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Clinical Outcomes of Chronic Anterior Shoulder Dislocation Treated with the Latarjet Procedure

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Abstract

Background: Chronic anterior shoulder dislocation is an uncommon but challenging condition, in which reduction may be associated with significant neurovascular problems. The Latarjet procedure has been widely recognized as an effective surgical option for recurrent shoulder instability. This study aimed to evaluate the vascular complications of chronic anterior shoulder dislocation treated with the Latarjet procedure.

Methods: This retrospective cohort study included 19 patients (21 shoulders) with chronic anterior shoulder dislocation treated with open reduction and the Latarjet procedure. The patients with chronic dislocation more than 4 weeks and less than 1 year included. All procedures were performed via a deltopectoral approach with coracoid osteotomy. Demographic data, postoperative shoulder range of motion (ROM), the visual analogue scale (VAS), and functional outcomes assessed by the American Shoulder and Elbow Surgeons (ASES) score and Oxford Shoulder Score (OSS) were collected. The patients were followed for a minimum of 9 months. Continuous variables were summarized as mean ±standard deviation and categorical variables as frequencies and percentages; given the absence of a control group and the small sample size, only descriptive statistics were performed (STATA version 17).

Results: The mean age of patients was 30.89 ± 11.88 years, and 16 patients (84.21%) were male. The mean duration from injury to surgery was 7.09± 2.66 weeks, with a mean follow-up period of 9.11± 4.30 months. No intraoperative vascular or neurological complications were observed. Coracoid graft union, confirmed radiographically, was achieved in all 21 patients (100%). The mean VAS pain score was 1.76 ± 1.04. Functional outcomes showed a mean ASES score of 72.14 ± 11.58 and OSS of 26.71 ± 6.41. Passive range of motion included forward flexion of 130.23° ± 31.79°, abduction of 116.66° ± 39.15°, and external rotation of 48.33° ± 23.73°.

Conclusion: Chronic anterior shoulder dislocation is a technically challenging condition associated with bone loss, potential neurovascular complications, capsular adhesion, and contractures. It is observed that open reduction and Latarjet procedure can be associated with satisfactory shoulder range of motion, coracoid graft union, and no recurrent dislocation or neurovascular complications.

Keywords: Chronic anterior shoulder dislocation, Latarjet procedure, Coracoid osteotomy, Vascular complications, Shoulder function

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Introduction

Anterior shoulder dislocation is the most common glenohumeral dislocation, particularly in young and active individuals. Acute dislocations are usually managed successfully with closed reduction; however, delayed or neglected cases are more challenging and are associated with higher morbidity and technical difficulty (1). The global

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Key Messages:

↑What is "already known" in this topic:

Neglected anterior shoulder dislocation is a rare and challenging condition characterized by capsular fibrosis, contractures, and vascular injury during open reduction.

→What this article adds:

This study presents clinical and radiological outcomes of the Latarjet procedure and open reduction in these patients. The procedure was associated with satisfactory functional outcomes, graft union, and no recurrent dislocation occurred during the study period. These findings add to the limited clinical evidence suggesting that the Latarjet procedure can be a reasonable treatment option for selected chronic anterior shoulder dislocations.

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incidence remains uncertain because of delayed presentations and neglected dislocations, particularly in resource-limited countries. (2, 3) According to the literature, the prevalence estimates range from 0.12% to 0.18%. (4)

Chronic or neglected anterior shoulder dislocation is commonly defined as a dislocation that remains unreduced for at least 3 weeks. In these patients, progressive soft-tissue contracture, capsular fibrosis, muscle shortening, and associated osseous defects of the glenoid and humeral head may develop, making closed reduction less likely to succeed and increasing the risk of complications during manipulation (5, 6).

Because of these structural changes, open reduction is often required in chronic cases, and the final stabilization procedure should be tailored to the degree of soft-tissue deficiency and bony loss (5, 6). Due to labral tears and bone defects, these patients are vulnerable to recurrent shoulder instability. Any surgical treatment in these patients should prevent consequent instability (7). Among the surgical options, the Latarjet procedure is increasingly common in patients with recurrent anterior shoulder instability, especially when glenoid bone loss or high-risk instability patterns are present. Its stabilizing effect is attributed to three mechanisms: restoration of the glenoid arc by coracoid transfer, the dynamic sling effect of the conjoint tendon, and reinforcement of the anteroinferior capsule (8, 9).

