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Arthroscopic lasso-loop technique for subscapularis repair with anterolateral viewing portal yields better clinical outcomes for Lafosse grade 3 and 4 tears: a prospective study with minimum 2 years of follow-up

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Background: Contracted subscapularis tears, especially Lafosse grade 3 and 4, pose a significant challenge in surgical repair due to the need for extensive release of retracted tendon and the risk of cut-through due to poor tissue quality. The posterior viewing portal may hinder adequate visualization and extensive release of retracted tendons, particularly in addressing the bursal surface of the tears. Tension-free robust repair is critical to prevent retears and for achieving successful outcomes for these massive and complex retracted tears. This study investigates the clinical outcomes of the Lasso-Loop technique with an anterolateral viewing portal, aiming to enhance tendon release, improve footprint fixation, and optimize tissue grip, particularly in cases of chronic retracted Lafosse 3 and 4 tears. This innovation also eliminates the need for arthroscope switching and serves as a crucial measure for averting axillary nerve injuries during the procedure.

Methods: The study included 40 patients with isolated subscapularis or combined anterosuperior rotator cuff tears (Lafosse grade 3 and 4) that underwent arthroscopic subscapularis repair using a Lasso-Loop technique through an anterolateral viewing portal. Evaluations were conducted both preoperatively and at predefined postoperative intervals: 6 weeks, 3 months, 6 months, 1 year, and 2 years. The evaluations in this study encompassed a comprehensive range of clinical assessments, which included a complete range of movements, specialized tests for subscapularis muscle functionality (specifically the lift-off test and belly press test), the utilization of the University of California at Los Angeles and Oxford shoulder scoring systems, and a postoperative ultrasonography conducted at the 6-month mark to assess the presence of any retear. Clinical outcomes were compared with that of the opposite normal shoulder.

Results: There was considerable improvement in the active painless range of motion postoperatively. During the 2-year follow-up, the positive belly press test decreased from 50% (n = 20) to 2.5% (n = 1), while the positive lift-off test decreased from 100% (n = 40) to 5% (n = 2). The modified University of California at Los Angeles score increased significantly from 10.15 preoperatively to 30.17 at 2 years postoperatively (*P* value = .001). Oxford's Shoulder Score increased significantly from 15.6 preoperatively to 40.64 at 2 years postoperatively (*P* value = .001).

Conclusion: This technique has produced positive functional outcomes, in cases categorized as massive subscapularis tears and chronic tears indicating the superiority over other conventional techniques of subscapularis repair described in the literature.

ASTER MIMS Institutional Ethics Committee approved this study.

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Historically, the surgical repair of Lafosse grade 3 and 4 tears has been fraught with difficulties, necessitating extensive tendon release and facing the risk of cut-through due to poor tissue quality. Traditional approaches, particularly through the posterior viewing portal, have limitations in providing adequate visualization, especially on the bursal side where the axillary nerve is at risk during contracture release.[11,13] Diagnostic arthroscopy remains the gold standard for the diagnosis of subscapularis tears.[15] The presence of a 'comma sign' in diagnostic arthroscopy indicates full-thickness subscapularis tears. The sensitivity of identifying the comma sign in magnetic resonance imaging (MRI) is 63%.[3]

In 2006, Lafosse et al introduced a new suture technique—the Lasso-Loop stitch to improve the tissue grip.[10] In 2010, Lafosse et al reported good clinical outcomes following arthroscopic repair of the subscapularis tendon using the Lasso-Loop technique. Utilization of the Lasso-Loop technique enhances tissue grip, thereby reducing the likelihood of suture cut-off and strengthening grip. In addition, visualization of the subscapularis tendon is important to obtain an ideal anatomical repair. This article explores the unique synergies of the Lasso-Loop technique with an anterolateral viewing portal, aiming to enhance surgical precision and improve outcomes in cases of chronic and retracted subscapularis tears. While Lasso-Loop technique has been employed individually in the past, their combined utilization represents a novel approach to subscapularis repair. Use of an anterolateral portal provides superior visibility of both articular and bursal surfaces, eliminating the need for a 70° arthroscope and minimizing the risk of axillary nerve injuries. This becomes particularly relevant in Lafosse grade IV tears, where conventional retear rates have been reported as high as 25%.[8]

Materials and methods

Patient selection

In our prospective cohort study, 40 patients aged between 48 and 80 years underwent arthroscopic subscapularis tendon repair with a minimum 2-year follow-up, using the Lasso-Loop technique and viewing from an anterolateral portal. Exclusively addressing Lafosse 3 or 4 subscapularis tears, the procedures were conducted from October 2018 to October 2019 following Institutional Review Board approval.

