Arthroscopic Latarjet With Cortical Buttons Versus Open Latarjet With Screws

A Short-Term Comparative Study

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Background: The arthroscopic bone block procedure according to Latarjet remains a controversial subject, and few comparative studies have demonstrated the benefit of arthroscopy over open surgery.

Purpose/Hypothesis: The objective of this study was to compare both procedures by analyzing the short-term clinical results. The hypothesis was that the arthroscopic procedure is superior to the standard open procedure.

Study Design: Cohort study; Level of evidence, 3.

Method: This was a retrospective comparative study. Patients treated for chronic anterior instability by arthroscopic Latarjet with double cortical buttons (group A) or open Latarjet with screws (group O) with a minimum follow-up of 12 months were included. Intraoperative (duration, complications) and postoperative (complications, pain, mobility, functional scores, resumption of sport, Patient and Observer Scar Assessment Scale scar aesthetics, satisfaction) data were compared.

Results: In total, 50 patients were included (n = 24 in group A, n = 26 in group O). Operating time was longer in group A (103 vs 61 min; *P* = .001). The average number of days on analgesics was higher in group A (8.9 vs 5.3 days; *P* = .04). The complication rate was similar for the 2 groups (12.5% vs 27%; *P* = .46). At 3 months, the loss of external rotation was greater in group A (–33° vs −18°; *P* = .01), and resumption of sports was less frequent (11% vs 48%; *P* = .01). At 12 months, the average scores were excellent, with no significants differences between the 2 groups: Walch-Duplay average, 90 points; Rowe, 94 points; Subjective Shoulder Value (SSV), 92.5%; sport SSV, 85%; and Patient and Observer Scar Assessment Scale score, 17.2 points.

Conclusion: Over the short term, this comparative study did not prove the superiority of the cortical-button arthroscopic Latarjet procedure over the open Latarjet procedure. A delay in the resumption of sports, longer time to recover range of motion, and no benefit regarding postoperative pain or the aesthetic aspect of the scar were observed in this study with the arthroscopic procedure.

Keywords: Latarjet; arthroscopy; cortical button; return to sport; shoulder instability

Since it was described in 1954 by Michel Latarjet,[27] the coracoid bone block transfer has become a reliable standard procedure in the treatment of anterior shoulder instability associated with glenoid bone loss.[2,41] The reported drawbacks of the open Latarjet procedure have led to the emergence of arthroscopic techniques that replicate the open surgery with screw fixation of the coracoid or completely innovative techniques with cortical-button fixation.[26,36] Although many studies have independently validated the encouraging results of each of these techniques, few have demonstrated the superiority of the arthroscopic procedure over the open procedure.[10,24,25,28,29,32,34,42] Theoretically, the cortical-button technique should improve bone block positioning with specific tools and better visualization, allow treatment of associated lesions (cuff tear, long head of biceps lesion), decrease hardware-related complications requiring removal, and have better cosmesis.[4]

The objective of this study was to report the short-term clinical results of 2 comparative series of an arthroscopic

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Submitted March 2, 2022; accepted July 1, 2022.

One or more of the authors has declared the following potential conflict of interest or source of funding: V.M. has received consulting fees from SBM (Science & BioMaterials). N.B. has received consulting fees from SBM & Move up. AOSSM checks author disclosures against the Open Payments Database (OPD). AOSSM has not conducted an independent investigation on the OPD and disclaims any liability or responsibility relating thereto.

The American Journal of Sports Medicine
2022;50(12):3326–3332
DOI: 10.1177/03635465221120076

Latarjet bone block procedure with cortical-button fixation and the standard open procedure with 2-screw fixation. The hypothesis was that the arthroscopic cortical-button procedure would be clinically superior to the open procedure.