Although Latarjet has shown favorable functional outcomes and low recurrence rates in recurrent anterior shoulder instability, evidence for its use in neglected or chronic dislocations remains limited and is mostly based on case reports and small studies. These cases are technically demanding because of fibrotic adhesions, distorted anatomy, and increased difficulty of safe reduction (5, 6, 10).

Delayed presentations also raise concerns about neurovascular complications, particularly axillary nerve injury, which is the most commonly affected nerve after glenohumeral dislocation. Therefore, careful preoperative neurovascular evaluation is essential in neglected cases (11, 12).

Given these considerations, chronic anterior shoulder dislocations are a distinct subgroup with variable outcomes, which makes evaluating the safety and efficacy of the Latarjet procedure clinically relevant. The present study aimed to assess the functional outcomes and neurovascular complication rates following the Latarjet procedure in patients with chronic anterior shoulder dislocation, with particular emphasis on vascular safety and feasibility in a non–vascular surgery-supported trauma setting.

Methods

This retrospective cohort study was conducted in patients with neglected chronic anterior shoulder dislocation diagnosed between 2022 and 2024. Informed consent was obtained from all participants. The inclusion criteria were chronic anterior shoulder dislocation lasting more than four weeks and less than one year, regardless of age or sex. These patients were referred to our hospital with restricted shoulder range of motion. Patients with pre-existing vascular disorders of the affected limb, prior shoulder surgery, ipsilateral vascular access for hemodialysis, microvascular diseases (e.g., Buerger's disease), uncontrolled seizure disorders, uncontrolled psychiatric con-

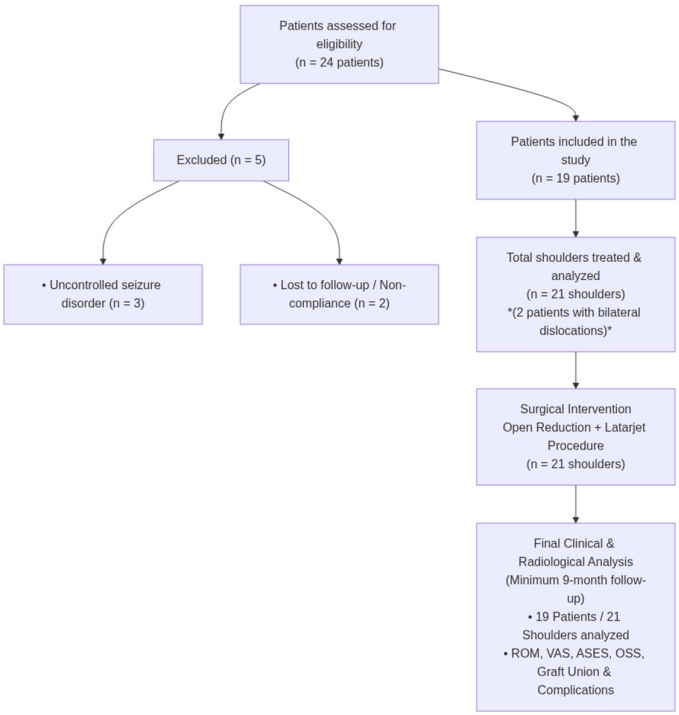


Figure 1. Diagram of study population

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ditions, or incomplete follow-up data were excluded to minimize confounding effects on functional outcomes and complication rates. 24 patients diagnosed with neglected anterior shoulder dislocation, 3 had uncontrolled seizures occurring at least one week before diagnosis, for which a neurologic consult was done and neurologic assessment and treatment were provided. Two of them were lost to follow-up; in contrast to direct contact with these patients, they did not come for follow-up examinations. Finally, 19 patients met the inclusion criteria and were included in the study. Two patients had bilateral chronic anterior shoulder fracture dislocations (21 shoulders), which were included in the statistical analysis (Figure 1).

