



## Original Article

# Evaluation of functional results from shoulders after arthroscopic repair of complete rotator cuff tears associated with traumatic anterior dislocation



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## ABSTRACT

**Objective:** To evaluate the clinical outcome of arthroscopic rotator cuff fixation and, when present, simultaneous repair of the Bankart lesion caused by traumatic dislocation; and to assess whether the size of the rotator cuff injury caused by traumatic dislocation has any influence on the postoperative clinical outcomes.

**Methods:** Thirty-three patients with traumatic shoulder dislocation and complete rotator cuff injury, with at least two years of follow up, were retrospectively evaluated. For analysis purposes, the patients were divided into groups: presence of fixed Bankart lesion or absence of this lesion, and rotator cuff lesions smaller than 3.0 cm (group A) or greater than or equal to 3.0 cm (group B). All the patients underwent arthroscopic repair of the lesions and were evaluated postoperatively by means of the UCLA (University of California at Los Angeles) score and strength measurements.

**Results:** The group with Bankart lesion repair had a postoperative UCLA score of 33.96, while the score of the group without Bankart lesion was 33.7, without statistical significance ( $p=0.743$ ). Group A had a postoperative UCLA score of 34.35 and group B, 33.15, without statistical significance ( $p=0.416$ ).

**Conclusion:** The functional outcomes of the patients who only presented complete rotator cuff tearing after traumatic shoulder dislocation, which underwent arthroscopic repair, were similar to the outcomes of those who presented an associated with a Bankart lesion that was corrected simultaneously with the rotator cuff injury. The extent of the original rotator cuff injury did not alter the functional results in the postoperative evaluation.

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## Avaliação dos resultados funcionais dos ombros submetidos ao reparo artroscópico de roturas completas do manguito rotador associadas a luxações traumáticas anteriores

### R E S U M O

#### Palavras-chave:

Ombro  
Artroscopia  
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Manguito rotador  
Luxação do ombro

**Objetivo:** Avaliar o desfecho clínico da fixação artroscópica do manguito rotador (MR) e, quando presente, a correção simultânea da lesão de Bankart, causadas por luxação traumática. Avaliar se a dimensão da lesão do MR causada por luxação traumática influenciou nos resultados clínicos pós-operatórios.

**Métodos:** Foram avaliados retrospectivamente 33 pacientes com luxação traumática do ombro e lesão completa do manguito rotador e seguimento mínimo de dois anos. Para fins de análise, os pacientes foram divididos em grupos: presença de lesão de Bankart fixada ou ausência da lesão e lesões do MR menores do que 3 cm (grupo A) ou iguais a ou maiores do que 3 cm (grupo B). Todos foram submetidos a reparo artroscópico das lesões e avaliados, pós-operatoriamente, pelo escore da UCLA (University of California at Los Angeles) e medida da força.

**Resultados:** O grupo em que houve o reparo da lesão de Bankart apresentou UCLA pós-operatório de 33,96, em relação ao grupo em que essa lesão não estava presente 33,7, sem significância estatística ( $p=0,743$ ). O grupo A apresentou resultado de UCLA pós-operatório de 34,35 e grupo B 33,15, sem significância estatística ( $p=0,416$ ).

**Conclusão:** Os resultados funcionais dos pacientes que apresentaram apenas rotura completa do manguito rotador após luxação traumática do ombro, submetidos ao reparo artroscópico, mostrou-se semelhante àqueles que apresentaram associação da lesão de Bankart, corrigida simultaneamente com a lesão do manguito rotador. A extensão da lesão inicial do manguito rotador não alterou os resultados funcionais na avaliação pós-operatória.

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## Introduction

The shoulder is the joint with greatest mobility and instability in the human body, and for this reason it is the one most liable to dislocate.<sup>1</sup>

Glenohumeral dislocation may cause tearing of the rotator cuff. This is relatively rare among patients under the age of 40 years but more frequent among patients over this age.<sup>2-4</sup> Rotator cuff injuries are the main complication documented after shoulder dislocation among patients over the age of 40 years.<sup>5</sup> This is due to the different injury patterns presented by the static and dynamic stabilizers in these groups.

Capsuloligamentous anterior static stabilizers, which were described by McLaughlin et al.,<sup>6</sup> have a fundamental role in young individuals' shoulders, but not in patients over the age of 40 years. When they are injured, this is expressed in the form of Bankart lesions.<sup>7</sup> After this age, the function of the rotator cuff as a dynamic stabilizer has fundamental importance and, when injured, this generates what Debiski et al.<sup>8</sup> and Craig et al.<sup>9</sup> described as posterior instability, with consequently increased anterior translation due to loss of the posterosuperior blockage that the rotator cuff provides.

Combined repair of Bankart lesions and rotator cuff injuries, when present, is still a matter of controversy in the literature. Few studies have been published, and these have all been retrospective. With the advent of arthroscopy for treating rotator cuff injuries, instead of open surgery, the biggest issue

today is whether associated repair of Bankart lesions is necessary or not. It is better established that in these situations, rotator cuff injuries should always be repaired.

The objectives of this study were to evaluate the clinical outcomes from arthroscopic fixation of the rotator cuff and, when present, simultaneous correction of Bankart lesions caused by traumatic anterior dislocation of the shoulder; and to evaluate whether the magnitude of rotator cuff injuries caused by traumatic dislocation influenced the postoperative clinical results.

## Material and methods

This was a retrospective study covering the period from September 1998 to March 2012. Over this period, 36 patients with traumatic anterior dislocation of the shoulder in association with complete tearing of the rotator cuff underwent surgical treatment by means of videoarthroscopy. The patients were operated by the four titular surgeons of the group.

The inclusion criteria were that the patients needed to have a clinical and radiographic diagnosis of traumatic anterior glenohumeral dislocation in association with complete tearing of the rotator cuff and that their cases were reevaluated by means of magnetic resonance imaging and clinical examination after a minimum follow-up of two years.

Patients presenting the following were excluded from the study: previous surgery on the shoulder, glenohumeral

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