Inclusion criteria: (1) All patients who underwent arthroscopic subscapularis repair for Lafosse grade 3 and grade 4 tears (including both isolated subscapularis tears and combined anterosuperior rotator cuff tears) with a minimum of 2 years of follow-up.

Exclusion criteria: (1) Massive irreparable subscapularis tears, (2) bilateral subscapularis tears, (3) Calcific Tendinitis, and (4) glenohumeral arthritis.

Preoperative abduction, flexion, extension, external rotation (ER), modified University of California at Los Angeles (mUCLA) score, and Oxford Score were considered as primary outcome variables. Descriptive analysis was carried out by mean and standard deviation for quantitative variables, and frequency and proportion for categorical variables. Non-normally distributed quantitative variables were summarized by median and interquartile range. Categorical outcomes were compared between study groups using the Chi-square test/Fisher's exact test (if the overall sample size was < 20 or if the expected number in any one of the cells was < 5, Fisher's exact test was used). The change in the quantitative parameters before and after the intervention was assessed by paired *t*-test (in case of q time periods). For non-normally distributed quantitative parameters, medians and interquartile range were compared between 2 study groups using Mann-Whitney U test (2 groups). *P* value $< .05$ was considered statistically significant. IBM SPSS version 22 (IBM Corp., Armonk, NY, USA) was used for statistical analysis.

Surgical procedure

Our technique for arthroscopic subscapularis tendon repair through an anterolateral viewing portal using the Lasso-Loop technique has already been published in the Journal of Arthroscopy (Arthroscopic Techniques).[13]

Surgery is performed under general anesthesia and interscalene block. The patient can be positioned in either the beach chair or lateral decubitus position.

We use 3 portals: the standard posterior viewing portal, the anterior working portal, and an anterolateral viewing portal. A standard posterior portal is used to perform a routine diagnostic arthroscopy of the glenohumeral joint. The subscapularis tear is arthroscopically classified according to the Lafosse et al classification to decide the treatment. The anterolateral portal is established at the leading edge of the supraspinatus tendon.

The anterolateral portal offers better visualization of the articular and bursal surface of the subscapularis tendon (Fig. 1). A traction stitch placed in the tendon can assist in the mobilization of the tendon if the tendon is severely retracted. The tendon can be extensively released to achieve full excursion to its footprint on the lesser tuberosity to allow for a tension-free repair.

The lesser tuberosity is débrided and decorticated with a radiofrequency ablator and burr before the placement of the anchor. A double-loaded anchor is placed into the lesser tuberosity at the subscapularis tendon footprint. One suture of the double-loaded anchor is employed for mattress suture in the inferior aspect of the tendon. The 2 limbs of the suture are retrieved using a suture shuttling device (Rhino suture passer; Arthrex, Naples, FL, USA) through the inferior part of the tendon before creating the Lasso-Loop stitch in the superior aspect using the other suture. To create a Lasso-Loop stitch, select one limb of the suture and retrieve a loop of the suture through the tendon using the suture shuttling device/bird beak to create a loop (Fig. 2). Retrieve the distal part of the same suture limb through the suture loop to form the Lasso-Loop stitch (Fig. 3). Pull the other limb of the suture to tighten the Lasso-Loop stitch. Use an arthroscopic nonsliding knot to complete the Lasso-Loop stitch over the superior part of the tendon. The arm is placed in a neutral position for proper tendon tensioning. The lower part of the tendon is repaired using a vertical mattress suture over the bursal surface with the 2 limbs of the suture retrieved initially. Thus, the Lasso-Loop stitch secures the superior part and the vertical mattress suture secures the inferior part of the subscapularis tendon. Biceps tenodesis or tenotomy, depending on the extent of damage and age were done alongside the subscapularis repair.

Postoperative protocol

The operated shoulder is immobilized in a sling for 4 to 6 weeks postoperatively. Wrist and elbow motions are encouraged during the period. Passive ER is permitted but limited to 0 or as determined during the surgery. Forward flexion exercises are initiated once the period of immobilization ends, progressing from active-assisted to active range of motion. Deltoid and rotator cuff strengthening exercises are started at 12 weeks postoperatively, with a progressive return to functional activities and sports.