Surgical Technique

All procedures were performed under general anesthesia with the patient in the supine position. After standard sterile preparation and draping, a deltopectoral approach was utilized. The coracoacromial and coracohumeral ligaments were released to allow graft mobilization. The anterior glenoid neck was prepared by decorticating the surface to create a bleeding cancellous bed, and the undersurface of the coracoid graft was similarly prepared. In contrast to the conventional technique, coracoid osteotomy was performed early in the procedure to reduce anterior soft-tissue tension and facilitate safer manipulation of the humeral head, thereby minimizing the need for excessive traction and reducing potential neurovascular risk previously described in chronic dislocations. A T-shaped split of the subscapularis tendon was performed, followed by capsulotomy and open reduction of the humeral head. The coracoid graft was then positioned on the anterior glenoid rim and fixed using two cannulated 4.5-mm titanium screws, restoring the anteroposterior glenoid contour and providing a bony block effect against anterior translation.

Outcome Measures

Postoperatively, the shoulder was immobilized in a sling

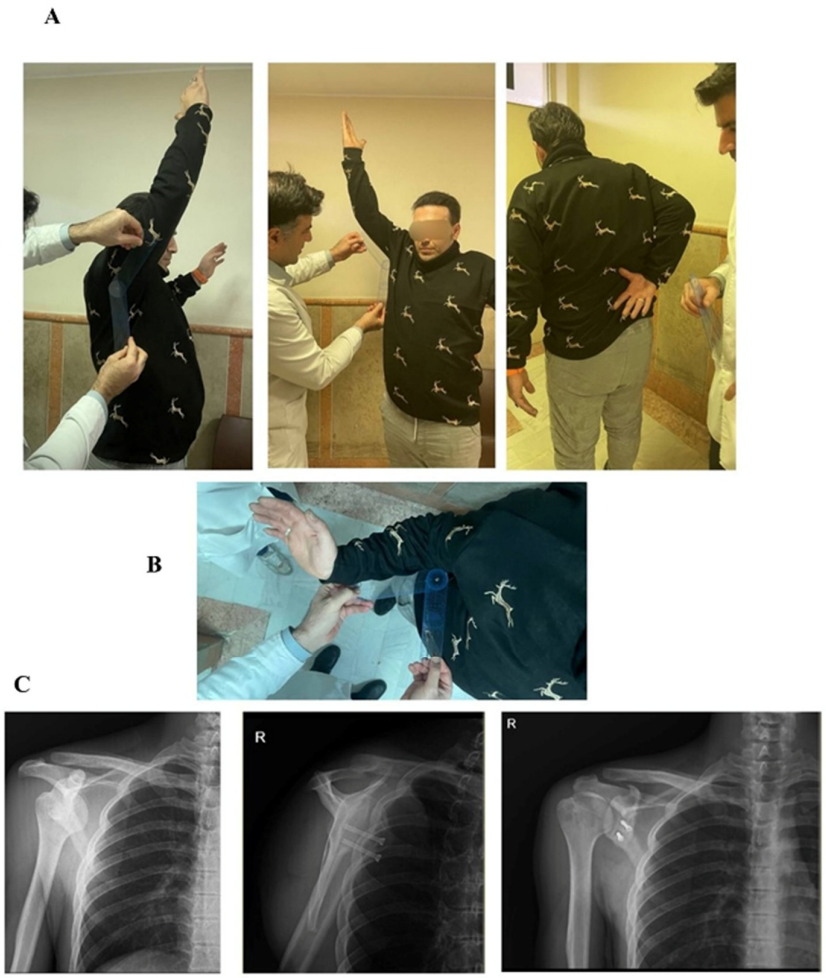


Figure 2. A) 32-year-old male with a history of anterior shoulder dislocation one month prior. Surgery was performed using the technique described in the article. Intraoperative images and ruler-assisted images demonstrate the shoulder range of motion 50 days after surgery. A) Shoulder range of motion physical examination, forward flexion, abduction, and internal rotation. B) External rotation range recorded with an orthopedic ruler. C) Pre-op and post-op radiographic images are shown.

