

Purpose

The purpose of this case report is to determine the significance of a Bankart lesion as it relates to a 27-year-old male who must return to his occupation in order to sustain his lifestyle. This traumatic dislocation caused a bankart lesion which was operated arthroscopically, then rehabilitated. This particular dislocation has commonalities in the mechanism of injury, type of rehabilitation, and recurrence rates.

Introduction

Arthroscopic Bankart repair is a common procedure to treat anterior shoulder instability in patients with minimum glenoid bone loss (Defroda et al, 2017). "The overall goal of this procedure is to release, mobilize, and tension the capsulolabral complex at the antero-inferior aspect of the glenoid" (Defroda et al, 2017). This said, patients with bone loss or shoulder hyperlaxity are at risk for recurrent instability after an arthroscopic Bankart repair (Pascal, 2006). Interestingly, the detachment of the anterior half of the inferior glenohumeral ligament from the glenoid results in only a slight increase in anterior translation. It is the inferior glenohumeral ligament that is likely elongated to allow for to allow anterior glenohumeral dislocation (Speer et al, 1994).

Anatomy

Understanding the anatomy in relation to shoulder and the musculature surrounding is key to understanding the difficulty of a Bankart lesion. The glenohumeral joint is known to be unstable due to the shallow articulation of the glenoid. The labrum is a structure that deepens the socket of the glenoid fossa, which increases stability of the humeral head. The antero-inferior labrum anchors the inferior glenohumeral ligament, which limits anterior humeral translation. A Bankart lesion is the instance of the labrum separating from the glenoid rim.

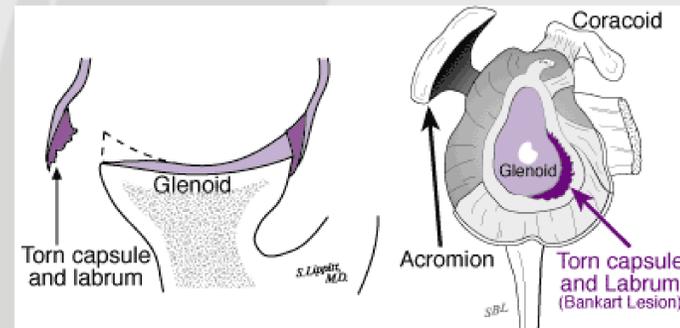


Case Report

Patient: A 27-year-old male landscaper was dragging a heavy object on the back of a golf cart when his arm suddenly and forcefully dislocated. The patient was immediately rushed to the hospital. The following information will explain the mechanism of injury and the procedural findings that accompanied the surgery.

Mechanism of Injury: The patient was at work dragging a heavy object off of the golf cart he was riding on when he suddenly hit a pothole and felt tremendous pain in his right shoulder. There was an obvious dislocation that was not immediately relocated. The patient was rushed to the hospital where they underwent arthroscopy and were able to treat him there.

Procedural Findings: The patient was induced with general anesthesia and intubated. The shoulder was arthroscoped through a standard posterior portal. The Bankart lesion was displaced inferiorly. The glenoid rim was debrided and a bur was used to facilitate healing of the bleeding bone. The biceps anchor and rotator cuff was intact and stable



Abstract

Background: This report details treatment of a 27-year-old male landscaper who acquired a Bankart lesion of the right shoulder while at work. The patient had no prior medical hx. Pt was working for a landscaping company and was riding a golf cart while gripping an object being dragged behind the cart. The patient pulled the object too hard and subsequently dislocated his right shoulder. Immediately the patient was transported to the hospital and underwent Sx on 5/9/18. Entering his evaluation, the patient had intact UE sensation. Patient is very guarded and has great point tenderness on ant. R shoulder, normal radial pulse and capillary bed refill. Edema and effusion were not measurable, but was visible during observation.

Differential Diagnosis: R arm dislocation, capsular inflammation, torn Labrum.

Initial Treatment: From point of arrival at the hospital, the patient was evaluated by a physician and had an MRI, which displayed a Bankart lesion of the anterior and inferior glenoid rim. The physician proceeded to surgery for his shoulder due to the increased instability and pain. Procedures performed include a right shoulder arthroscopy with extensive arthroscopic debridement, capsulorrhaphy, and a Bankart repair with platelet-rich plasma injected into the repair site as well. Patient was under general endotracheal anesthesia and had minimal blood loss during the procedure. As for post-surgical treatment, direct care for patient discussing HEP and PROM in accordance with the protocol provided by the physician includes light soft tissue mobilization on R shoulder musculature and ESTIM (pre-mod, 80-150, R shoulder) with cryotherapy packs to R shoulder to aid in pain relief.