Patient assessment

The patients were assessed preoperatively with clinical examination and shoulder scoring systems. Clinical examination includes

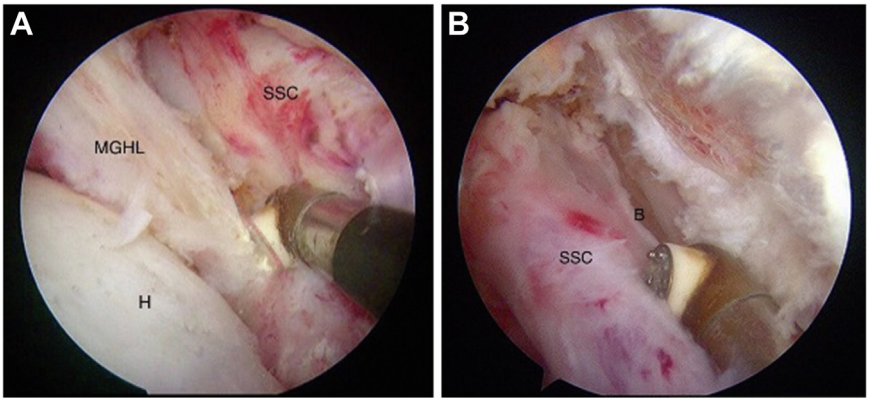

Figure 1 Visualizing through the anterolateral viewing portal, the retracted subscapularis tendon can be extensively released both on the articular (**A**) and bursal surface (**B**). The middle glenohumeral ligament is released on the articular surface. While releasing the bursal surface of the subscapularis tendon, the radiofrequency probe shoulder always points upwards so that injury to the axillary nerve can be avoided. *B*, bursal surface; *H*, head of the humerus; *MGHL*, middle glenohumeral ligament; *SSC*, subscapularis.

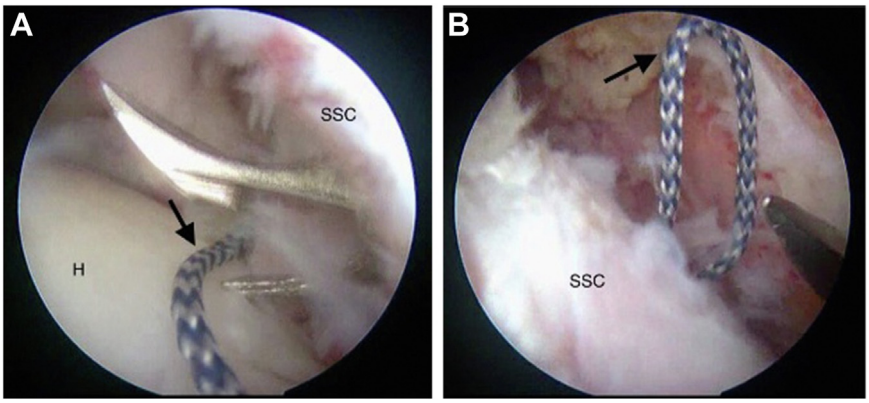

Figure 2 (**A**) One limb of the suture is selected for a Lasso-Loop stitch. (**B**)The selected limb of the suture is retrieved from the articular surface of the subscapularis tendon to create a loop at the bursal surface. The arrow shows the selected limb of the suture. *H*, head of humerus; *SSC*, subscapularis.