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for two weeks, followed by protected use for up to six weeks with pendulum exercises. Active-assisted range of motion was initiated at 6–7 weeks, and full active motion was allowed after three months. External rotation and abduction were initially restricted and gradually increased after the fourth postoperative month. Follow-up visits were arranged 2,6,12,24,36 weeks postoperatively. The radiographic union was checked by a single shoulder surgeon (P.T.) and a shoulder surgery fellow (M.M.M). The radiographic union was defined as the presence of bridging callus in at least three out of four cortices, as seen on standard anteroposterior (AP) and lateral radiographs. At each follow-up visit at the clinic, shoulder range of motion (ROM) was measured using a goniometer (Figure 2). Pain intensity was evaluated using the visual analog scale (VAS; 0–10). Functional outcome questionnaires were assessed using the American Shoulder and Elbow Surgeons (ASES) score (0–100) and Oxford Shoulder Score questionnaire (OSS; 12–60), where higher ASES and OSS scores indicate better shoulder function (13, 14). Validated Persian versions of standardized questionnaires were used. The validity and reliability of these Persian versions had been established in previous studies. Clinical examination was conducted by a fellowship-trained shoulder and elbow surgeon and included shoulder abduction force, deltoid muscle tone, and two-point discrimination (for sensory ulnar nerve). Complications including neurovascular injury, graft nonunion, recurrent instability, and loss of external rotation were checked in each patient.

Statistical Analysis

Data were analyzed using STATA version 17. Continuous variables are expressed as mean ± standard deviation (SD) and categorical variables as frequencies and percentages. Due to the lack of a control group and small sample size, no inferential analysis was done; descriptive analyses were reported.

Results

In this study, 19 patients (21 shoulders in total) were evaluated. Of these, 16 were male (84.21%), and 3 were female (15.78%). The mean age of the patients was 30.89 ± 11.88 years (range: 14–61 years). Regarding occupation status, laborers were the largest subgroup (n=9, 47.36%), followed by drivers (n=3, 15.78%), housewives (n=2, 10.52%), students (n=2, 10.52%), guardsmen (n=1, 5.26%), production supervisors (n=1, 5.26%), and unemployed individuals (n=1, 5.26%). 15 patients stated the right hand as the dominant arm (78.94%), whereas 4 patients (21.06%) were left-handed. Among the total 21 shoulders, fracture-dislocation was observed in four cases (19.04%), whereas isolated shoulder dislocations accounted for the remaining 17 cases (80.95%). The most common etiology was seizure, accounting for 9 shoulders (42.85%), followed by motor vehicle accidents (n=5, 23.81%), falls from height (n=4, 19.04%), and ground-level falls (n=3, 14.28%). At initial assessment, neurovascular injury was observed in 4 shoulders (19.04%), consisting of axillary nerve injury in 3 shoulders (14.28%) and ulnar sensory nerve injury in 1 case (4.76%). The mean time from initial dislocation to definitive diagnosis was 7.09 ± 2.66 weeks. Detailed demographic characteristics are presented in Table 1.

The mean follow-up duration was 9.11±4.30 months. The patients were referred for physiotherapy 6 weeks post op to improve shoulder range of motion. The mean number of physiotherapy sessions was 19.38 ± 14.54 and was continued until an acceptable range of motion was achieved. The shoulder range of motion was evaluated at each follow-up visit, and according to the final follow-up, passive range of motion (ROM) assessment demonstrated a mean forward flexion of 130.23°±31.79°, abduction

Table 1. Demographic characteristics of the patients

Variable	Category	Frequency (%)
Sex (n=19)	Male	16 (84.21%)
	Female	3 (15.79%)
Age;Mean+SD		30.89±11.88
Occupation (n=19)	Driver	3 (15.78%)
	Guardsman	1 (5.26%)
	Housewife	2 (10.52%)
	Laborer	9 (47.36%)
	Student	2 (10.52%)
	Unemployed	1 (5.26%)
	Production supervisor	1 (5.26%)
Fracture Dislocation* (n=21)	Yes	4 (19.04%)
	No	17 (80.95%)
Mechanism* (n=21)	Ground-level fall	3 (14.28%)
	Fall from height	4 (19.04%)
	Seizure	9 (42.85%)
	Vehicle accident	5 (23.81%)
Hand dominance (n=19)	Right	15 (78.94%)
	Left	4 (21.06%)
Affected side (n=21)	Right	9 (42.85%)
	Left	12 (57.15%)
Initial Neurovascular condition* (n=21)	Axillary nerve injury	3 (14.28%)
	Ulnar sensory nerve injury	1 (4.76%)
	No injury	17 (80.9%)
Time from dislocation to diagnosis (weeks); Mean±SD		7.09±2.66

