

## Chronic shoulder instability using the Latarjet technique: About 20 cases

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### Abstract

This retrospective study included 20 patients operated on in the Traumatology and Orthopedics Surgery Department (A) of the HASSAN II University Hospital in Fez, treated with a LATARJET

- between January 2016 and December 2023, a 5-year period
- In our series, the mean age at surgery was 27 years.
- Male predominance was evident, with a traumatic context found in 90% of cases.
- The apprehension test was positive in 65% of cases.
- Our patients underwent a systematic standard preoperative radiological work-up.
- We opted for the LATARJET technique
- Elbow-to-body immobilization for 21 days post-operatively.
- They were followed up in consultation with a 5-year follow-up.

The results of our series are very satisfactory according to the ROWE score:

- -85% of patients complained of no pain. Stability was perfect in 18 cases (90%).
- -Unrestricted mobility was restored in 80% of cases.
- -Only one case of recurrence (5%)
- One patient with postoperative osteoarthritis, corresponding to 5%.

In all, we had 85% good and excellent results, versus 15% fair and poor results.

The results of this study are similar to those found in the literature, confirming that the LATARJET technique is the most reliable in the treatment of anterior shoulder instability, with good functional results and the fewest complications.

**Keywords:** Luxation; Shoulder; Chronic instability; Latarjet

### 1. Introduction

Increasingly frequent dislocations after a first episode in young active subjects and possibly athletes [1], of which the entity of Anterior shoulder instability constitutes the most frequent form giving one of the most important complications of anteromedial shoulder dislocation.

dislocation of the shoulder [2].

- Recurrent shoulder dislocation is mainly treated surgically.

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- It enables the recovery of mobility and joint stability.
- Numerous surgical techniques have been proposed, with a common objective:
- Stabilization of the shoulder and rapid recovery of limb function and strength

Among these techniques, the Latarjet procedure remains the technique of choice. This technique involves the creation of a bone block consisting of the pedicled coracoid process to reinforce the anteroinferior part of the glenoid cavity of the scapula, while at the same time

hammock effect on the subscapularis muscle [2].

## 2. Material and methods

This is a retrospective study included 20 patients operated on in the Traumatology and

Orthopedics Surgery Department (A) of the HASSAN II University Hospital in Fez, between January 2016 and December 2022, a period of 5 years, for chronic anterior shoulder instability.

Our study included all patients treated surgically for chronic anterior shoulder instability using the Latarjet technique and followed up by clinical examination and radiological control and excluded from our study any patient:

Whose file was unusable or contained incomplete data, or who were treated by a technique other than the Latarjet technique.

Radiological examination:

- standard radiography was systematically requested in all patients:

Front x-ray (neutral, internal and external rotation) and a Bernageau glenoid profile

- A functional assessment was carried out based on the ROWE classification (Table 1)

Samilson and Prieto classification (table 2)

**Table 1** Rowe rating: assessment of the objective result

criteria	quotation		points
stability	1	no recurrence, no subluxation, no apprehension	50
	2	apprehension with arm in certain positions	30
	3	subluxation	10
	4	Recurrence of dislocation	0
mobility	1	100% external rotation, anterior elevation and internal rotation	20
	2	75% external rotation, 75% anterior elevation and internal rotation	15
	3	50% external rotation, 75% anterior elevation and internal rotation	5
	4	50% anterior elevation and internal rotation, no external rotation	0
Function Return to work	1	no restrictions on work or sport	30
	2	slight limitation in work or sport or minimal discomfort	25
	3	limitation in work or sport and moderate discomfort	10
	4	severe limitation in work or sport	0
overall target result	excellent		90-100
	good		75-89

	average		51-74
	poor		≤50

### 3. Results and Discussion

- In our series, the mean age at surgery was 27 years.
- Males predominated, with an average age of 23 years,
- The traumatic context found in 90% of cases, whose mechanism was traumatic in 90% and direct in 65%.
- The average was 6 recurrences, with a maximum of 19 and a minimum of 3.
- The apprehension test was positive in 65% of cases.
- All our patients underwent standard preoperative and postoperative radiography.
- The presence of Malgaigne notch or humeral head notch was found in 14 patients (70%) on frontal incisions
- Fracture of the inferior glenoid rim was found in 8 patients (40%).
- Glenohumeral osteoarthritis was found in 2 patients.
- In addition, no trochial tears or rotator cuff tears were found.
- Arthro-scanning was performed in 6 patients (30%).

The time between surgical treatment and initial dislocation averaged 4.4 years, with extremes ranging from 3 months to 20 years.