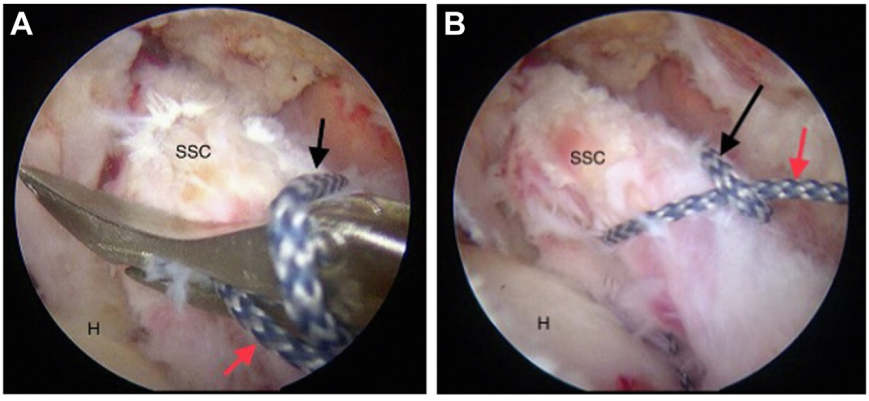

Figure 3 (**A**) One limb of the suture is selected and the same is retrieved from the articular surface of the subscapularis tendon to create a loop at the bursal surface. (**B**) Retrieve the distal part of the same suture limb through the suture loop to create the Lasso-Loop stitch. The *black arrow* shows the loop. The *red arrow* shows the distal part of the suture limb. *H*, head of humerus; *SSC*, subscapularis.

active range of motion of the shoulder and the special test for subscapularis muscle—the lift-off test and the belly press test for both shoulders. We used a mUCLA score and the Oxford Shoulder Score to assess the functional status. Diagnostic shoulder arthroscopy was done to assess the rotator cuff's status and identify associated injuries. By arthroscopy, subscapularis tendon tears were classified according to Laffose et al classification into 5 grades.[10] After the surgery, patients underwent postoperative evaluations at intervals of 6 weeks, 3 months, 6 months, 1 year, and 2 years, which included clinical assessments, the use of shoulder scoring systems, and postoperative ultrasonography of both shoulders conducted by a skilled musculoskeletal radiologist at the 6 months and 1 year for assessing healing integrity of repaired shoulder and to rule out any pathology of the opposite shoulder.

Table I
Comparison of preoperative and postoperative range of motion.

Range of motion	Preoperative	2 years postoperative		*P* value	Opposite shoulder
Abduction	97.5 ± 30.7	158.57 ± 14.06		<.001	161.25 ± 7.07
Forward flexion	84.25 ± 25.91	149.29 ± 9.17		<.001	159.34 ± 12.23
Extension	50.25 ± 15.61	71.43 ± 8.64		<.001	75.68 ± 4.37
External rotation	29 ± 8.41	48.57 ± 7.7		<.001	60.67 ± 5.18
Internal rotation	up to T10	up to L1	up to S1	up to gluteal region	up to thigh
Preoperative	1 (2.5%)	7 (17.5%)	19 (47.5%)	11 (27.5%)	2 (5%)
Postoperative	2 (5.26%)	33 (86.84%)	3 (7.89%)	0	0

Table II
Comparison of preoperative and 2 years postoperative shoulder scores.

Shoulder score	Preoperative score	2 years postoperative score	*P* value
mUCLA	10.15 ± 2.52	30.71 ± 4.3	.001
Oxford Shoulder Score	15.6 ± 3.64	40.64 ± 6.87	.001

mUCLA, modified University of California at Los Angeles.

The lift-off test and the belly press test were done from 3 months of follow-up onwards. The range of motion of the involved shoulder was compared with that of the opposite normal shoulder at the final follow-up.

Results

In this study of 40 individuals, the mean age of the population was 60.35 ± 7.84 years, with a range from 48 to 80 years. Gender distribution was predominantly male (70%) and female (30%). Side dominance revealed 75% with right-sided subscapularis tears and 25% with left-sided tears. The mean duration of symptoms was 6.68 ± 8.45 months, with a median of 4.00 months, ranging from 0.25 to 36.00 months.

Etiology analysis showed 62.5% (n = 25) traumatic subscapularis tears, 35% (n = 14) degenerative tears, and 2.5% (n = 1) following anterior dislocation of the shoulder. Additionally, 23 patients (57%) had Lafosse grade 3 subscapularis tears, and 17 patients (42.5%) had grade 4 tears. Combined anterosuperior rotator cuff tears were more common 25 (62.5%) than isolated subscapularis tears 15 (37.5%).

There was a statistically significant improvement in the range of motion postoperatively. The range of motion is found comparable with that of the opposite normal shoulder (Table 1).

The mUCLA score increased statistically significantly from 10.15 preoperatively to 30.17 at 2 years postoperatively (*P* value = .001). Following the mUCLA system, the evaluation of the 40 patients revealed 10% excellent, 70% good, 12.5% fair, and 7.5% poor outcomes. The Oxford Shoulder Score increased statistically significantly from 15.6 preoperatively to 40.64 at 2 years postoperatively (*P* value = .001) (Table 2).