* In statistical analysis, for number of fracture-dislocations, mechanism, neurovascular condition, and affected side, a total of 21 shoulders were considered, but for other variables, 19 patients were analyzed.

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Table 2. Postoperative Functional outcomes

Variable	Category	Mean±SD
Follow-up duration (weeks) (n=19)		9.11±4.30
Passive ROM (degree)	Forward flexion	130.23±31.79
	Abduction	116.66±39.15
	External Rotation	48.33±23.73
	Internal Rotation	L1
	Median (1st - 3rd quartile)	(T12; L3)
Active ROM (degree)	Forward flexion	104.52±35.28
	Abduction	98.57±45.47
	External Rotation	38.80±22.52
	Internal Rotation *	L2 (L1;L4-5)
	Median (1st ; 3rd quartile)	
Muscle Force*	Jobs, Median (1st ; 3rd quartile)	5 (4;5)
	External Rotation, Median (1st ; 3rd quartile)	5 (4-5;5)
	Internal Rotation, Median (1st ; 3rd quartile)	5 (5;5)
Physiotherapy sessions (n=19)		19.38±14.54
VAS score		1.76±1.04
ASES score		72.14±11.58
OSS score		26.71±6.41

* Internal rotation and muscle force are reported as median (1st; 3rd quartile) rather than mean± SD due to their ordinal distribution; all other continuous variables are reported as mean ± SD.

of 116.66°±39.15°, and external rotation of 48.33°±23.73°. Passive internal rotation reached a median vertebral level of L1 (IQR: T12 to L3). Active ROM values showed a mean forward flexion of 104.52°±35.28°, abduction of 98.57°±45.47°, and external rotation of 38.80°±22.52°. Active internal rotation achieved a median level of L2 (IQR: L1 to L4-5).

Muscle force assessment yielded median grade 5 motor power across all evaluated domains, including Jobs strength test (median 5; IQR: 4 to 5), external rotation strength (median 5; IQR: 4–5 to 5), and internal rotation strength (median 5; IQR: 5 to 5). Evaluation of postoperative patient-reported outcomes revealed a mean Visual Analog Scale (VAS) pain score of 1.76±1.04. The functional score outcomes demonstrated a mean American Shoulder and Elbow Surgeons (ASES) score of 72.14±11.58 and a mean Oxford Shoulder Score (OSS) of 26.71±6.41. Radiographic assessment confirmed union of the coracoid graft to the scapular neck in 21 shoulders (100%). The nerve injury resolved spontaneously after 2-3 months postoperatively, and recovery was observed clinically; no further electromyographic study was needed. No intraoperative neurovascular complications were observed in any patient. Furthermore, no cases of recurrent shoulder dislocation were recorded during the follow-up period. The detailed postoperative clinical outcomes are summarized in Table 2.

Discussion

Chronic or neglected anterior shoulder dislocation is an uncommon and challenging condition. Unlike acute dislocation, chronic dislocation produces capsular fibrosis, muscular shortening, neurovascular entrapment in adhesions, and bone loss changes in the humeral head and glenoid. The optimal treatment of chronic anterior shoulder dislocations remains controversial. Reported strategies include closed reduction, open reduction with pin fixation, Bankart repair with or without remplissage, hemiarthroplasty, reverse shoulder arthroplasty, Bristow–Latarjet procedure, and bone grafting. Although the Latarjet procedure is well established for recurrent shoulder instability with significant glenoid bone loss, evidence regarding its use in chronic unreduced dislocation remains limited and is derived mainly from case reports and small observational series (15, 16).

