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A case of posterior instability shoulder with Reverse Bankart lesion treated with arthroscopic repair

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Abstract

Glenohumeral instability is a relatively common condition affected in 2% of population, with posterior instability is very uncommon.

Glenohumeral instability is usually anterior instability. Posterior instability usually seen in electric shock, seizures, psychosomatic disorders.

Redislocation and persistent pain is the main indication for repair of posterior instability due to posterior labral tear.

Normally done as open technique by posterior approach, we proceed to manage by Arthroscopic stabilization.

The posterior capsule, posterior band of the inferior glenohumeral ligament, and posterior labrum provide the greatest support posteriorly. An isolated lesion in any one of these posterior structures often results in unidirectional posterior instability.

Arthroscopic repair of posterior labrum has shown good results. The main difficulty with the procedure is gaining appropriate access to posteroinferior quadrant of glenoid. Additional posterolateral portal which is steep enough angle access to glenoid is required to avoid multiple accessory portals.

Keywords: posterior instability, Reverse Bankart, arthroscopic repair

Introduction

Case report

38 year old gentleman c/o severe pain right shoulder, sustained injury to right shoulder while doing his electrical job, fall from height and had posterior dislocation shoulder. clinical assessment revealed swelling and tenderness over rt shoulder. Reduction of shoulder in emergency was performed, arm was immobilized for 1 month and then physio was started, since then he had severe pain while moving the shoulder and not able to tolerate the pain. MRI reveals posterior labral tear (reverse bankarts lesion) fig 2.

Clinical examination

Jerk test was positive Patient seated, examiner flexes patient's arm to 90° & internally rotates glenohumeral joint, while applying long axis compression on the humerus.

Examiner then proceeds to horizontally adduct the shoulder across the front of the patient's body while maintaining the long axis compressive force.

Positive Sudden jerk, clunk or patient apprehension as the arm is moved Posterior glenohumeral instability.



Fig 1: Posterior labral tear from 7-11 O clock position

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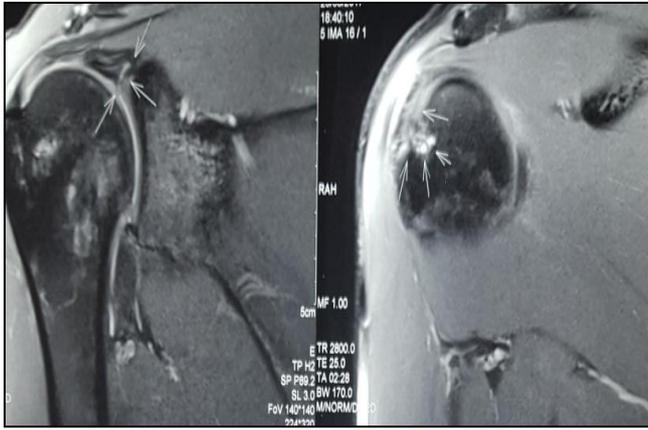


Fig 2: MRI showing Posterosuperior labral tear

Technique

The patient is placed in the lateral decubitus position. Balanced suspension is used to position the arm in approximately 70° of abduction. Bony anatomy including the scapular spine, acromion, clavicle, and coracoid is marked with a marking pen. The position for the standard posterior viewing portal is palpated in the “soft spot” approximately 2 cm medial and 2 cm inferior to the posterolateral corner of the acromion. In this situation, when the surgeon knows that posterior labral/capsule work is to be performed, the initial viewing portal is created 2 cm lateral and 1 cm inferior to the standard portal. This allows for a more lateral approach to the glenoid as opposed to the standard portal, which is more coplanar, allowing an appropriate angle for anchor placement (Fig 2). When one is placing anchors or sutures, this lateralized position eliminates the need for accessory portals during anchor placement.

Two anterior portals are then created by an outside-in approach with a spinal needle. The anterosuperior portal is created superiorly in the rotator interval. A mid-glenoid portal is also created just superior to the subscapularis tendon. A diagnostic arthroscopy is then performed from both the posterior portal and the anterosuperior portal. The arthroscope is left in the anterosuperior portal to perform the procedure. Two 8.5×75-mm cannulas (Arthrex) are placed into the anterior and posterior portals.

