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Introduction

- Clinicians consider several factors when deciding between shoulder stabilization techniques, such as number of dislocations, symptom duration, revision surgery, and the extent of bone loss.[1-3]
- A prospective analysis of 564 patients found that revision surgery, high-risk sport participation, and glenoid bone loss were predictive factors for utilizing Latarjet surgery as opposed to Bankart repair.[1]
- Predictive factors for performing remplissage concomitantly with arthroscopic Bankart repair were the presence of humeral or glenoid defects >11% and revision surgery.[1]
- International and societal consensus statements support these findings, as surgeons recommended the Latarjet procedure for patients with significant glenoid bone loss (>15-20%) while remplissage is recommended for patients with off-track or engaging Hill-Sachs lesions without significant glenoid bone loss.[2,3]
- While several studies have compared outcomes between Latarjet surgery and remplissage, these studies have only evaluated patients with engaging Hill-Sachs lesions, not consecutive patient cohorts indicated for each surgery.

Objectives

- To compare rates of recurrent instability, re-operation, revision, and return to play (RTP), as well as patient-reported outcomes (ASES, SANE, and OSI scores) between Latarjet surgery and arthroscopic labral repair plus remplissage surgery (Remplissage) patients.

Methods

- Included patients who underwent either Latarjet or Bankart repair with concomitant remplissage at one institution from 2014-2019 using the CPT codes 29806 and 23462.
- Physician chart notes and operative notes were screened to confirm primary shoulder stabilization surgery, and to exclude patients who had multidirectional instability or underwent concomitant rotator cuff repair.
- 22 Latarjet patients and 13 Remplissage patients had available pre-operative MRIs which were assessed for glenoid bone loss and engaging Hill-Sachs lesions by two independent investigators (R.W.P. and G.O.).
- Patients were contacted via RedCap to collected post-operative outcomes (recurrent instability, reoperation, revision, RTP, months until RTP) and patient-reported outcomes (American Shoulder and Elbow Surgeons [ASES] score, Single Assessment Numeric Evaluation [SANE] score, Oxford Shoulder Instability [OSI] score).
- Patients who did not respond to RedCap were screened for post-operative outcomes via post-operative chart notes.

Demographic Variable	Latarjet (n=43)	Remplissage (n=28)	P Value
Engaging Hill-Sachs	17 (77.3%)	9 (69.2%)	0.698
Bone Loss (%)	0.19 ± 0.06	0.11 ± 0.04	**<0.001**
Chronic History of Dislocations	38 (88.4%)	12 (42.9%)	**<0.001**
Sport Participation	21 (48.8%)	19 (67.9%)	0.182
Sport Category:			0.254
None	21 (50.0%)	9 (32.1%)	
Non-Contact	4 (9.52%)	1 (3.57%)	
Contact	16 (38.1%)	17 (60.7%)	
Overhead	1 (2.38%)	1 (3.57%)	

Post-Operative Outcome	Latarjet (n=43)	Remplissage (n=28)	P Value
Dislocation:	2 (4.65%)	4 (14.3%)	0.204
Subjective Instability:	9 (20.9%)	14 (50.0%)	**0.022**
Revision:	2 (4.65%)	4 (14.3%)	0.204
Reoperation:	2 (4.65%)	4 (14.3%)	0.204
RTP:	11 (57.9%)	10 (58.8%)	1.000
Months Until RTP:	7.28 ± 3.69	9.30 ± 6.18	0.542
SANE:	73.9 ± 17.7	73.7 ± 24.0	0.622
OSI:	40.3 ± 9.15	38.0 ± 8.90	0.269
ASES:	85.6 ± 15.5	86.9 ± 13.8	0.790

RTP=return to play, SANE=Single Assessment Numeric Evaluation, OSI=Oxford Shoulder Instabilty score. ASES=American Shoulder and Elbow Surgeons score.
Categorical data presented as n (%), continuous data presented as mean (standard deviation).

Results

- Overall, 43 Latarjet patients (age: 29.8 ± 12.1 years, 36 males 7 females) and 28 remplissage patients (age: 28.2 ± 8.8 years, 25 males 3 females) were included with a mean follow-up of 3.3 ± 1.9 years.
- There were no demographic differences in patient age, sex, BMI, surgery laterality, or sport participation between groups.
- Patients who underwent Latarjet surgery had larger amounts of bone loss (19% vs. 11%, p<0.001) and more frequently had a history of chronic shoulder dislocations (88% vs. 43%, p<0.001).
- Latarjet patients less frequently reported feeling subjective shoulder instability after surgery (21% vs. 50%, p=0.022), which was defined as feeling apprehension, or experiencing a shoulder subluxation or dislocation event.
- There were no differences in rates of post-operative dislocation, revision, reoperation, or RTP between groups.
- Patient-reported outcomes (SANE, OSI, and ASES scores) also did not differ.

Conclusions

- Despite differences in glenoid bone loss, Latarjet and Remplissage patients had similar rates of redislocation, revision, and RTP at a mean of 3.3 years post-operatively, along with similar patient-reported outcomes.
- Patients indicated for Latarjet surgery may be less likely to experience subjective shoulder instability post-operatively than patients indicated for Bankart repair with concomitant remplissage.

References

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