

BANKART REPAIR

Overview

The labrum is a rim of connective tissue and cartilage that surrounds the cup shaped glenoid, deepens the glenoid and helps to stabilise the head of the humerus in the glenoid. The glenohumeral ligaments attach to the outer edge of the labrum and forms part of the capsule of the shoulder joint that connects the head of the humerus with the glenoid rim. It stabilizes the shoulder joint which has the largest range of motion of any joint in the body. The Bankart lesion was first described by Arthur Bankart in 1923. It is caused by dislocation of the shoulder and involves the anterior and inferior parts of the labrum as well as the inferior glenohumeral ligament. When a piece of bone is pulled off together with the labrum, the lesion is called a bony Bankart.

Causes

Bankart lesions are typically caused by shoulder dislocation where the humeral head is forced out of the glenoid in an anterior and inferior direction. It happens when great forces are applied over the shoulder joint with the arm rotated externally and while it is elevated in a position above shoulder height.

The majority of shoulder dislocations in adolescents and young adults take place via a Bankart lesion. This lesion tends to cause recurrent instability and repeated dislocations of the shoulder.

Symptoms

Bankart lesion causes severe shoulder pain and deformity immediately after the injury. Once the shoulder is being reduced, it can still be painful for a couple of days after the injury. The feeling of instability is common, especially when the hand is placed in an overhead position. When pieces of labrum is torn and displaced into the joint space, a feeling of locking or clicking is experienced during shoulder movements. Repeating dislocations can cause further damage to the labrum capsule and cartilage of the joint.

Classification

MR arthrograms can be used to confirm Bankart lesions and involves the injection of dye into the shoulder joint before the scan is done. The contrast medium escapes through defects in the capsule and labrum and shows up on the MR scan in that manner. Most Bankart lesions involve a labrum tear and damaged to the anterior band of the inferior glenohumeral ligament.

Less often the humeral head can dislocate posteriorly, in which case the posterior band of the inferior glenohumeral ligament is damaged. Further classification is based on the presence of the glenoid fracture, the involvement of the articular cartilage of the joint and the position of the tear in the capsule or labrum. An injury which is called a HAGL lesion involves also the inferior gleno-humeral ligament but on the humeral side of this structure.

Treatment

In cases where there is only mild instability of the injury, the arm can be rested in a sling until pain and discomfort have subsided where after strengthening exercises can be employed. There is however greater tendency for the shoulder to reduce during this type of treatment in young patients.

To treat recurrent instability successfully, surgery is usually indicated whereby the labrum and the capsule is repaired back to the socket, either through an arthroscopic or an open procedure. Specialised anchors are used to attach the labrum and capsule to the glenoid and small fractures of the glenoid labrum can also be addressed in this manner. For larger bony lesions, bony repair or reconstruction might be necessary.