- All patients in our series underwent preglenoid coracoid bone block surgery using the Latarjet technique.
- The procedure is usually performed under general anaesthetic, with hypotension hypotension.
- Prophylactic antibiotic therapy is warranted in view of the risk of infection.
- The patient is positioned supine in the BEACH CHAIR position.

The anterior deltopectoral approach is used in all our patients, a first exploration phase is carried out in search of ligamento-capsular and muscular lesions, then the bone block is harvested and prepared for possible grafting and stabilization by means of a double screw between 3 and 5 hours from the anterior edge of the glenoid.

- The external rotation sector is protected for 6 weeks.
- Sports activities, excluding high-risk sports, may be resumed in the 3rd month.
- Contact sports are permitted from the 6th month.
- The aim of rehabilitation is to achieve a pain-free, stable, mobile and efficient shoulder.
- Active mobilization without resistance begins at the end of the first week.
- Our study series comprises 20 patients evaluated over a mean follow-up period of 5 years (60 months), based on clinical and radiological data.

### 4. Results

Results were assessed on the basis of clinical elements such as:

#### 4.1. Pain (VAS)

**Table 2** Comparison of pain between different series

	<b>Mba mba</b>	<b>L. Doursounian</b>	<b>our series</b>
absent	84.2%	88%	85%
mild pain	10%	12%	10%
moderate pain	5.8%	-	5%

Pain was absent in 85% of cases, with 17 patients reporting perfect pain results.

2 patients (10% of cases) reported pain of mild intensity. And only one patient had moderate-intensity pain rated 5 out of 10, and stability was perfect in 18 patients (90% of cases), which is in line with the literature TAB 3

#### 4.2. Patient satisfaction

Subjectively, 17 or 85% of our patients were very satisfied, 2 or 10% were happy, and 1 or 5% was disappointed.

**Table 3** Comparison of subjective results with other series

	Collin.P	Grordins.V	Our series
Very satisfied	85%	58%	85%
Happy	-	42%	10%
Disappointed	9%	-	5%

No patient mentioned the notion of dislocation or subluxation.

#### 4.3. Mobility

- In our series, normal mobility was restored in 80% of cases.
- The reduction in mobility was mainly in external rotation, as in the literature [3,4,5].
- Normal mobility was restored in 16 cases (80%).

#### 4.4. Overall objective results

Results were assessed using the ROWE rating system.

We obtained 85% excellent and good results versus 15% average and poor results. Our functional results with the Latarjet procedure were entirely satisfactory, and in line with other series in the literature [6, 7, 8, 9].

**Table 4** Comparison of overall objective results with other series

	Walch	Leving	Mole	Louaste and al	Our series
excellent	38%	33%	33%	36%	35%
good	38%	41%	41%	58%	50%
average	17%	22%	22%	5%	10%
poor	7%	4%	4%	5%	5%

#### 4.5. Radiological findings

- In our series, no pseudarthrosis of the bone block was noted.
- In the literature, this rate is highly variable, ranging from 0 to 50% [10,11, 12].
- We did not observe any cases of lysis of the bone block, contrary to what is described in the literature [13, 14].
- With regard to glenohumeral osteoarthritis, we noted only one case (5%).

**Table 5** Comparison of osteoarthritis with the literature

	Mba mba	Gordins.V	Collin	Huguet	Our series
no osteoarthritis	89.5%	39%	90%	64%	95%
Osteoarthritis I	10.5%	27%	6%	27.5%	5%
Osteoarthritis II	-	23%	-	7%	-
Osteoarthritis III	-	11%	4%	1.5%	.

## 5. Conclusion

Chronic shoulder instability is defined as a recurrent sensation of pathological translation

of the scapulohumeral joint or an inability to keep the humeral head centered in the glenoid cavity during active movements.

One of the surgical methods used to treat this condition is the Latarjet procedure, which consists of mobilizing the coracoid process at the anterior edge of the glenoid to ensure shoulder stability. It is an effective treatment for glenohumeral instability, with lower failure rates than other techniques. It's The results in terms of stability are good, even after a long period of time.

Complications are rare, and include glenohumeral osteoarthritis, lysis of the bone block or recurrence of dislocation.

Our study shows, in line with the literature, that the Latarjet technique restores normal mobility and perfect stability in the majority of cases, with good functional results and satisfied patients.

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## Compliance with ethical standards

### *Disclosure of conflict of interest*

No conflict of interest to be disclosed.

### *Statement of ethical approval*

Ethical clearance was obtained from the hospital's research and ethical committee. Furthermore, present research work does not contain any studies performed on animals/humans' subjects by any of the authors.

### *Statement of informed consent*

Informed consent was obtained from all individual participants included in the study.

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