Postoperative ultrasonography conducted at the 6-month and 1-year mark revealed a healing rate of 97.5%. It is noteworthy that only 1 patient who underwent the repair experienced a retear, as confirmed by MRI following the initial ultrasonography assessment.

Discussion

Although there is published literature regarding the functional outcome after arthroscopic subscapularis repair, limited specific data are only available for contracted (Lafosse grade 3 and grade 4) subscapularis repair. Good functional outcome is reported following the arthroscopic repair of subscapularis tears (Table 3). Lafosse et al reported good functional outcomes following arthroscopic subscapularis repair using the Lasso-Loop technique.[10] In 2013, U Lanz et al reported good functional outcomes following arthroscopic repair of large subscapularis tears by mattress suture technique.[12] Arun et al reported the use of a 70º arthroscope for better visualization, especially in large tears.[2] Our technique involving the anterolateral portal offers superior visibility for the subscapularis tendon, enabling extensive release of retracted subscapularis while minimizing the risk of axillary nerve injury. The Lasso-Loop technique ensures a secure and robust repair, particularly in cases of retracted tears. Additionally, there is no necessity to switch from a 30° arthroscope to a 70° arthroscope, as the anterolateral viewing portal provides ample visualization with the former, streamlining the surgical process.[13] We have undertaken this study to confirm whether excellent clinical results obtained with other techniques in arthroscopic subscapularis repair can be reproduced with equal success with our technique. Our study shows a good functional outcome after arthroscopic repair in contracted subscapularis tendon using the Lasso-Loop technique through an anterolateral viewing portal (mean mUCLA score 30.71 and mean Oxford Shoulder Score 40.64 at 2-year follow-up).

There were statistically significant improvements in the active range of motion of the shoulder postoperatively. Reduction in the active range of motion was noticed at 6 weeks of follow-up period which can be attributed to postoperative pain and stiffness. It was noticed that with further motivation and regular physical therapy, the active range of motion increased tremendously and the patients were satisfied with a painless range of motion (Table 4).

Arun et al reported an increase in the elevation from 73.68° to 170.88° at the final follow-up; an increase in ER from 23.09° to 71.18°; an increase in internal rotation from L5, S1 to T7 in the follow-up.[2] L. Laffose et al reported an increase in active forward flexion from 145.6° to 174.7° postoperatively and an increase in ER from 50° to 60.3° postoperatively.[10] Although the range of motion of the shoulder in our study population is less as compared to the previous studies, our range of motion matched the age-stratified and gender-stratified normative data of shoulder range of motion described by Toussaint et al and Gill et al.[6,17] A patient with less range of motion of the operated shoulder was evaluated with an MRI scan and diagnosed to have a supraspinatus tear with an intact repaired subscapularis tendon. Moreover, we noticed that isolated subscapularis tears showed better results during the initial follow-up periods.[14] With further physical therapy, the range of motion was similar for both isolated and combined subscapularis and other rotator cuff muscle tears at the final follow-up. A weak positive correlation was observed between the opposite shoulder flexion and the 6-month postoperative flexion but was not significant

Table III
Literature review for various techniques of arthroscopic subscapularis repair.