A critical concern in both acute and chronic shoulder dislocations is neurovascular injury, particularly involving the axillary artery. Vascular complications may occur either as a consequence of the initial trauma or after reduction maneuvers (17-19). Chronic anterior shoulder dislocation has also been associated with occult vascular injury, including thrombosis, pseudoaneurysm, and arterial rupture, which may not be evident on initial examination (20). Case reports further demonstrate that axillary artery injury may become apparent only after attempted closed reduction or even after operative management in chronic cases (18, 20-22). These findings support careful pre- and post-reduction neurovascular examination and a low threshold for vascular imaging when compromise is suspected.

Despite these concerns, surgical treatment of chronic anterior shoulder dislocation has generally been associated with meaningful improvements in pain and function in small observational studies and case series. Rai et al. reported significant functional gains after open reduction combined with the Latarjet procedure in chronic unreduced anterior shoulder dislocation, with no recurrent dislocation or neurovascular complications in their small prospective cohort (5). A recent systematic review also found that surgical management usually improves shoulder function, although the evidence is limited, heterogeneous, and largely observational (23).

The present study evaluated 21 affected shoulders in 19 patients treated with open reduction and Latarjet procedures. No recurrent dislocation was observed during the follow-up period, and radiographs demonstrated complete union of the coracoid graft in all patients. The results were compared with the initial assessment of each patient and also with the contralateral limb. Due to severe pain and restricted range of motion, patients presenting with chron-

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ic shoulder dislocation experience lower VAS scores and better range of motion after the Latarjet procedure. These findings suggest that the procedure could be helpful in maintaining early structural stability, even when the anatomy has been substantially altered by prolonged dislocation. The absence of graft nonunion in this series is clinically relevant because graft healing is essential for maintaining the bony-block effect and may influence the long-term stability of the reconstruction. Notably, no vascular or neurological complications were observed during follow-up, and the functional outcomes were satisfactory. This suggests that, when performed carefully, the Latarjet procedure can be a feasible option in selected chronic patients.

A notable finding in the current study was the absence of intraoperative or postoperative neurovascular complications. Neurovascular injury is an important concern in chronic shoulder dislocation because the axillary artery and brachial plexus may be displaced, tethered, compressed, or previously injured. Vascular complications can be occult and may become apparent after manipulation or reduction. Therefore, the risk is not limited to the initial trauma; it may also be influenced by the force and direction of reduction maneuvers (24).

Among the surgical options, the Bristow-Latarjet procedure has gained attention because of its combined bony and soft-tissue stabilizing effects. In chronic or locked anterior dislocations, it may help restore anterior stability while addressing associated bone loss and soft-tissue deficiency (5, 23). The functional outcomes were also satisfactory. This finding is consistent with previous studies indicating that open reduction and stabilization can improve pain, range of motion, and shoulder function in carefully selected patients with chronic anterior dislocation. However, outcomes in the literature are heterogeneous. Some series have reported good to excellent function after head-preserving surgery, whereas others have described persistent subluxation, superior migration, pain, early arthrosis, or recurrent instability. These differences may reflect variations in the duration of dislocation, associated fractures, rotator-cuff status, humeral head viability, degree of bone loss, and surgical procedure used. A recent review similarly found that functional improvement is generally achievable after treatment of chronic anterior dislocation, but that complication rates remain considerable and the available evidence is predominantly observational (3, 25).

The surgical modification used in this study may have contributed to the favorable safety profile. Coracoid osteotomy was performed early to decrease anterior soft-tissue tension and facilitate mobilization of the humeral head before definitive reduction. In chronic dislocations, this sequence may reduce the amount of traction and force required to restore the joint, potentially limiting stress on the axillary neurovascular structures. Nevertheless, the absence of vascular or neurological complications in a small series should not be interpreted as proof that the technique eliminates risk. Rather, it suggests that early graft mobilization, controlled open reduction, adequate release of contracted tissues, and meticulous identification and protection of neurovascular structures may be useful technical principles.

