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Original article

Mid-term results of arthroscopic Bankart repair: A review of 31 cases

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ABSTRACT

Introduction: The goal of this study was to assess the overall function (Walch-Duplay score), stability, time and because it is time of return to sport and level of return to sport, and satisfaction of patients who underwent an arthroscopic Bankart repair for chronic anterior shoulder instability at 5 years' follow-up. In addition, the potential correlation between the postoperative Walch-Duplay score and the presence of risk factors for recurrence, the ISIS score, associated labral lesions discovered intraoperatively and clinical presentation was determined.
Material and methods: This was a retrospective, single-centre study of 30 patients (31 arthroscopic Bankart procedures) operated between January 2003 and December 2012. The Walch-Duplay score, recurrence rate (dislocation or subluxation), return to sports and subjective satisfaction were evaluated.
Results: The mean postoperative Duplay score was 77.4 points (100–15) ± 30.6. At review, 25.8% of patients had recurrence of the preoperative symptoms, including 16.1% glenohumeral dislocation and 9.7% subluxation. Patients requiring revision surgery (Bristow-Latarjet procedure) had no additional instability episodes. Among the athletes, 16 (66.6%) returned to their pre-injury level, four (16.6%) changed to a different sport and four stopped participating (16.6%). The subjective evaluation of the procedure was satisfactory in 75% of cases. No risk factors for recurrence were significantly related to the Walch-Duplay score.
Conclusion: Despite satisfactory Walch-Duplay scores and subjective results, this mid-term follow-up study revealed a significant number of patients with recurrent instability after arthroscopic Bankart repair, confirming published data. Careful patient selection is essential prior to proposing this procedure and patients should be informed of the potential risk of revision surgery.
Level of evidence: Level IV, retrospective study.

1. Introduction

Anterior shoulder instability is a frequent condition. The incidence of first-time shoulder dislocation ranges from 8.0 to 8.2 per 100,000 people per year, and its prevalence is about 2%. The recurrence rate can reach 95% depending on the risk factors, particularly patient age at the first episode [1]. Bankart was the first to describe the capsulolabral complex lesions associated with anterior dislocations [2] and their open surgical treatment. Arthroscopic methods for repairing Bankart lesions have been developed [3] with a low rate of immediate complications and satisfactory preservation of postoperative range of motion [4]. The recurrence rate would be higher than with open surgery [5], but according Harris et al., there is no significant difference in the rate of recurrent instability, clinical outcomes or return to sport between the two techniques [6]. However, the postoperative instability rate remains high, between 5% and 30% following arthroscopic Bankart repair [7,8]. The average time to failure can reach 4.2 years according to Privitera et al. [9], which would explain the lower recurrence rate of studies with a short follow-up.

This retrospective study had two objectives:

- assess the overall function (Walch-Duplay score), stability, return to sport, and satisfaction of patients who underwent arthroscopic Bankart repair for chronic anterior shoulder instability at 5 years' follow-up;
- determine whether the postoperative Walch-Duplay score is correlated with the presence of risk factors for recurrence, the ISIS score, associated labral lesions and preoperative clinical presentation.

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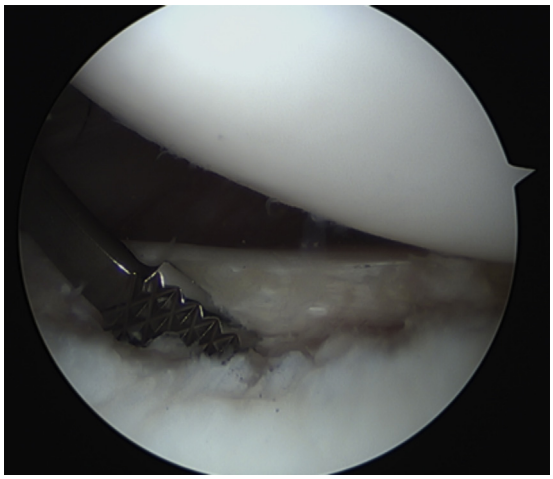

Fig. 1. Preparation of the anterior glenoid rim and neck using a glenoid rasp after mobilization of the capsulolabral complex. The capsule and labrum were released after decortication of the scapular neck and anterior glenoid rim with a rasp.

2. Material and methods

This was a single-centre, single surgeon, retrospective study. The inclusion criteria were:

- patient operated for anterior instability (pure anterior instability, unstable painful shoulder);
- more than 15 years of age at the time of surgery;
- surgical shoulder stabilization by arthroscopic Bankart procedure.