Author	Yr	No. of patients	Age	Follow-up (average)	Type of tear	Technique of repair	Portals used for the subscapularis tendon repair
Burkhart and Tehrany	2002	25	60.7 yr	10.7 mo	Isolated, combined	Traction shuttle repair technique	Standard posterior viewing and working anterior portal
Bennet	2003	8	56.8 yr	2-4 yr	Isolated	Modified Revo knot	Switching between posterior viewing and viewing/working anterior portal
Kim et al	2005	29	54 yr	27 mo	Isolated	SMC knot	Standard posterior and anterior portals provided access, a posterolateral portal assessed subacromial space, and a lateral working portal facilitated interventions around the glenohumeral joint and tendon.
L Laffose et al	2007	79	60.8 yr	104.7 mo	Isolated, combined	Mattress suture	Posterior and lateral visualisation portal, anterolateral portal for the lesser tuberosity decortication, subscapular release
CR Adam et al	2008	40	66 yr	5 yr	Isolated, combined	Single-row repair	Standard posterior viewing portal and anterolateral working portal
L Laffose et al	2010	74	63 yr	32 mo	Isolated	Mattress suture + **Lassoloop technique**	Posterior assesses limited subscapularis lesions, biceps tenodesis. Lateral visualizes extensive supraspinatus, secondarily infraspinatus tears. Anterolateral and anterosuperior are instrument channels.
Bartl et al	2011	21	43 yr	27 mo	Isolated	Single-row repair	Involves the use of a posterior portal for arthroscope insertion, a lateral portal to visualize tear margins, and an anterolateral portal for tagging and releasing the subscapularis tendon during surgery.
P J Denard et al	2012	79	60.8 yr	104.7 mo	Isolated, combined	Single-row repair	Standard posterior viewing and working anterior portal
B Toussaint et al	2012	103	58.4 yr	1-year minimum follow-up	Isolated, combined	Single-row and double-row repair	Posterior and anterolateral portals, along with instrument portals (mainly anterior and occasionally anterolateral)
U Lanz et al	2012	46	62 yr	35.3 mo	Isolated, combined	Mattress suture	Standard arthroscopic portals were used, including posterior and lateral portals. Anterolateral, anterosuperior, and anteroinferior portals were used as working portals and for release of the subscapularis.
Nove Josserand et al	2012	22		36 mo	Isolated	Mattress suture	Details not available
Arun et al	2016	35	58.2 yr	2.8 yr	Isolated, combined	Not mentioned	Standard posterior portal used for

(*continued on next page*)

Table III (*continued*)

Author	Yr	No. of patients	Age	Follow-up (average)	Type of tear	Technique of repair	Portals used for the subscapularis tendon repair
							glenohumeral diagnostic arthroscopy. 70° arthroscope employed for subscapularis repair, involving freshening of tendon edges and rasping the lesser tuberosity
S C Kim et al	2023	109	62.4 ± 67.9 yr	84 mo	Isolated, combined	Single-row mattress or double-row suture bridge technique	Standard posterior and anterior portals provided access, a 70° scope via a posterior portal observed the SSC first facet, a posterolateral portal assessed subacromial space, and a lateral working portal facilitated interventions around the glenohumeral joint and supraspinatus tendon.
Shibayama et al	2018	101	66 yr	2 yr	Isolated, Combined	Suture Bridge Technique	Posterior and anterior for glenohumeral investigation, anterolateral and posterolateral for subacromial decompression.
Present study	2023	40	60.35 ± 7.84 yr	26 mo	Isolated, combined	Lasso-loop technique	Anterolateral viewing portal for subscapularis release and standard posterior viewing portal for diagnostic glenohumeral arthroscopy.

SSC, subscapularis.

(R value: 0.015, *P* value: .51). Additionally, a weak positive correlation was found between the opposite shoulder ER and the 6-month postoperative ER (R value: 0.175, *P* value: .017). Internal rotation of the shoulder was comparable to the opposite normal shoulder at 2-year follow-up.

During the 2-year follow-up, the positive belly press test decreased from 50% (n = 20) to 2.5% (n = 1), while the positive lift-off test decreased from 100% (n = 40) to 5% (n = 2). In the study conducted by Arun et al, persistent lift-off test and belly press test were reported at 2 years postoperatively in 14.28% of patients.[2] This observation matches the results derived from our study. Kim et al in a study stated that the lift-off test is not sensitive to partial thickness tears but the belly press test was found reliable.[9] Gerber et al and Edward et al reported persistent positive belly press tests and lift-off tests in the postoperative follow-up.[4,5] Edward et al stated that shoulder scores usually do not adequately reflect the strength of subscapularis and the positive subscapularis test postoperatively does not indicate a poor clinical outcome.[4]

The mUCLA shoulder score and the Oxford Shoulder Score improved significantly over subsequent follow-up periods with 33 good and fair results and 4 excellent results of 40 as reported by the patients. In the study conducted by Arun et al, UCLA's score increased significantly from 14.24 preoperatively to 33.15 at the final follow-up postoperatively. They reported 22 excellent, 11 good, and 2 fair results. In the study by L. Laffose et al, improvement in UCLA's score was reported from 16.4 to 30.9 during the final follow-up. This is similar to the results obtained from our study.[11]