An elevator is used to liberate the labrum which is inserted through anterior portal and glenoid margin freshened with rasp to form punctuate bleeding (fig 2).

The drill guide is placed through the posterior cannula and positioned on the edge of the glenoid. The bone is then drilled and the anchor inserted with a mallet to the appropriate depth. A penetrating suture passer is used and pass the shuttle under the labrum at the site of anchor. This looped wire passer is grabbed through the anterior cannula, and the previously placed limb of suture is placed into the passer and is pulled through the labrum. Both sutures are now back in the posterior cannula. Arthroscopic knots are tied with modified sliding knot and backed up with half hitches. Before knot tying, the post-limb of suture is confirmed to be the limb that was passed through the labrum. With the sliding knot oriented this way, the capsular tissue is advanced toward the glenoid so that a tissue bumper is created, and the knot is posterior and not in the joint space. More anchors are then placed on the posterior glenoid, and the lateralized posterior portal allows appropriate access to the posterior labrum and capsule without the need for accessory portals. 1 double loaded and one single loaded anchors are used to complete the repair (fig 3).

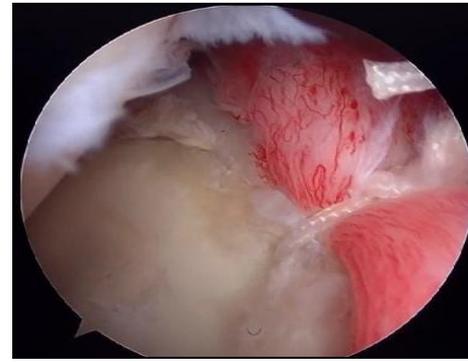


Fig 3: Posterior Capsulolabral repair with suture anchors

Discussion

The important stabilizing structures of the glenohumeral joint are the articular surfaces and congruity of the humerus and glenoid of the scapula, the capsular structures, the glenoid labrum, the intra-articular portion of the biceps tendon, and the rotator cuff muscles. Histologic evaluation of the posterior capsule shows it to be relatively thin and composed of only radial and circular fibers, with minimal cross-linking. Pathologies of the posterior capsule and labral complex are believed to be the main contributors to posterior instability. With the arm forward-flexed to 90 degrees, the subscapularis provides significant stability against posterior translation, and as the arm is placed in neutral, the coracohumeral ligament resists this force. With internal rotation of the shoulder (follow through phase of throwing), the posterior band of the inferior glenohumeral ligament complex is the main restraint to posterior translation [3]. Patients with a chronically locked posterior dislocation have an increased risk of developing chondral injuries and degenerative osteoarthritis.

Studies have shown rates of recurrence of 0% to 8% and rates of return to sport of 89% to 100% [4, 5, 6]. With the advancement of arthroscopic techniques have come better outcomes for both athletes and non-athletes alike. While open posterior labral repair and reconstructive surgery are still viable options, for the majority of patients, an arthroscopic repair will likely achieve a superior outcome.

Postoperatively patient has satisfactory outcome.

References

1. Ahlgren SA, Hedlund T, Nistor L. Idiopathic posterior instability of the shoulder joint: results of operation with posterior bone graft. *Acta Orthop Scand.* 1978; 49(6):600-603.
2. Bigliani LU, Kelkar R, Flatow EL, Pollock RG, Mow VC. Glenohumeral stability: biomechanical properties of passive and active stabilizers. *Clin Orthop Relat Res.* 1996; 330:13-30.
3. Blasler RB, Gulberg RE, Rothman ED. Anterior shoulder stability: contributions of rotator cuff forces and the capsular ligaments in a cadaver model. *J Shoulder Elbow Surg.* 1992; 1(3):140-150.
4. Bradley JP, Baker CL 3rd, Kline AJ. Arthroscopic capsulolabral reconstruction for posterior instability of the shoulder: a prospective study of 100 shoulders. *Am J Sports Md.* 2006; 34:1061-1071.
5. Kim SH, Ha KI, Park JH. Arthroscopic posterior labral repair and capsular shift for traumatic unidirectional recurrent posterior subluxation of the shoulder. *J Bone Joint Surg Am.* 2003; 85A:1479-1487.
6. Williams RJ III, Strickland S, Cohen M. Arthroscopic repair for traumatic posterior shoulder.