METHODS

Study Design

This was a retrospective comparative study of 2 continuous series of arthroscopic and open bone block procedures. All patients who underwent surgery for anterior shoulder instability with an Instability Severity Index Score >3 points[3] and a minimum of 12 months of clinical follow-up were included. Patients with a history of shoulder stabilization surgery and those with associated injuries were excluded. During the inclusion period, the patients were exclusively treated with an arthroscopic procedure from January 1, 2018, to June 30, 2018, and with an open procedure from July 1, 2018, to December 31, 2018. A previous study reporting an unexpected time to achieve bone block fusion in the arthroscopic group motivated this technical change for evaluation.[11] This study was approved by the ethics committee of the Toulouse University Hospital Center, France, and all patients gave their informed consent (RnIPH 2020-40).

Operating Techniques and Rehabilitation Protocol

All procedures were performed by the same shoulder specialist surgeon (N.B.) with experience of more than 100 cases for each procedure.[7,12,39]

Patients were placed in a beach-chair position with their head in a headrest. General anesthesia was combined with locoregional anesthesia by interscalene nerve block.

The standard open Latarjet procedure, as described by Young et al,[41] was performed via a mini deltopectoral incision. The coracoid process was withdrawn while preserving the attached coracoacromial ligament. The subscapularis muscle was released in the direction of its fibers at the lower two-thirds of its height, and the glenohumeral joint was exposed by capsulotomy. The detached glenoid labrum was identified and preserved for reinsertion. The anterior edge of the glenoid was then decorticated and smoothed before the coracoid was fixed with two 4.5-mm bicortical malleolar screws (Médicalex). The bone block was placed without a guide in a "flush" position. Finally, the labral lesion was repaired with 1 anchor placed between the screws, incorporating the coracoacromial ligament, before the capsule was closed (Figure 1).

The arthroscopic Latarjet procedure was performed as described by Boileau et al,[4] using a 70° arthroscope and specific instruments (Latarjet Guiding System; Smith & Nephew). Five arthroscopic portals were required and 5 steps were taken in succession:

1. The coracoid step: release of the pectoralis minor tendon and the coracoacromial ligament, freshening of the inferior aspect, positioning of the cortical button, and osteotomy of the coracoid

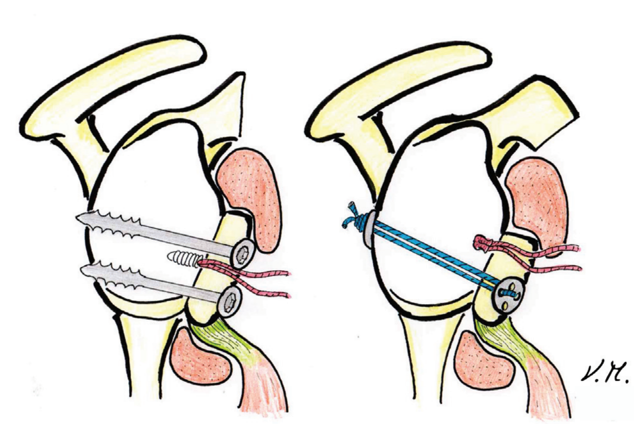

Figure 1. Surgical principle of open Latarjet with screw (left) and arthroscopic Latarjet with double-button fixation (right) with Bankart repair.

2. The glenoidal step: refreshing the scapular neck, placement of an anchor in the "3-o'clock" position, and packing of the glenoid via a specific guide
3. The subscapular step: opening a "safety window" with an intra-articular retractor positioned from the back toward the front and an extra-articular retractor placed from the front toward the back after verifying the position of the axillary nerve
4. The fixation step: transfer of the coracoid through the subscapularis muscle using a shuttle suture and final fixation with a posterior cortical button tightened to a controlled tension of 100 N by a dynamometer
5. The Bankart repair step: reinsertion of the labrum on the anchor with capsule retention from south to north (Figure 1)

In the postoperative period, each patient received the same drug protocol, including nonsteroidal anti-inflammatory drugs, level 1 analgesics, and morphine administered on demand and freely within the maximum authorized doses.

