COMPARATIVE STUDY BETWEEN ARTHROSCOPIC BANKART REPAIR WITH REMPLISSAGE VERSUS LATARJET PROCEDURE IN PATIENTS WITH TRAUMATIC ANTERIOR SHOULDER INSTABILITY

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Introduction

Traumatic anterior shoulder instability is a common clinical condition, particularly among young, active individuals, often resulting from sports injuries or accidents. Recurrent dislocations can lead to significant impairment and reduced quality of life, necessitating surgical intervention to restore joint stability and function. Two widely accepted surgical treatments for this condition are the arthroscopic Bankart repair combined with Remplissage, and the Latarjet procedure. The former technique involves reattachment of the detached anteroinferior labrum to the glenoid rim, addressing the soft tissue injury, while the Remplissage component fills the Hill-Sachs lesion using the infraspinatus tendon and posterior capsule, thereby reducing the risk of engagement. On the other hand, the Latarjet procedure involves transferring the coracoid process with its attached muscles to the anteroinferior glenoid, providing a bony block and dynamic sling effect to prevent further dislocations.

Aim of the Work

The primary objective of this study was to compare the functional and clinical outcomes of patients undergoing the Latarjet procedure versus those treated with arthroscopic Bankart repair combined with remplissage. The study aimed to assess differences in postoperative shoulder stability, pain levels, range of motion, recurrence rates, and overall patient satisfaction. The hypothesis was that both techniques provide effective stabilization, but each may offer distinct advantages in different clinical scenarios.

Subjects and Methods

A retrospective analysis of 40 patients treated at El-Hadra University Hospital between 2020 and 2023 was conducted. Twenty underwent the Latarjet procedure (Group A), while 20 had arthroscopic Bankart repair with remplissage (Group B). All patients were followed for at least 12 months. Preoperative imaging assessed glenoid bone loss and Hill-Sachs lesions. Postoperative function was measured using the UCLA shoulder score and SIRSI score. Data were statistically analyzed with significance set at $p \leq 0.05$.

Results

The mean UCLA total score was comparable between both groups, with the remplissage group showing a slightly higher mean (30.30 ± 2.54) than the Latarjet group (29.50 ± 3.62), but the difference was not statistically significant (p = 0.605) (Table I). Pain scores were also similar between the groups, with a mean of 7.0 ± 1.78 in the Latarjet group and 7.30 ± 1.63 in the remplissage group (p = 0.581). Significant differences were observed in the range of motion. External rotation was better preserved in the remplissage group (74.75° ± 5.73) compared to the Latarjet group (66.75° ± 6.34) (p < 0.001) (Figure 1). Similarly, forward flexion was significantly higher in the remplissage group (153.8° ± 9.01) than in the Latarjet group (146.1° ± 12.67) (p = 0.033). Strength of forward flexion was also superior in the remplissage group, with all patients achieving normal muscle strength (Grade 5), while 25% of the Latarjet group had slightly reduced strength (Grade 4) (p = 0.047). Regarding recurrence, no cases were observed in the Latarjet group, while two patients (10%) in the remplissage group experienced recurrent instability, although the difference was not statistically significant (p=0.487). Both groups reported high patient satisfaction, with 100% of patients in both cohorts expressing improvement postoperatively.

Table 1: Comparison between the two studied groups according to the primary outcome (UCLA total).

Primary Outcome (UCLA total)	Latarjet Group (n= 20)		Bankart repair and Remplissage Group (n=20)		Test of sig.	p
	No.	%	No.	%		
<27	3	15.0	1	5.0	χ^2=1.111	FEp=0.605
≥27	17	85.0	19	95.0		
Min. – Max.	19.0 – 34.0		25.0 – 35.0		t= 0.809	0.423
Mean ± SD.	29.50 ± 3.62		30.30 ± 2.54			
Median (IQR)	31.0 (27.0–31.50)		29.50 (29.0–32.0)			

(t) Student t-test; (x^2) chi-square test; (FE) Fisher Exact test; (p) probability value, significant if ≤0.05.

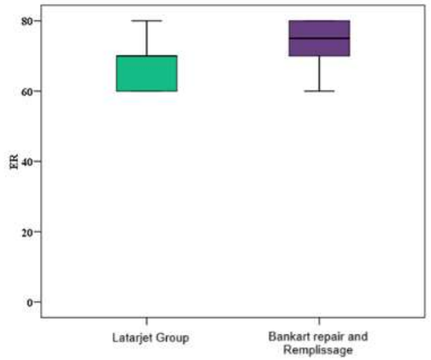

Figure 1: Comparison between the two studied groups according to ER

Conclusion

Both the Latarjet procedure and arthroscopic Bankart repair with remplissage are effective surgical options for managing recurrent anterior shoulder instability. The Latarjet procedure provides superior stability and a lower recurrence rate, particularly in cases with significant glenoid bone loss. However, it is associated with restricted external rotation and potential loss of muscle strength. On the other hand, remplissage offers better preservation of range of motion and muscle function but may have a slightly higher recurrence risk. The choice between these procedures should be tailored to individual patient characteristics, including activity level, degree of bone loss, and functional demands.