

FROM PRIMARY TRAUMATIC DISLOCATION TO CHRONIC SHOULDER INSTABILITY: ARTHROSCOPIC BANKART REPAIR IN A YOUNG ACTIVE PATIENT

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Abstract

Anterior shoulder dislocation is the most common major joint dislocation and is seen particularly in young active adults. Recurrent instability may develop after a first traumatic dislocation, especially in patients treated conservatively. This paper presents the case of a 28-year-old male patient with recurrent anterior instability of the right shoulder associated with a Bankart lesion.

The patient experienced his first traumatic anterior shoulder dislocation while swimming recreationally. Closed reduction was performed, followed by conservative treatment and temporary immobilization. During the following year, he experienced several recurrent dislocations after minimal trauma, including a fall from bed during sleep and shoulder movement while taking off his clothes. Over time, the patient reported increasing fear of shoulder movement and limitation during daily activities.

Clinical examination showed findings consistent with chronic anterior shoulder instability, including positive apprehension testing. Magnetic resonance imaging (MRI) demonstrated an anteroinferior labral tear compatible with a Bankart lesion.

Because of recurrent low-energy dislocations and persistent functional limitation, arthroscopic Bankart repair using suture anchors was performed. Postoperatively, the shoulder was immobilized for a short period, followed by a structured physiotherapy and rehabilitation program with gradual return of range of motion and strengthening exercises.

At 18-month follow-up, the patient had regained full shoulder function without further episodes of instability. He successfully returned to normal daily and recreational activities and reported significant improvement in shoulder confidence and quality of life.

This case demonstrates the progression from primary traumatic anterior shoulder dislocation to recurrent instability in a young active patient. It also highlights the importance of MRI evaluation in recurrent cases and the role of timely surgical stabilization when conservative treatment fails.

Keywords: anterior shoulder dislocation, recurrent instability, Bankart lesion, arthroscopic Bankart repair, shoulder instability.

Introduction

Anterior shoulder dislocation represents the most common major joint dislocation encountered in orthopedic and emergency practice, accounting for approximately 90–95% of all shoulder dislocations. The glenohumeral joint possesses the greatest range of motion of any joint in the human body, allowing mobility in multiple planes but consequently predisposing it to instability and dislocation. Young active males represent the highest-risk population, particularly individuals participating in sports and activities involving overhead arm motion or trauma.

The stability of the shoulder joint depends on a complex interaction between static stabilizers — including the glenoid labrum, capsule, and glenohumeral ligaments — and dynamic stabilizers such as the rotator cuff musculature. Traumatic anterior shoulder dislocation frequently results in injury to the anteroinferior glenoid labrum, classically known as a Bankart lesion. Additional associated injuries may include Hill-Sachs lesions, capsular stretching, and rotator cuff injuries.

One of the major clinical concerns following primary anterior shoulder dislocation is recurrent instability. Recurrence rates vary significantly according to patient age, sex, and activity level, but young active males have recurrence rates reported as high as 70–90% following

conservative treatment. Repeated episodes of instability may lead to progressive capsulolabral damage, chronic pain, decreased shoulder function, and degenerative joint changes.

Although first-time dislocations are often initially managed conservatively through closed reduction and immobilization, increasing evidence supports early surgical stabilization in selected high-risk patients. Arthroscopic Bankart repair has become one of the most widely utilized procedures for recurrent anterior instability because of its minimally invasive nature, favorable functional outcomes, and relatively low recurrence rates.

The present paper describes a case of recurrent anterior shoulder instability in a young active adult who progressed from an initial traumatic dislocation to repeated low-energy redislocations associated with chronic instability and Bankart lesion formation. The case highlights the clinical importance of early recognition of instability progression, the diagnostic role of MRI, and the effectiveness of arthroscopic stabilization combined with structured rehabilitation.

Aim of the paper

The aim of this paper is to present and analyze a clinical case of recurrent anterior shoulder instability associated with a Bankart lesion in a young adult patient, and to discuss the diagnostic and therapeutic approach in the context of contemporary orthopedic literature.

More specifically, the objectives of this paper are:

To describe the clinical presentation and progression from first-time traumatic dislocation to chronic recurrent instability;

To emphasize the role of magnetic resonance imaging (MRI) in the evaluation of recurrent shoulder instability;

To illustrate the indications and outcomes of arthroscopic Bankart repair in recurrent anterior shoulder dislocation;

To discuss the importance of rehabilitation and postoperative physiotherapy in restoring shoulder function;

To compare the clinical findings and treatment outcomes of this case with current literature regarding recurrent anterior shoulder instability.

Literature review

Anterior shoulder dislocation is among the most frequent traumatic injuries encountered in orthopedic practice. Epidemiological studies indicate that the incidence is highest among young males involved in contact sports, overhead athletic activities, or physically demanding occupations. The mechanism of injury most commonly involves forced abduction, extension, and external rotation of the arm, leading to displacement of the humeral head anteriorly relative to the glenoid cavity.