An identical rehabilitation protocol was applied for both procedures. The shoulder was protected in a sling for the first 4 weeks. Pendular and passive mobilization exercises were initiated in the second week. Active rehabilitation started in the fourth week under the supervision of a physical therapist, with protected external rotation until the sixth week. Resumption of sports that do not involve shoulder use was allowed after the sixth week. Sports with a risk for the shoulder were not allowed before the third month, depending on clinical and radiological controls.

Clinical Evaluation

Data were collected by an independent observer with no relations with the surgeon (M.G.). Preoperatively, epidemiological (age at time of surgery, sex, affected side, dominant side, type of sport, sport level, type of work, smoking status, surgical history) and clinical (active range of motion, Subjective Shoulder Value [SSV],[18] and sport

SSV score, Instability Severity Index Score[3]) data were collected. Hyperlaxity was defined by an external rotation with the elbow at the side >85°.

The operative time was calculated from opening to closing of the skin, and intraoperative complications were recorded.

Postoperatively, patients were clinically followed up on days 15 and 45 and at 3 months, 6 months, and 1 year. A verification was routinely done for immediate complications.

Postoperative pain was evaluated by a self-assessment method from postoperative days 2 to 15. The level of pain, based on a visual analog scale (VAS) ranging from 0 to 10 points, was noted twice a day on a booklet. Similarly, all use of analgesics had to be recorded during the day. The booklet was returned to the examiner at the first postoperative appointment (day 15).

The clinical evaluation was based on the measurement of active range of motion: anterior elevation, external rotation with elbow against body (ER1), external rotation at 90° of abduction (ER2), and internal rotation (vertebral level).

The subjective criteria tested were the SSV,[18] the sport SSV (value of the shoulder during sport activities), and the Net Promoter Score (NPS),[19] corresponding to the answer to the following question: "On a scale of 0 to 10, how would you rate your procedure to a friend?"

Recurrence (subluxation or dislocation) and apprehension at abduction external rotation were used to assess objective stability. Resumption of sports and the level of resumption of sports were noted. The Walch-Duplay score[40] and the Rowe score[33] were calculated.

Finally, the subjective Patient and Observer Scar Assessment Scale (POSAS) score was used to assess scarring in month 12 via a questionnaire in which the patient assessed 7 criteria (pain, itching, color, stiffness, thickness, irregularity, and general opinion), each measured on a scale of 0 to 10.[15]

Radiological Evaluation

A preoperative analysis was based on a standard anteroposterior radiograph with the shoulder in internal, external, and neutral rotation to assess humeral and glenoid bone loss according to the criteria defined by the Instability Severity Index Score.[3] Postoperatively, a computed tomography (CT) scan at 6 months was used to assess the healing of the bone block according to the Samim et al[35] criteria. In case of nonunion, a new CT scan was performed at 12 months.

Statistical Analysis

Statistical analyses were performed with StatiS software (statis.fr; Version 11.6; Olivier Mericq). Variables were described by frequency, mean, standard deviation, extremes, and confidence interval of the mean. The Lilliefors (Kolmogorov-Smirnov) and/or Shapiro test were used to judge the normality of the distributions. The Student t and the nonparametric Mann-Whitney U tests were used to compare the groups. The standard significant P value of <.05 was used.

RESULTS

Patient Characteristics

A total of 52 patients were included and 2 were excluded (revision surgery), leaving 50 patients available for statistical analysis: n = 24 in the arthroscopy group (A) and n = 26 in the standard open (O) group. The sex ratio was 43 men to 7 women with a mean ± SD age of 24 ± 8 years (range, 15-54 years). The dominant side was affected in 54% of the cases (n = 27). Sixteen patients (32%) were regular smokers. The mean ± SD Instability Severity Index Score was 5.4 ± 1.6 (3-10) points (Table 1).

Operating Time and Complications

The mean ± SD operating time was 102.7 ± 16.4 minutes in group A and 60.5 ± 9.2 minutes in group O (P = .001).

