



## Original Article

# Evaluation of the results and complications of the Latarjet procedure for recurrent anterior dislocation of the shoulder



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## ABSTRACT

**Objective:** Evaluate the results and complications of Latarjet procedure in patients with anterior recurrent dislocation of the shoulder.

**Methods:** Fifty-one patients (52 shoulders) with anterior recurrent dislocation, surgically treated by Latarjet procedure, were analyzed retrospectively. The average follow-up time was 22 months, range 12–66 months; The age range was 15–59 years with a mean of 31; regarding sex, 42 (82.4%) patients were male and nine (17.6%) were female. The dominant side was affected in 29 (55.8%) shoulders. Regarding the etiology, 48 (92.3%) reported trauma and four (7.6%) had the first episode after a convulsion.

**Results:** The average elevation, lateral rotation and medial rotation of the operated shoulder were, respectively, 146° (60–80°), 59° (0–85°) and T8 (T5 gluteus), with statistical significance for decreased range of motion in all planes, compared with the other side. The scores of Rowe and UCLA were 90.6 and 31.4, respectively, in the postoperative period. Eleven shoulders (21.2%) had poor results: signs of instability (13.4%), non-union (11.5%) and early loosening of the synthesis material (1.9%). There was a correlation between poor results and convulsive patients ( $p = 0.026$ ).

**Conclusion:** We conclude that the Latarjet procedure for correction of anterior recurrent dislocation leads to good and excellent results in 82.7% of cases. Complications are related to errors in technique.

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## Avaliação dos resultados e das complicações em pacientes com instabilidade anterior de ombro tratados pela técnica de Latarjet

### R E S U M O

#### Palavras-chave:

Instabilidade articular/cirurgia

Luxação glenoumeral

Ombro

**Objetivo:** Avaliar os resultados e as complicações da cirurgia de Latarjet em pacientes acometidos pela instabilidade recorrente anterior de ombro.

**Métodos:** Foram analisados, retrospectivamente, 51 pacientes (52 ombros) com diagnóstico de luxação recidivante anterior, operados pela técnica de Latarjet. O tempo médio de seguimento foi de 22 meses, variação de 12 a 66 meses; a faixa etária variou de 15 a 59 anos, com média de 31; em relação ao sexo, 42 (82,4%) pacientes eram do masculino e nove (17,6%) do feminino. O lado dominante foi acometido em 29 (55,8%) ombros. Quanto à etiologia, 48 (92,3%) referiram trauma e quatro (7,6%) tiveram o primeiro episódio após um quadro de convulsão.

**Resultados:** As médias de elevação, rotação lateral e rotação medial ativas do membro operado foram, respectivamente, de 146° (60° a 180°), 59° (0° a 85°) e T8 (T5 a glúteo), houve significância estatística quanto à diminuição da amplitude de movimento em todos os planos, quando comparado com o lado contralateral (não operado). As médias de pontuação de Rowe e UCLA foram de 90,6 e 31,4, respectivamente, no período pós-operatório. Onze ombros (21,2%) apresentaram maus resultados: sinais de instabilidade (13,4%), pseudoartrose (11,5%) e soltura precoce do material de síntese (1,9%). Houve correlação entre maus resultados e pacientes convulsivos ( $p = 0,026$ ).

**Conclusão:** O procedimento de Latarjet para correção da luxação anterior recidivante leva a bons e excelentes resultados em 82,7% dos casos.

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## Introduction

Different surgical procedures have been described for treating recurrent anterior shoulder dislocation.<sup>1</sup> The capsulolabral repair described by Bankart<sup>2</sup> and modified by Rowe et al.<sup>3</sup> is one of the main techniques used to treat this condition and it can be done arthroscopically or as an open procedure, with good results from most patients.<sup>1</sup> In cases in which the dislocation occurs in more than one direction and/or there is an increase in capsule volume, capsuloplasty can be chosen. This technique was described by Neer and Foster<sup>4</sup> and was subsequently revised by Bigliani.<sup>5</sup>

However, soft-tissue repair alone does not seem to be an effective procedure in all cases.<sup>6</sup> Attempts to define some parameters that could be used to guide the type of procedure to be performed are now being made.<sup>6</sup> From studying cadavers, Itoi et al.<sup>7</sup> concluded that bone defects of the glenoid cavity greater than 21% provide the conditions for the force needed for shoulder dislocation to be considerably lower. Application of a bone graft to such defects increases the stability of the joint.<sup>7</sup>

Balg and Boileau<sup>6</sup> created an instability score (ISIS) for determining the preoperative risk factors among patients with recurrent instability, with the aim of assisting surgeons in indicating arthroscopic or open surgery. According to these authors, for patients with high risk of recurrent dislocation, transposition of the coracoid process to the anteroinferior border of the glenoid cavity is an effective option.<sup>6</sup> This procedure was first described by Latarjet<sup>8</sup> in 1954 and by Helfet<sup>9</sup> (the author who named the technique the Bristow procedure) in

1958. In 1982, Patte and Debeyre<sup>10</sup> added further stability to the original technique through using the coracoacromial ligament, which overlaps the joint capsule after fixation of the bone graft.

The first Brazilian authors to publish their experience of treating recurrent anterior shoulder dislocation using the technique of bone grafting from the coracoid in association with ligament stabilization were Godinho and Monteiro,<sup>11</sup> in 1993. These authors did not have any cases of recurrence of the dislocation, and 90% of the patients returned to their previous sports activities. Bessière et al.<sup>12</sup> conducted a retrospective study on 186 patients who presented recurrent post-traumatic anterior instability. They compared the patients treated by means of Bankart's arthroscopic repair of the injury versus Latarjet's operation,<sup>8</sup> with a mean follow-up of six years, and concluded that the second group presented better Rowe scores<sup>3</sup> and lower rates of recurrent instability.<sup>12</sup>

The objective of this study was to evaluate the results from patients with recurrent anterior shoulder dislocation who were treated using the Latarjet technique,<sup>8</sup> highlight their complications and attempt to correlate these with their possible causes.

## Sample and methods

Between July 2007 and December 2012, 69 patients with diagnoses of recurrent anterior shoulder dislocation were treated surgically using the Latarjet technique,<sup>8</sup> by the Shoulder

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