The majority of anterior shoulder dislocations are associated with soft tissue injuries, particularly Bankart lesions involving detachment of the anteroinferior glenoid labrum. Hill-Sachs lesions, consisting of compression fractures of the posterolateral humeral head, may also occur due to impaction against the anterior glenoid rim during dislocation.

Recurrence after primary anterior shoulder dislocation remains a major clinical problem, especially in young active adults. Multiple studies have demonstrated significantly higher recurrence rates in patients younger than 30 years who undergo conservative treatment alone. Risk factors for recurrent instability include younger age, male sex, sports participation, ligamentous laxity, and associated labral injuries.

Magnetic resonance imaging (MRI) plays an important role in evaluating recurrent shoulder instability. MRI provides superior visualization of soft tissue structures including the glenoid

labrum, capsule, rotator cuff tendons, and associated ligamentous injuries. Identification of Bankart lesions and associated pathology is essential for planning surgical treatment.

The management of recurrent anterior shoulder instability has evolved significantly over recent decades. While conservative treatment remains appropriate for selected low-risk patients, arthroscopic stabilization procedures have become increasingly favored in young active individuals because of improved functional outcomes and reduced recurrence rates.

Arthroscopic Bankart repair involves reattachment of the detached labrum to the glenoid rim using suture anchors. Advantages of arthroscopic techniques include smaller incisions, less soft tissue trauma, reduced postoperative pain, shorter hospitalization, and earlier rehabilitation compared with open surgical procedures.

Postoperative rehabilitation is considered a critical component of successful treatment. Rehabilitation protocols generally include temporary immobilization followed by progressive range-of-motion exercises, rotator cuff strengthening, scapular stabilization exercises, and gradual return to physical activities. Successful rehabilitation contributes significantly to restoration of shoulder stability and prevention of recurrent dislocation.

Recent literature demonstrates favorable outcomes following arthroscopic Bankart repair, with high patient satisfaction rates and successful return to sports and occupational activities. However, recurrence remains possible, particularly in patients with significant bone loss, inadequate rehabilitation, or premature return to high-risk activities.

Presentation of the clinical case

4.1 Anamnesic and demographic data: The patient was a 28-year-old right-hand-dominant male who presented with recurrent episodes of right shoulder instability following a traumatic anterior shoulder dislocation sustained during recreational swimming.

The initial injury occurred approximately one year prior to definitive surgical treatment. During swimming activity, the patient experienced sudden severe pain in the right shoulder associated with immediate functional impairment and visible deformity. He was transported to the emergency department, where clinical and radiographic evaluation confirmed anterior glenohumeral dislocation.

Closed reduction was successfully performed, followed by temporary immobilization and conservative treatment. Initially, symptom improvement was achieved.

Approximately six months later, the patient experienced a second dislocation episode after a minor fall from bed during sleep. Compared with the initial trauma, this event occurred after significantly lower-energy trauma, suggesting progression toward chronic instability.

A third dislocation occurred several months later while the patient was removing a T-shirt, involving simple overhead arm movement without significant external trauma. Following this episode, the patient sought specialized orthopedic evaluation because of increasing instability, fear of recurrent dislocation, and limitation in daily activities.

The patient denied previous shoulder injuries before the initial traumatic event. No history of connective tissue disorders or generalized ligamentous laxity was reported.

4.2 Physical Examination : Orthopedic examination revealed mild asymmetry of the right shoulder compared with the contralateral side. Tenderness was present over the anterior glenohumeral region.

Range of motion was mildly limited because of pain and apprehension, particularly during abduction and external rotation. The anterior apprehension test was positive, reproducing the sensation of instability. Relocation testing relieved symptoms, supporting the diagnosis of anterior instability.

No neurological deficits were identified. Distal neurovascular examination was normal, including intact peripheral pulses and preserved motor and sensory function of the affected extremity.

4.3 Imaging and diagnosing: Plain radiographs confirmed anterior glenohumeral dislocation. The humeral head demonstrated anterior displacement relative to the glenoid cavity, consistent with subcoracoid anterior dislocation.

Because of recurrent instability episodes, magnetic resonance imaging (MRI) of the shoulder was performed for detailed soft tissue evaluation. MRI demonstrated an anteroinferior labral tear consistent with a Bankart lesion, together with capsular insufficiency contributing to recurrent instability.

Based on the patient's clinical presentation, recurrent low-energy dislocations, physical examination findings, and MRI results, the diagnosis of chronic recurrent anterior shoulder instability associated with Bankart lesion was established.

Surgical technique

Because of recurrent instability episodes and failure of conservative treatment, arthroscopic stabilization was recommended.

The procedure was performed under general anesthesia with the patient positioned in the beach-chair position. Standard posterior and anterior arthroscopic portals were established to allow visualization and instrumentation of the glenohumeral joint.

Diagnostic arthroscopy confirmed detachment of the anteroinferior glenoid labrum consistent with a Bankart lesion. Capsular laxity and instability of the anterior inferior glenohumeral ligament complex were also identified.