Diagnosed Injury: R Labrum Tear, Bankart lesion of the anterior and inferior glenoid rim.

Uniqueness: Bankart lesions are relatively common in regard to a torn labrum. The mechanism of injury reported in the background indicates that this case is common in that the tear was caused by a dislocation. In this case, athletic trainers are important to not only athletes, but workers outside the realm of athletics as well. Though this injury presents as a classic case, the patient demonstrated very slow progress as to the ROM and strength measurements that accompanied his injury.

Conclusions: This case highlights the surgical prevention and treatment of a patient suffering from a right shoulder Bankart lesion and his functionality back to work. This case further highlights the necessity of progression of ROM, strength, and back to function therapeutic exercise that will be beneficial for the stability of the shoulder.

Rehabilitation and Results

Patient was immobilized and began formal rehabilitation 2 weeks post-operation. Patient was rehabilitated through a variety of methods that fulfill the goals set for each phase and benefit the progression of the patient. All three phases were met.

Phase 1

- ✓Decrease pain
- ✓Increase ROM
- ✓Decrease edema
- ✓Strengthening exercises

Plan

- Isometric exercises for PROM
- Scapular stabilization exercises
- AROM for wrist, forearm, and elbow
- Proprioception
- Ice and STIM for pain relief and inflammation

Phase 2

- ✓Progress scapular stabilization
- ✓Establish neuromuscular control
- ✓Progress ER ROM

Plan

- AAROM for GH, AC, ST, and SC joints
- AAROM and AROM to strengthen the rotator cuff, upper arm musculature, and scapular stabilization
- Core strengthening through verbal cues

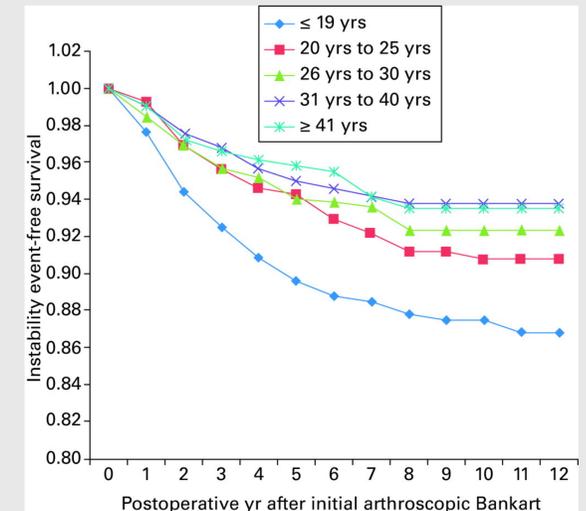
Phase 3

- ✓Full AROM with shoulder movements with normal scapulohumeral rhythm
- ✓Full rotator cuff and scapular strength
- ✓Progress toward resisted and weighted exercise

Plan

- AROM and resisted exercises Against gravity and resisted
- Strengthening includes scapular muscles, trapezius, pectoral group, upper arm musculature
- Proprioceptive exercises with band to provide necessary pressure and special abilities to perform ADL
- Core strengthening with verbal cues

Discussion and Summary



Bankart lesions are likely found in children and young adults who have succumbed to a traumatic dislocation of the glenohumeral joint, such as the patient in this case study. Arthroscopic stabilization procedures, such as the one involved in this case, have also seen dislocation recurrence rates associated with instability. Though the labrum may be surgically repaired with this procedure, incidence of recurrence is common (Mahure et al 2018). Long term problems with chronic shoulder weakness and dislocation may still be a problem even after an arthroscopic repair due to muscle weakness and instability in structures surrounding the Glenohumeral joint. Non surgical conservative treatment of a Bankart lesion also often results in large incidence of chronic instability and dislocation, which may result in further injury (McHale et al, 2017). The patient in this case report will need to continue rehabilitation even after his departure from physical therapy as a preventative measure from recurrent dislocations. Though he has gained strength in therapy, he will need to continue strengthening his shoulder after discharge in order to decrease the risk of multiple dislocations. Incidence of multiple dislocations resulting from post-surgical instability may indicate the need for a Latarjet procedure as opposed to an arthroscopic procedure.

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