In group A, a fracture of the bone block occurred at the time of compression, justifying additional fixation with anchors and remplissage.[5] One patient required intraoperative conversion to an open procedure for a hemostatic disorder with uncontrollable arterial hypertension. In addition, 1 patient had postoperative capsulitis diagnosed at 45 days and required prolonged rehabilitation.

In group O, an infection in 1 patient and a hematoma in another required early reoperation with lavage and antibiotic therapy. Progression was favorable in both cases without further intervention. One case with a bone block fracture required modification of the fixation with a single screw. Finally, 4 patients had isolated sensory axillary nerve injuries that diminished spontaneously between days 15 and 45.

Therefore, the overall rate of complication was 12.5% for group A vs 27% for group O (P = .46).

Postoperative Pain

A total of 29 diaries of daily VAS and analgesics taken, filled out by the patient, were collected on day 15. The average postoperative VAS showed no significant difference between the 2 groups. In contrast, the average number of days of analgesic use was significantly higher in the arthroscopy group (analgesic level 1, P = .04; level 3, P = .03) (Table 2).

Clinical Outcomes

At day 45, mobility was significantly more limited in group A in active anterior elevation, with a greater loss of ER1. At last follow-up, the lost of ER1 in group A was higher than in group O, but the difference became nonsignificant between the 2 groups at 6 months.

At 3 months, 2 patients (11%) had resumed sports activity in group A and 12 (48%) in group O (P = .01). Beyond 6 months, the difference was not significant.

At 12 months, the global scores were excellent, with an average Walch-Duplay score of 90 ± 13 points (40-100), Rowe score of 94 ± 9 points (60-100), SSV score of 92.5% ± 11% (60%-100%), and sport SSV score of 85% ± 15% (20%-100%), with no significant difference between the 2 groups. No patient had a recurrence during follow-up.

TABLE 1
Preoperative Characteristics[a]

Preoperative Data	Total (n = 50)	Group A (n = 24)	Group O (n = 26)	*P* Value, A vs O
Age, y	24 ± 8	22.5 ± 6.8	25.5 ± 8.7	.23
Sex, male/female, n	43/7	19/5	24/2	.52
Dominant side involved, n	27	11	16	.35
SSV, %	62.6 ± 24.3	64.1 ± 20.6	61 ± 27.8	.91
Sport SSV, %	34.2 ± 23.2	28.8 ± 24.1	40.2 ± 21	.15
Instability Severity Index Score, points	5.4 ± 1.6	4.8 ± 1.6	5.9 ± 1.7	.48
Smoking, n (%)	16 (32)	10 (42)	6 (23)	.25
AAE, deg	167 ± 11	166 ± 11.8	168 ± 10.3	.93
ER1, deg	64 ± 18	71 ± 15.8	58 ± 18.4	**.02**
ER2, deg	90 ± 12.5	91 ± 12.1	89 ± 13.1	.92
IR, points	16 ± 2.2	16 ± 2.2	16 ± 2.3	.85
Hyperlaxity, n (%)	15 (30)	9 (38)	6 (23)	.31
Type of work, 0/1/2/3, n	2/11/19/18	1/7/10/6	1/4/9/12	.54
Type of sports, 0/1/2/3/4, n	8/0/6/6/30	4/0/3/3/14	4/0/3/3/16	.46
Level of sports, L/C, n	10/32	8/12	2/20	.33

[a]Values are expressed as mean ± SD unless otherwise indicated. Bold P value is statistically significant. Group A: arthroscopy. Group O: standard open procedure. Hyperlaxity is defined by an ER1 greater than 85°. Type of work: 0, none; 1, nonmanual; 2, light manual; 3, heavy manual. Type of sports: 0, none; 1, no risk; 2, overhead; 3, contact; 4, contact with throwing. AAE, active anterior elevation; C, competition; ER1, external rotation with elbow against body; ER2, external rotation at 90° of abduction; IR, internal rotation vertebral level, defined by the highest vertebra reached with the thumb, numbered from 1 (for C1) to 24 (for L5); L, leisure; SSV, Subjective Shoulder Value.