The glenoid rim was prepared using arthroscopic instruments to promote healing. Suture anchors were inserted into the anterior glenoid rim, and the detached labrum was mobilized and reattached to restore capsulolabral stability. Adequate tensioning of the repaired structures was achieved arthroscopically.

At the conclusion of the procedure, shoulder stability was reassessed and found to be satisfactory. The patient tolerated the procedure well without intraoperative complications.

Postoperative rehabilitation

Following surgery, the shoulder was immobilized using a sling for approximately four weeks in order to protect the repair and allow soft tissue healing.

Passive range-of-motion exercises were initiated gradually according to the rehabilitation protocol. Progressive physiotherapy focused on restoration of shoulder mobility, strengthening of the rotator cuff musculature, scapular stabilization, and gradual functional recovery.

Strengthening exercises were introduced progressively during the rehabilitation period. Particular attention was directed toward avoiding excessive external rotation and abduction during the early postoperative phase to minimize stress on the repair.

The patient demonstrated excellent compliance with physiotherapy and rehabilitation instructions throughout recovery.

Clinical course and follow-up

The postoperative course was favorable, with progressive improvement in pain, shoulder mobility, and functional stability.

At follow-up evaluation 18 months after surgery, no recurrent instability episodes had occurred. The patient reported absence of pain during daily activities and complete restoration of confidence during overhead arm movements.

Functional outcome assessment demonstrated substantial postoperative improvement.

Functional Score	Preoperative	Postoperative
DASH Score	54	6
Constant-Murley Score	48	92
WOSI Score	1120	120

The patient successfully returned to recreational sports activities and physical exercise without recurrence of instability.

Discussion

The present case demonstrates the typical progression from primary traumatic anterior shoulder dislocation to chronic recurrent instability in a young active adult. Young male patients represent the highest-risk group for recurrent instability following first-time anterior dislocation, particularly when initial treatment is conservative.

A notable aspect of this case is the progressive reduction in the amount of trauma necessary to produce redislocation. While the initial episode occurred during swimming activity, subsequent dislocations developed after minimal trauma, including a minor fall from bed and simple overhead arm movement while removing clothing. Such low-energy redislocations strongly suggest advanced capsulolabral insufficiency and chronic instability.

The role of MRI was particularly important in this patient. Although plain radiographs confirmed the presence of anterior dislocation, MRI provided detailed assessment of soft tissue structures and confirmed the presence of a Bankart lesion. Identification of labral pathology is essential in recurrent instability because soft tissue injuries frequently determine treatment strategy and prognosis.

Conservative treatment following first-time anterior shoulder dislocation remains widely used, especially in patients with lower physical demands. However, recurrence rates among young active males remain high. Repeated instability episodes may lead to progressive soft tissue damage, glenoid bone loss, development of Hill-Sachs lesions, and increasing functional limitation.

Arthroscopic Bankart repair has become one of the preferred surgical techniques for recurrent anterior instability because it allows restoration of capsulolabral anatomy using minimally invasive methods. Compared with open surgical procedures, arthroscopic stabilization offers reduced soft tissue trauma, decreased postoperative pain, shorter hospitalization, and faster rehabilitation while maintaining excellent functional outcomes.

Another important factor contributing to successful recovery in this case was structured postoperative rehabilitation. Physiotherapy plays a critical role in restoring range of motion, muscular strength, proprioception, and dynamic shoulder stability. Patient compliance with rehabilitation protocols significantly influences final functional outcomes and recurrence prevention.

The excellent postoperative recovery observed in this patient is consistent with contemporary literature reporting favorable outcomes following arthroscopic Bankart repair in young active individuals. The absence of recurrent instability at 18-month follow-up and the successful return to physical activity demonstrate the effectiveness of surgical stabilization combined with appropriate rehabilitation.

Despite the favorable outcome, recurrent instability remains a recognized complication after arthroscopic stabilization, particularly in patients with substantial glenoid bone loss, hyperlaxity, or premature return to contact sports. Long-term follow-up therefore remains important.

This case underscores the importance of early recognition of recurrent instability, appropriate imaging evaluation, and timely surgical intervention in high-risk patients with recurrent anterior shoulder dislocation.

Conclusion

Anterior shoulder dislocation in young active individuals carries a significant risk of recurrent instability, particularly when associated with Bankart lesions and treated conservatively after the initial episode.

This case demonstrates the progression from primary traumatic dislocation to chronic recurrent instability characterized by repeated low-energy redislocations and functional impairment. MRI evaluation played a critical role in identifying the underlying capsulolabral injury and guiding definitive treatment.

Arthroscopic Bankart repair combined with structured postoperative rehabilitation resulted in excellent functional recovery, restoration of shoulder stability, and successful return to physical activities without recurrence.

Early recognition of instability progression and timely surgical stabilization may prevent chronic shoulder dysfunction and improve long-term outcomes in young active patients with recurrent anterior shoulder instability.

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