Studies by Ide et al and Lanz et al have reported retearing rates of 15% and 11%, respectively, in arthroscopic repair of anterosuperior/massive tears.[7,12] Our study focused on Lafosse grade 3 and 4 tears and revealed a remarkably low retear rate of 2.5%, with only 1 tear observed in Lafosse grade 4 and none in Lafosse grade 3. Shibayama et al reported retear rates of 4% in type III and 9% in type IV Lafosse tears. In recent studies, Kim et al found an 8.3% retear rate in overall SSC tears, with type III tears at 2.5% and type IV at 25.0%. While arthroscopic repair using conventional techniques (including Suture bridge and single-row/double-row mattress suture) appears promising for type III tears, it is less effective for type IV tears. Our technique, incorporating the Lasso-Loop and anterolateral viewing portal for enhanced tissue grip and extensive retracted tendon release, shows potential in reducing retear rates, even in cases of grade IV tears ensuring a tension-free repair.[8,16]

Comparing the mUCLA shoulder score and the Oxford Shoulder Score among the males and females, males reported better outcomes. Statistically significant difference in outcome was not identified between isolated and combined groups and traumatic and degenerative groups. C R Adams et al reported the shoulder scoring systems were not significantly associated with age, follow-up time, and etiology at the final follow-up consistent with our inference.[1]

The strengths of our study lie in the exclusive focus on La Fosse 3 or 4 subscapularis tears. The technique offers enhanced visualization of retracted subscapularis tears through an anterolateral portal, eliminating the need for a 70° arthroscope. It allows for

Table IV
Comparison of range of motion between the 2 groups (isolated/combined tears) at different follow-up time periods.

Parameter	Isolated median (interquartile range)	Combined median (interquartile range)	Mann-Whitney U test (*P* value)
Abduction			
Preop	100 (100, 120)	90 (60, 115)	.12
6 wks	100 (90, 100)	90 (60, 90)	.002
3 mo	120 (110, 120)	100 (80, 120)	.015
6 mo	120 (120, 130)	120 (100, 130)	.488
1 yr	130 (130, 140)	130 (100, 137.5)	.118
2 yr	140 (140, 145)	135 (107.5, 140)	.083
Flexion			
Preop	100 (80, 100)	80 (60, 100)	.157
6 wks	90 (60, 90)	60 (45, 90)	.03
3 mo	100 (90, 110)	90 (60, 100)	.031
6 mo	100 (100, 110)	100 (90, 110)	.269
1 yr	115 (110, 120)	110 (90, 120)	.135
2 yr	120 (120, 122.5)	120 (97.5, 120)	.115
Extension			
Preop	60 (50, 60)	40 (30, 60)	.017
6 wks	50 (40, 60)	30 (30, 40)	.022
3 mo	60 (50, 70)	40 (40, 60)	.094
6 mo	60 (60, 70)	60 (45, 70)	.574
1 yr	60 (60, 72.5)	65 (60, 77.5)	1.000
2 yr	70 (60, 80)	75 (62.5, 80)	.763
Preop	30 (30, 40)	30 (20, 35)	.079
6 wks	20 (10, 20)	20 (10, 20)	.806
3 mo	30 (20, 30)	20 (20, 30)	.105
6 mo	30 (30, 30)	30 (30, 40)	.165
1 yr	35 (30, 40)	30 (30, 30)	.065
2 yr	40 (30, 40)	40 (32.5, 40)	.933

extensive release of retracted subscapularis tendons while safeguarding neurovascular structures, providing a tension-free repair. These factors, combined with the Lasso-Loop technique for strong and secure footprint fixation in LaFosse grade 3 and 4 tears, contribute to a reduced retear rate.[8] B. Toussaint et al has used the anterolateral viewing portal for subscapularis release but our study has exclusively used the Lasso-Loop technique with anterolateral portal release in Lafosse 3 and 4 tears.[17] The study is limited by the absence of postoperative MRI assessments, a small patient sample, and the lack of a control group for direct comparisons. Furthermore, the outcomes are constrained due to the absence of a 2-year radiological follow-up in view of the abscence of clinical deterioration.

Conclusion

Lasso-Loop technique with an anterolateral viewing portal has demonstrated promising clinical outcomes in addressing Lafosse grade 3 and 4 subscapularis tears, characterized by significant improvement in painless range of motion and substantial reduction in positive belly press and lift-off tests over a 2-year follow-up period. The utilization of this innovative technique resulted in a noteworthy increase in mUCLA and Oxford Shoulder Scores, indicating superior functional outcomes compared to conventional repair methods.

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