The apprehension test was negative in abduction external rotation. Six patients in each group had occasional pain: 27% in group A vs 25% in group O (*P* = .9).

Subjective satisfaction was excellent in both groups, with a mean NPS of 9.3 points (range, 7-10) with no significant difference.

The mean subjective POSAS score was 17.2/70 points (range, 7-37) with no significant difference between the groups. In women, the mean ± SD POSAS score was 16.2 ± 6.1 points and 30 ± 8.5 points in groups A and O, respectively (*P* = .1) (Table 3).

TABLE 2
Pain and Analgesics Used[a]

Pain Parameters	Group A (n = 13)	Group O (n = 16)	*P* Value, A vs O
VAS (0 to 10)			
Day 1	4 ± 2.8	3.5 ± 2	.89
Day 5	2.1 ± 2.7	2.6 ± 2	.85
Day 15	1 ± 1.7	0.8 ± 1.4	.84
Mean	2 ± 2.1	1.9 ± 1.5	.67
Analgesics, d			
Level 1	8.9 ± 4.7	5.3 ± 4.6	**.04**
Level 3	5.5 ± 3.6	3.2 ± 3.3	**.03**
NSAID	4.2 ± 2.9	1.6 ± 1.4	**.01**

[a]Values are expressed as mean ± SD. Bold P value is statistically significant. Group A: arthroscopy. Group O: standard open procedure. Level 1, paracetamol; level 3, opioid. NSAID, nonsteroidal anti-inflammatory drug; VAS, visual analog scale.

Radiographic Results

At 6 months, consolidation of the bone block was achieved in 70% and 100% of groups A and O, respectively (*P* = .06). At 12 months, the consolidation rate increased to 96% in group A (*P* = .48).

DISCUSSION

This study did not confirm the main hypothesis that the arthroscopic Latarjet procedure (group A) with cortical-button fixation is clinically superior at the short term to the standard open procedure with screw fixation (group O). The use of drugs for analgesic purposes was higher in group A, the recovery of range of motion was longer, and the return to sports was delayed. Other than a higher loss of ER1, no difference was demonstrated between the 2 procedures at 12 months of follow-up, including for the aesthetic appearance of scars and overall patient satisfaction.

Furthermore, the operative time of 102 vs 60 minutes was longer in group A due to the operative difficulty, which has already been reported.[39] Cunningham et al[10] described an operating time of 146 minutes for the arthroscopic procedure and 81 minutes for the open procedure. This increase in arthroscopic operating time has been confirmed by 2 literature reviews with operating times of 108 minutes and 112 minutes, respectively, for the arthroscopic Latarjet with screw fixation and 95 minutes and 93 minutes for the standard open Latarjet.[21,22] Beyond simply numerical data, Koh et al[23] reported an increase in cerebral ischemia episodes with patients in the beach-chair position under general anesthesia, especially when prolonged hypotension was required. Therefore, it seems the arthroscopic bone block procedure should be reserved for trained experienced surgeons.[7,9,10,39]

Our study showed no significant difference between the 2 procedures regarding pain evaluated by VAS during the first 2 postoperative weeks. The significantly higher

TABLE 3
Postoperative Clinical Data[a]

