Tour Hospital, Meyrin, Switzerland

⁵Faculty of Medicine, University of Geneva, Geneva, Switzerland

⁶Division of Orthopaedics and Trauma Surgery, Department of Surgery, Geneva University Hospitals, Geneva, Switzerland

⁷Department of Orthopaedic Surgery, Clinique des Cèdres, Echiroles, France

All authors meet authorship based on the following contributions:

J. Horinek: Design/data interpretation, Manuscript prep and revision, final approval, and accountable for all aspects of work

M. Menendez: Design/data interpretation, Manuscript prep and revision, final approval, and accountable for all aspects of work

P. Narbona: Data acquisition, manuscript revision, final approval, and accountable for all aspects of work

A. Lädermann: Data acquisition, manuscript revision, final approval, and accountable for all aspects of work

J. Barth: Data acquisition, manuscript revision, final approval, and accountable for all aspects of work

P. Denard: Data acquisition, Design/data interpretation, Manuscript prep and revision, final approval, and accountable for all aspects of work

Corresponding Author:

Patrick J. Denard, MD

2780 E. Barnett Rd

Suite 200

Medford, OR 97504

(541) 779-6250

pjdenard@gmail.com

Aim:

The purpose of this study was to compare functional outcome, return to sport, satisfaction, postoperative recurrence, and complications in patients undergoing primary arthroscopic Bankart repair with remplissage (Remp) to primary Latarjet.

Background:

Appropriate treatment for patients with anterior glenohumeral instability continues to be debated. Current treatment algorithms generally center around the glenoid track concept, though this concept does not account for soft tissue injury. We sought to compare Remp vs Latarjet with varying bone loss to better define treatment algorithms for the operating surgeon. We hypothesized that there would be no difference in functional outcomes or recurrence between the two procedures.

Methods:

A multicenter retrospective study was performed on patients undergoing primary REMP or open Latarjet between 2013 and 2019 who had minimum 2-year follow-up. Baseline and two-year range of motion (ROM), patient-reported outcomes (PROs: Western Ontario Shoulder Instability Index [WOSI], Single Assessment Numeric Evaluation [SANE], and visual analog scale [VAS] for pain) recurrence, return to sport, satisfaction, and complications were reviewed.

Results:

Two hundred fifty-eight patients were available for study, including 70 REMPs and 188 Latarjet. Baseline demographics, ROM, and PROs were similar between the groups. Mean preop glenoid bone loss (GBL) (12.3% +/- 10.9% vs 7.6% +/- 9%; $P < 0.001$) and off-track lesions (23% vs 13%; $P = 0.046$) were higher in the REMP group. Change in VAS (1.9 vs 0.9; $P = 0.019$) and WOSI (1096 vs 805; $P < 0.001$) were improved in REMP. Percent achieved MCID was improved in WOSI for REMP and PASS for REMP in SANE, VAS, and WOSI scores. The REMP cohort

had worse change in external rotation (ER) (-4° vs $+19^{\circ}$; $P<0.001$) but similar forward flexion (FF) and internal rotation. Return to sport amongst overhead and contact athletes favored REMP (91.5% vs 72.7%; $P=0.007$). Satisfaction and recurrent dislocation were similar. Surgical complications were observed in 0% of REMP cases, compared to 5.9% in the Latarjet group.

Conclusion:

Primary REMP resulted in 2-year functional outcomes that were as good or superior to primary Latarjet, with higher return to sport for overhead and contact activities, fewer complications, and comparably low recurrence rates, even despite greater bipolar bone loss in the REMP cohort. However, this comes at the expense of decreased external rotation which may be considered in individual patients.