Several limitations should be acknowledged. First, the study was retrospective and included a small number of patients from a single institution. Second, there was no control group treated with another surgical method, preventing direct comparison with alternative procedures. Third, the follow-up duration was relatively short and variable, with a minimum of nine months; therefore, late recurrence, osteoarthritis, hardware-related complications, and deterioration in external rotation may not have been detected. The patients presented with chronic dislocation, and the initial assessment of shoulder range of motion was not achievable due to severe pain and restricted shoulder motion. Finally, the use of consecutive convenience sampling and treatment by a single experienced surgeon may limit generalizability, although the latter may also have reduced technical variability.

Despite these limitations, this study provides additional clinical evidence regarding a rare condition for which treatment recommendations are not well established. The combination of open reduction, early coracoid osteotomy, and the Latarjet procedure was associated with graft union, restoration of stability, satisfactory early function, and no observed neurovascular complications in this series. Prospective multicenter studies with standardized preoperative and postoperative outcome measures, longer follow-up, and comparison with other head-preserving and arthroplasty-based procedures are needed to clarify the indications, durability, and relative safety of this approach.

Conclusion

Chronic anterior shoulder dislocation is a technically challenging condition associated with bone loss, potential neurovascular complications, capsular adhesion, and contractures. In this study, open reduction and the Latarjet procedure were performed in these patients. The functional and radiologic outcomes were assessed, and no recurrent dislocation or perioperative neurovascular complications were observed during the follow-up period. Due to the risk of neurovascular injury, these findings suggest that this technique may be a treatment option for patients with neglected chronic anterior shoulder dislocation, especially in trauma centers without a vascular surgeon. Nevertheless, the small sample size, retrospective design, absence of a control group, and relatively short and variable follow-up limit the strength and generalizability of these results.

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Conflict of Interests

The authors declare that they have no competing interests.

Authors' Contributions

MNA & PT contributed to conceptualization and Supervision. PT & RA designed the study and contributed to

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the methodology of the work. BH & BZ did data analysis. MKAA & MMM wrote the manuscript. MRB did the formal review of the draft. All authors contributed to results interpretation, manuscript preparation, and the review process.

Ethical Considerations

The study was approved by the Ethics Committee of Iran University of Medical Sciences, Tehran, Iran (Code: IR.IUMS.FMD.REC.1404.048) and registration number 1403-2-103-30529. All included patients were recruited in accordance with relevant ethical standards.

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Data Availability

More Data and details will be made available on request from the corresponding author during submission or after publication.

AI Use Statement

The authors did not use artificial intelligence or AI-assisted technologies in the preparation of this manuscript.

