Bankart Lesion in Landscaping Accident

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Purpose
The purpose of this case report is to determine the significance of a Bankart lesion as it relates to a 27-year-old man who must return to his occupation in order to sustain his lifestyle. This traumatic dislocation caused a bankart lesion which was operated upon anteriorly, then rehabiliated. This particular dislocation is common 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 capsular-labral 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 antero-lateral labral tissue from the glenoid is related to recurrence in cases requiring revision surgery following arthroscopic Bankart repair (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 labrum. The labrum is a structure that deepens the socket of the glenoid. The labrum anchors the inferior glenohumeral ligament, which limits anterior translation. It is the inferior glenohumeral ligament that is likely elongated to allow for anterior glenohumeral dislocation (Speer et al, 1994).

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 when he tripped, causing his right arm to hit the golf cart while it was running. He felt a pop 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 covered inferiorly and anteriorly. The glenoid rim was debrided and a bur was used to relax the healing of the bleeding bone. The biceps anchor and rotator cuff was intact and stable.

Rehabilitation and Results
Patient was immobilized and began formal rehabilitation 2 weeks post-operation. Patient was rehabilitated through a variety of methods that followed the goals set for each phase and 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 ROM with shoulder movements with normal scapulohumeral rhythm
• Full rotator cuff muscular strength
• Progress toward resisted and weighted exercise

Plan
• AROM and resisted exercises Against gravity and resistance
• Strengthening includes scapular muscles, trapezius, serratus anterior, and 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 dissolution 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 structure 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.

References