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Surgical Treatment of Chronic Anterior Shoulder Instability Using the Latarjet-Patte Technique: A Report of 12 Cases

Youness Mokhchani[1*], Bouchaib Chafry[2], Ahmed Salim Bouabid[2], Mustapha Boussouga[2]

[1]Department of Orthopedic Surgery and Traumatology, Mohammed VI Military Hospital – Dakhla-Morocco
[2]Department of Orthopedic Surgery and Traumatology, Mohammed V Military Teaching Hospital – Rabat- Morocco

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***Corresponding author:** Youness Mokhchani
Department of Orthopedic Surgery and Traumatology, Mohammed VI Military Hospital – Dakhla-Morocco

Abstract **Case Series**

Chronic anterior shoulder instability is a common condition affecting young, active individuals, leading to functional and sports-related disability. The Latarjet-Patte technique is a reference surgical option. The objective of our study is to report our experience with the Latarjet-Patte technique in 12 patients operated on over 30 months and to compare our results with updated data from the literature. This retrospective study included 12 patients operated on between August 2023 and January 2026. The primary outcome measure was the Walch-Duplay score. Complications and patient satisfaction were analyzed. All patients were athletic males (mean age 32 years). The Walch-Duplay score was excellent in 33.33% of cases; 91.66% of patients were satisfied. Postoperative stiffness was observed in 2 patients (16.66%), with no screw malpositioning on postoperative radiographs. No recurrence or non-union was noted. The Latarjet-Patte technique provides excellent functional outcomes and a low recurrence rate, provided rigorous bone block positioning and early rehabilitation are respected.

Keywords: Anterior shoulder instability, Latarjet-Patte technique, Coracoid bone block, Surgical stabilization, Retrospective study.

INTRODUCTION

The shoulder is the joint most susceptible to dislocation, particularly anterior dislocation, due to its high mobility and the poor congruence of its articular surfaces [1]. Chronic anterior instability is defined by recurrent dislocations or subluxation episodes, often associated with labro-capsulo-ligamentous and/or osseous lesions [2]. This condition primarily affects young, active adults, resulting in significant socio-professional and sports-related disability [3].

When conservative treatment fails or anatomical lesions are severe, management is unequivocally surgical [4]. The Latarjet-Patte technique, involving the placement of a coracoid bone block anterior to the glenoid rim providing a triple blocking effect (bone block effect, capsular repair, reinsertion of the conjoint tendon), is widely validated [5]. It has become the technique of choice in our department.

The objective of this study is to report our experience with 12 patients operated on over a 30-month period and to discuss our results in light of updated literature data.

MATERIALS AND METHODS

This is a retrospective study conducted within the trauma-orthopedics department of the Dakhla military hospital. We included all patients operated on for chronic anterior shoulder instability using the Latarjet-Patte technique between August 2023 and January 2026, a period of 30 months. A total of 12 patients were included, all male and military personnel. No patient was lost to follow-up.

The primary outcome measure was the functional Walch-Duplay score (Figure1), assessing stability, pain, and return to activity. Secondary criteria included subjective satisfaction, range of motion, and complications (recurrence, infection, malposition, non-union, glenohumeral osteoarthritis). All patients were operated on via the deltopectoral approach (Figure3). The coracoid bone block was positioned flush with or slightly medial to the anterior-inferior part of the glenoid rim. Fixation was achieved using two 3.5 mm malleolar screws in the majority of cases, or a single 4.5 mm screw with a washer when graft size precluded the use of two screws (Figure4). Immobilization with a sling and body bandage was maintained for 21 days, with passive

rehabilitation starting on the 5th postoperative day using pendulum movements (abduction, forward flexion, limited external rotation). Patients were reviewed at day 15, 1 month, 2 months, and 3 months. Mean follow-up was 13 months.