References

1. Hasebroock AW, Brinkman J, Foster L, Bowens JP. Management of primary anterior shoulder dislocations: a narrative review. Sports Med Open. 2019;5(1):31.
2. Babalola OR, Vrgoč G, Idowu O, Sindik J, Čoklo M, Marinović M, et al. Chronic unreduced shoulder dislocations: Experience in a developing country trauma centre. Injury. 2015;46:S100-S2.
3. Mabaso C, Mashigo M, Nkosi C. Outcomes of Chronic Anterior Shoulder Dislocation Treatment: A Systematic Review. Cureus. 2026;18(1):e100831.
4. Abdulahi M, Ali AO, Said AI, Walhad H, Elmi HSA. 5 months old neglected anterior shoulder dislocation treated with open reduction and laterjet procedure: A case report. Int J Surg Case Rep . 2024;124(C).
5. Rai AK, Bandebuche AR, Bansal D, Gupta D, Naidu A, RAI A, et al. Chronic unreduced anterior shoulder dislocation managed by Latarjet procedure: a prospective study. Cureus. 2022;14(1).
6. Chung H, Yoon YS, Shin JS, Shin JJ, Kim D. Chronic irreducible anterior dislocation of the shoulder without significant functional deficit. Clin Orthop Surg. 2016;8(3):333-8.
7. Amroodi MN, Jafari D, Kousari AA. Results of Open Bankart Surgery for Recurrent Anterior Shoulder Dislocation with Glenoid Bone Defect and Concomitant Hill-Sachs Lesion. Arch Bone Jt Surg. 2018;6(3):212-8.
8. Meyer AM, Lorentz SG, Droz LG, Ralph JE, Lau BC. Management of anterior shoulder instability in the contact athlete: a narrative review. Ann Jt. 2025;10:19.
9. Edwards TB, Walch G. The Latarjet procedure for recurrent anterior shoulder instability: rationale and technique. Oper Tech Sports Med. 2002;10(1):25-32.
10. Zari S, Sammouni O, Abdeljaouad N, Yacoubi H. Neglected Anterior Shoulder Dislocation Treated With Open Reduction and Latarjet Procedure: A Case Report. Cureus. 2023;15(2).
11. Avis D, Power D. Axillary nerve injury associated with glenohumeral dislocation: a review and algorithm for management. EFORT Open Rev. 2018;3(3):70-7.
12. Lorente A, Mariscal G, Barrios C, Lorente R. Nerve injuries after glenohumeral dislocation, a systematic review of incidence and risk factors. J Clin Med. 2023;12(13):4546.
13. Ebrahimzadeh MH, Birjandinejad A, Razi S, Mardani-Kivi M, Kachooei AR. Oxford shoulder score: a cross-cultural adaptation and validation study of the Persian version in Iran. Iran J Med Sci. 2015;40(5):404.
14. Mahmoudi Hashemi F, Mousavi J, Attarbashi Moghadam B, Talebian Moghadam S, Mousavi SH. Cross cultural adaptation, validity and reliability study of the Persian version of the American shoulder and elbow surgeons (ASES) questionaire for evaluation of shoulder function in injured athletes. J Mod Rehabil. 2013;7(1):34-9.
15. Sha, II, Majeed IS. Locked Neglected Anterior Shoulder Dislocation Treated With Open Reduction and Latarjet Procedure: A Case Report. J Orthop Case Rep. 2025;15(3):146-50.
16. Lubis AMT, Primaputra MRA, Dilogo IH. A case report of ten-month-neglected anterior shoulder dislocation managed by open reduction combined with Latarjet procedure. Int J Surg Case Rep. 2019;57:93-6.
17. Verhaegen F, Smets I, Bosquet M, Brys P, Debeer P. Chronic anterior shoulder dislocation: aspects of current management and potential complications. Acta Orthop Belg. 2012;78(3):291-5.
18. Magister S, Bridgforth A, Yarboro S. Axillary artery injury following closed reduction of an age-indeterminate anterior glenohumeral dislocation. J Orthop Case Rep. 2018;8(4):53.
19. Eyler Y, Kilic TY, Turgut A, Hakoglu O, Idil H. Axillary artery laceration after anterior shoulder dislocation reduction. Turk J Emerg Med. 2019;19(2):87-9.
20. Patousis A, Sachinis NP, Yiannakopoulos C, Givissis P, PATOUSIS AI. Axillary artery injury and by-pass restoration after open reduction of a chronic shoulder dislocation: a case report. Cureus. 2022;14(3).
21. Balogun M, Aremu O, Uwajeh A, Odeyemi OE. Axillary artery compression following reduction of a high-impact anterior shoulder dislocation: A case report of a rare complication. East Cent Afr J Surg. 2024;29(1):11-5.
22. HaengJin O, Hwang D, Park I, Lee M, Lee J-K. Axillary Artery Rupture after Shoulder Dislocation That Was Treated with a Self-Expanding Stent-A Case Report. J Musculoskelet Trauma. 2020;33(4):217-21.
23. Mabaso C, Mashigo M, Nkosi C, Mashigo Sr M, Nkosi CS. Outcomes of Chronic Anterior Shoulder Dislocation Treatment: A Systematic Review. Cureus. 2026;18(1).
24. Rodrigues MFBF, Rodrigues EF, Andreazza N, Alves LC, Mendes PNK. Case Report of Subclavian Artery Injury After Reduction of Right Shoulder Dislocation. Braz J Case Report. 2025;6(1):bjcr121.
25. Sahu D, Gupta S. Neglected and locked anterior shoulder dislocation: functional outcomes and complications after open reduction and preservation of humeral head. JSES Int. 2024;8(1):11-20.

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