Postoperative Data	Group A	Group O	*P* Value, A vs O
Day 45 (n = 42)	n = 19	n = 23	
VAS	0.9 ± 1.7	0.3 ± 0.8	.21
AAE, deg	127 ± 24	148 ± 15	**.001**
Dif. ER1, deg	–57 ± 19	–41 ± 16	**.01**
IR, points	L2	T12	.78
3 months (n = 44)	n = 19	n = 25	
AAE, deg	145 ± 24	162 ± 11	.34
ER1, deg	36 ± 20	41 ± 17	.53
Dif. ER1, deg	–33 ± 20	–18 ± 18	**.01**
ER2, deg	80 ± 13	74 ± 20	.57
IR, points	T12	T10	.28
Walch-Duplay score, points	71 ± 17	76 ± 12	.39
Rowe score, points	79 ± 19	87 ± 11	.25
Resumption of sports, %	11	48	**.01**
6 months (n = 43)	n = 20	n = 23	
AAE, deg	157 ± 41	169 ± 9	.26
ER1, deg	57 ± 22	57 ± 14	.76
Dif. ER1, deg	–14 ± 21	–3 ± 19	.12
ER2, deg	84 ± 24	81 ± 19	.95
IR, points	T11	T10	.58
Walch-Duplay score, points	83 ± 19	88 ± 10	.56
Rowe score, points	91 ± 13	93 ± 8	.57
SSV, %	92 ± 14	88 ± 12	.54
Sport SSV, %	79 ± 29	65 ± 34	.35
Resumption of sports, %	75	87	.92
Same level, %	40	35	.95
12 months (n = 50)	n = 24	n = 26	
AAE, deg	171 ± 9	169 ± 8	.54
ER1, deg	61 ± 16	60 ± 15	.91
Differential ER1, deg	–11 ± 16	0 ± 15	**.04**
ER2, deg	89 ± 9	85 ± 7	.24
IR, points	T9	T9	.18
Walch-Duplay score, points	88 ± 15	93 ± 10	.24
Rowe score, points	93 ± 11	95 ± 8	.57
SSV, %	93 ± 12	93 ± 11	.87
Sport SSV, %	83 ± 18	87 ± 12	.56
Resumption of sports, %	86	87	.93
Resumption at the same level, %	50	61	.52
Apprehension, %	27	33	.91
Satisfaction, points	3.7 ± 0.5	3.9 ± 0.3	.33
NPS, points	9.2 ± 1.1	9.5 ± 0.8	.51
POSAS, points	15.7 ± 5.8	18.5 ± 8.5	.34

[a]Values are expressed as mean ± SD unless otherwise indicated. Bold P value is statistically significant. Group A: arthroscopy. Group O: standard open procedure. AAE, active anterior elevation; ER1, external rotation with elbow against body; ER2, external rotation at 90° of abduction; Dif. ER1, difference between pre- and postoperative ER1 values; IR, internal rotation, with vertebral level defined by the highest vertebra reached with the thumb, numbered from 1 (for C1) to 24 (for L5); NPS, Net Promoter Score; POSAS, Patient and Observer Scar Assessment Scale; SSV, Subjective Shoulder Value; VAS, visual analog scale.

consumption of level 1 analgesics, opioids, and anti-inflammatory drugs in group A suggests that pain stimulation may even be greater after an arthroscopic procedure. The use of the electrocoagulation probe required for exposure and passage of the coracoid through the subscapularis muscle during the arthroscopic procedure, the multiple perforations of the deltoid muscle for the approaches, and the hyperpressure generated by the pump could be an explanation for this trend. Previously, Nourissat et al[32] came to the opposite conclusion in a comparative study of 184 patients. In contrast to our study based on self-assessment, the postoperative VAS score in that study was determined by the clinician and was not weighted by the assessment of analgesic use. The comparative study by Marion et al[28] reported a significant difference in VAS during the first postoperative week in favor of the arthroscopy group, whereas the consumption of analgesics appeared identical in the 2 groups. Therefore, the superiority of arthroscopy in this area seems controversial, especially since the relevance of pain assessment tools is questionable.[17,38]

The rate of clinical complications noted in our series is similar to that in the literature.[9,10,24,28,29] Partial sensory axillary nerve involvement, which is usually infrequent, was identified in 4 patients in the open procedure group.[14,20,29] A potential bias that could explain this high incidence is that the clinical examination was particularly rigorous and thorough. Nevertheless, the regression of symptoms after 45 days was in favor of a simple neurapraxia, and therefore no electromyographic exploration was performed. Only electromyography could have documented this condition with certainty. The known neurological risk has already been explored by Delaney et al,[13] who reported that 76% of cases their patients experienced nerve complications during intraoperative monitoring, particularly concerning the axillary nerve during exposure of the glenoid and placement of the bone block under the action of the retractors during open surgery. Curarization of the patient and a short operative time during the bone block fixation step could decrease this type of postoperative complication. In contrast, we noted no such complication in the arthroscopy group, since the instrumental technique with a cortical button allows all the vascular and neural elements to be protected without traction.[4]