RESULTS

All patients were male, with a mean age of 32 years (range: 22–40 years). All engaged in regular sports activity. The dominant side was affected in 91.66% of cases. An initial traumatic mechanism was found in all patients. The interval between the first dislocation and recurrence ranged from 4 to 21 months. All patients presented with apprehension in the throwing position and anterior drawer sign (100%). All patients underwent standard radiographic assessment and CT arthrography (Figure2). A Hill-Sachs lesion (Malgaigne notch) was present in 75% of cases, and glenoid erosion in 25% of cases. The Walch-Duplay score was excellent in 33.33% of patients (n=4), good in 50% (n=6), and fair in 16.66% (n=2). Subjective satisfaction was high: 91.66% of patients reported being satisfied or very satisfied, while one patient remained dissatisfied. No septic complications or recurrences were observed. No cases of intra-articular screw positioning were noted on postoperative control radiographs (Figure4). Three patients (25%) presented postoperative stiffness with abduction < 100° and a mean loss of 10° of external rotation (Figure5). No non-union or glenohumeral osteoarthritis was observed at this follow-up.

The Walch-Duplay Score for Instability of the Shoulder

Patient's Details

Operation/Diagnosis: Date:
Side: R L

Examination: 3 months 1 year
6 months 2 years years

1.- Level of Sport Practised (please circle):
C = Competition L = Leisure N = Not practising a sport

2.- Type of Sport (please circle):
0 = no sport
1 = risk free athletics, rowing, swimming, breaststroke, underwater diving, voluntary gymnastics, cross-country skiing, shooting, sailing.
2 = with contact martial arts, cycling, motorcycling or biking, scrambling, soccer, rugby, water-skiing, downhill skiing, parachute jumping, horse riding.
3 = with cocking of the arm climbing, weight lifting, shot-putting, swimming overarm and butterfly, pole vaulting, figure skating, canoeing, golf, hockey, tennis, baseball.
4 = high risk basketball, handball, volleyball, hand gliding, kayaking, water polo.

3.- Side (please circle): Right Left D = dominant d = nondominant

ROM
Abduction:_____ FWF:_____ ER:_____ IR: _____ ER in 90 abduction:_____

POINTS (please circle)

A.- Daily Activity

Return to same level in the same sport	+25 points	No discomfort
Decrease level in the same sport	+15 points	Slight discomfort in forceful movements
Change in sport	+10 points	Slight discomfort during simple movements
Decrease level and change, or stop sport	0 points	Severe discomfort

B.- Stability
+25 points: No apprehension
+15 points: Persistent apprehension
0 points: Feeling of instability
-25 points: True recurrence

C.- Pain
+25 points: No or pain during certain climatic conditions
+15 points: Pain during forceful movements or when tired
0 points: Pain during daily life

D.- Mobility
+25 points: Pure frontal abduction against a wall: symmetrical
Internal rotation limited to less than three vertebrae
External rotation at 90 degrees abduction limited to less than 10% of the opposite side.
+15 points: Pure frontal abduction against a wall < 150 degrees
IR: limited to less than three vertebrae
ER: limited to less than 30% of the opposite side
+5 points: Pure frontal abduction against a wall < 120 degrees
IR: limited to less than six vertebrae
ER: limited to less than 50% of the opposite side
0 points: Pure frontal abduction against a wall < 90 degrees
IR: limited to more than six vertebrae
ER: limited to more than 50% of the opposite side

OVERALL

Excellent:	91 to 100 points
Good:	76 to 90 points
Medium:	51 to 75 points
Poor:	50 points or less

TOTAL(/100): A + B + C + D

Figure 1: Walch-Duplay score for shoulder instability

Figure 2: CT arthrography showing the sequelae of recurrent shoulder dislocation: Malgaine notch and labral lesion

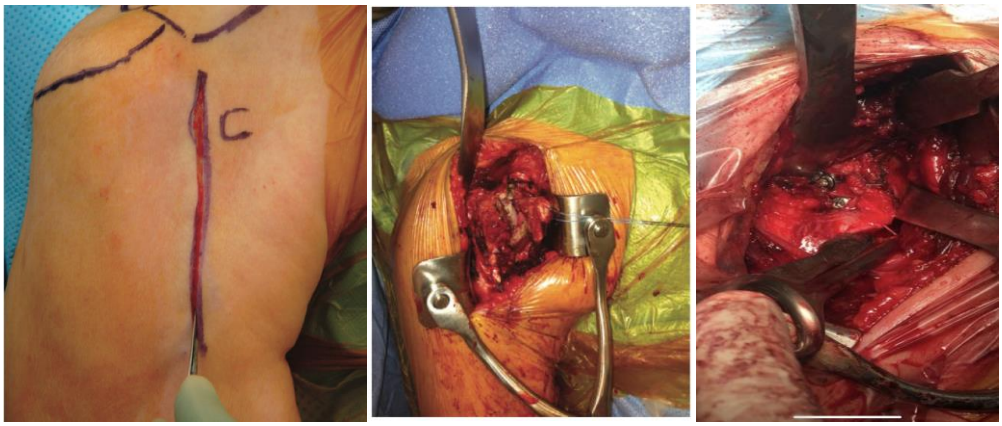

Figure 3: Intraoperative images showing the different stages of the Latarjet procedure via the deltopectoral approach