The exclusion criteria were:

- revision of prior procedure;
- voluntary or multidirectional instability;
- pure posterior instability.

The clinical assessment included an evaluation of shoulder hyperlaxity. Anterior hyperlaxity was defined as external rotation greater than 85° with the arm at the side [10]. Inferior hyperlaxity was defined as a positive Gagey hyperabduction test [11]. The apprehension test and the Jobe relocation test results were recorded to capture clinical shoulder instability. All patients underwent anteroposterior, triple rotation and lateral shoulder X-rays, as well as CT arthrography. The ISIS score [12] was recorded for every patient (Appendix 1).

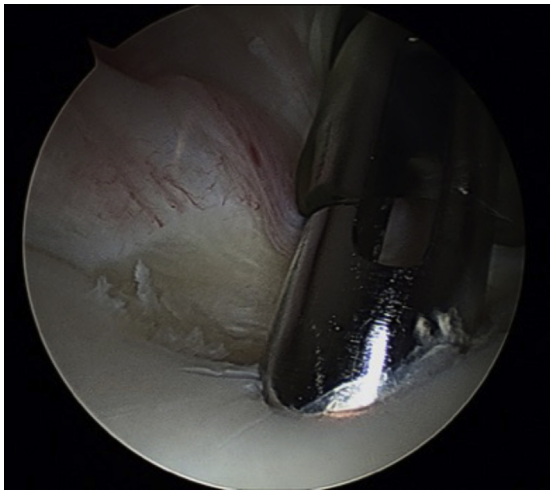

Fig. 2. The suture anchor is placed on the cartilaginous margin of the glenoid.

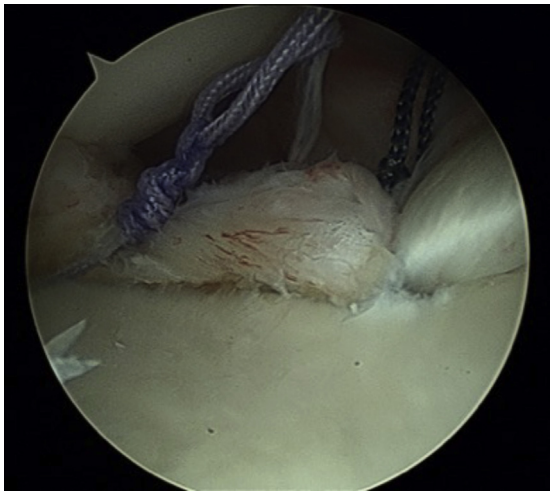

Fig. 3. The bumper effect is restored after reattachment of the labrum.

The arthroscopic procedure was performed with the patient in lateral decubitus position. The capsulolabral complex was released and reattached after decortication of the scapular neck and anterior glenoid rim (Fig. 1). A south-north capsular shift, to provide a proximal retensioning of the capsule, was performed by placing one anchor between 4 and 6 o'clock. The anchors were placed on the cartilaginous margin of the glenoid (Fig. 2), which restored the labrum's bumper effect (Fig. 3). All patients were immobilized during the first 3 weeks in a sling in internal rotation and instructed to do pendulum exercises. In the next 3 weeks, active anterior elevation movements up to 90° flexion were allowed. Complete shoulder mobilization was allowed after 6 weeks. Return to sport was allowed after the third postoperative month.

The intraoperative data were collected based on surgical reports and photographs taken during the procedure.

The average follow-up was 5.1 years (range 1.8–11) and no patients were lost to follow-up. The following criteria were

Table 1
Preoperative clinical and paraclinical data.

	n	%
Clinical picture		
1st dislocation/subluxation before 20 years	8	25.8
Dominant side	20	64.5
Athlete	24	77.4
Professional athlete	7	22.5
Overhead sport	18	58
Unstable painful shoulder	8	25.8
Preoperative pain	22	71
Anterior hyperlaxity	6	19.3
Apprehension test	31	100
Jobe relocation test	31	100
Gagey test	18	58
X-rays		
Hill-Sachs lesion	4	12.9
Glenoid loss of contour	1	3.2
CT arthrography		
Hill-Sachs lesion	4	12.9
Glenoid rounding	1	3.2
Bankart lesion	28	90.3
Bony Bankart	3	9.7
SLAP II	4	12.9
Posterosuperior labral lesion	2	6.4
Partial lesion of the deep surface of supraspinatus	2	6.4
Early glenohumeral OA	1	3.2

SLAP: superior labrum from anterior to posterior; OA: osteoarthritis.