At 12 months postoperatively, the Rowe, Walch-Duplay, SSV, sport SSV, and NPS clinical scores confirmed that the Latarjet, whether performed in an open procedure or arthroscopically, provided excellent short-term results in the treatment of anterior shoulder instability without recurrence of dislocation or subluxation. No difference was noted between the 2 procedures. Although the 12-month time frame is short to judge efficacy in terms of stability, Griesser et al[20] noted that most recurrences happen in the first year.

Resuming sports activity as soon as possible counts in the success of surgical treatment of shoulder instability.[1,16] Some authors have reported excellent results regarding the resumption of sports after Latarjet surgery regardless of the technical details of the procedure.[8,31,37] However, our study did not confirm whether arthroscopic surgery improved this delay. In fact, 3 months postoperatively, only 11% of the group A patients had resumed sports activity compared with 48% of group O, whereas the type of sport practiced preoperatively was similar in the 2 groups. In a review of the literature, Abdul-Rassoul et al[1] reported that the time to resume sports at the same level after Latarjet was 5 months, regardless of the type of procedure. One of the explanations for this difference that does not plead in favor of arthroscopy could be the inability to recover range of motion postoperatively, thereby limiting return to preinjury sport, which is necessary to prevent a new injury. In fact, early close follow-up of the patients in this series showed significant limitation in range of motion in external rotation and anterior elevation in the arthroscopy group at day 45, which persisted until the third month. This finding was surprising as preoperative ER1 was significantly higher in group A because of a higher rate of hyperlax patients. Kordasiewicz et al[25] found an external rotation deficit of 7° more in the arthroscopy group than in the standard open procedure group. For these authors, the more traumatic and therefore inflammation-inducing nature related to splitting the subscapularis muscle with the electrocoagulation probe during arthroscopy compared with the simple incision of the fibers with the scissors could be one of the explanations.[25] Metais et al[29] also observed better rotational mobility in the standard open procedure group compared with the arthroscopy group (screws or cortical buttons). Therefore, our results confirm this trend, and the use of a Latarjet bone block in conjunction with a Bankart-type capsular procedure in both groups provides no additional corroboration.

To our knowledge, this study is the first to report the results of postoperative scar assessment based on the subjective POSAS score[30] after the Latarjet bone block procedure. Considering the results of this study, the general belief that the arthroscopic procedure is more aesthetic than the open procedure does not seem to be justified. Although a trend toward a higher score was observed in women who underwent open surgery, the low number of women in this series does not allow conclusions to be drawn in this subgroup. Therefore, arthroscopy has not proven its superiority over open surgery for this aesthetic criterion.

Strengths and Weaknesses of the Study

Our study has a number of weaknesses. The small size of each group limits the statistical power. Nevertheless, to our knowledge, this is the first study to report the results of the arthroscopic Latarjet procedure with cortical-button fixation compared with the open Latarjet procedure performed over the same period by the same surgeon experienced in both procedures.[7,11]

On the other hand, this study is retrospective, which causes weaknesses related to this type of analytic method. The reason for changing the technique, explained previously, may have created some selection bias. However, the collection of 12 months of prospective data by a reviewer independent of the surgeon strengthens the robustness of the analysis.

Finally, the analytical approach for these series was mainly clinical. In fact, the comparative radiological evaluation of the 2 procedures was already known and reported in a dedicated radiological study.[6]

CONCLUSION

This comparative study of arthroscopic and open Latarjet bone block stabilization showed similar clinical results at 1 year. Nevertheless, the arthroscopic procedure opens the possibility of a delay in the resumption of sports, with longer recovery of range of motion, and seems to provide no benefit in terms of postoperative pain or the aesthetic aspect of the scar.

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