Figure 4: Standard post-operative X-rays, verifying the correct positioning of the screws and their adequate lengths

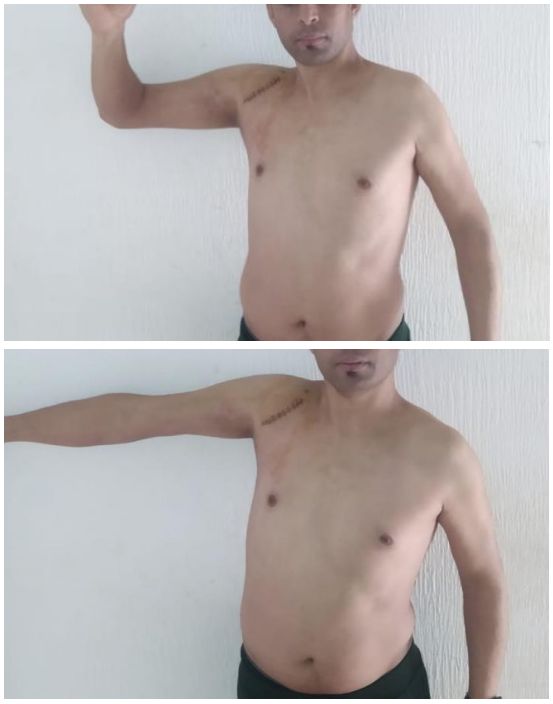

Figure 5: Average functional outcome with limited abduction and external rotation

DISCUSSION

Our study reports the outcomes of 12 cases of anterior shoulder instability treated with the Latarjet-Patte technique with a mean follow-up of 13 months. Our functional results are satisfactory and consistent with recent literature data. We observed 33.33% excellent results on the Walch-Duplay score and 91.66% satisfaction. These figures are comparable to those of the meta-analysis by Hurley *et al.,* (2021), which reported 87% good subjective outcomes after open Latarjet [6]. According to Ernat *et al.,* (2022), the technique allows return to sport in over 80% of cases, which our series subjectively confirms [7]. The rate of postoperative stiffness in our series (25%) is higher than that reported in some recent series (8 to 15%) [8]. This could be explained by overly cautious initial passive rehabilitation or by slightly lateralized positioning of the bone block in some patients. Domos *et al.,* (2023) emphasize the importance of flush or medialized positioning to limit impingement and preserve external rotation [9].

We noted no cases of screw malpositioning, a classic complication whose incidence varies from 2 to 10% according to studies [10]. The systematic use of intraoperative imaging (which we consistently perform) or specific guides could reduce this risk [11]. We observed no cases of recurrence or non-union. These results are consistent with recent literature, which reports a recurrence rate of less than 5% after Latarjet, compared to 15–20% after arthroscopic Bankart repair in at-risk patients [12]. The superiority of the Latarjet procedure in young, athletic individuals or those with bone lesions is now well established [13].

No cases of glenohumeral osteoarthritis were diagnosed in our series, which is consistent with the short follow-up. However, this is the main long-term complication of the technique. A recent study (Dauzère *et al.,* 2024) reports a radiographic prevalence of glenohumeral osteoarthritis of 22% at 10 years and 58% at 14 years [14]. The risk is significantly correlated with lateralized bone block positioning, smoking, and advanced age at the time of surgery [15].

Our study has several limitations: its retrospective nature, the absence of a control group, the small sample size, and the moderate follow-up duration. Furthermore, the exclusively male and military population limits the generalizability of the results.

CONCLUSION

Chronic anterior shoulder instability is a common and disabling condition. The Latarjet-Patte technique, when rigorously performed, provides excellent functional outcomes, a low recurrence rate, and a high level of satisfaction. Proper bone block positioning and early rehabilitation are key success factors. Prolonged follow-up remains necessary to assess the occurrence of secondary glenohumeral osteoarthritis.

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