

SUBSPECIALTY PROCEDURES

OPEN BANKART REPAIR WITH
SUBSCAPULARIS SPLIT

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Published outcomes of this procedure can be found at: *Orthop J Sports Med.* 2022 Jul 28;10(7 suppl5):2325967121S00692.

Investigation performed at Duke University Medical Center, Durham, North Carolina

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Abstract

Background: Anterior shoulder dislocations are a common injury, especially in the young, active, male population¹. Soft-tissue treatment options for shoulder instability include arthroscopic or open Bankart repair, with open Bankart repair historically having lower rates of recurrence and reoperation, faster return to activity²⁻⁴, and a similar quality of life compared with arthroscopic repair⁵. More recent literature has suggested similar recurrence rates between arthroscopic and open procedures⁶. However, open Bankart repair may be indicated in cases of recurrent instability, especially if the patient participates in high-risk sports, because open repair can provide more capsular shift through the use of extra-capsular knots⁷. Performing a subscapularis split decreases the likelihood of subscapularis tendon avulsion following subscapularis tendon tenotomy and subsequent repair, as has been described in the literature⁸.

Description: Indications for open Bankart repair include failure of arthroscopic Bankart repair, multiple dislocations, with subcritical bone loss. This surgical technique is performed via the deltopectoral approach. The subscapularis tendon is exposed and "spared" by splitting the fibers with use of a longitudinal incision between the upper 2/3 and lower 1/3 of the subscapularis. We begin the split medially near the myotendinous junction. Because the subscapularis becomes increasingly difficult to separate from the capsule as it tracks laterally, a RAY-TEC sponge is utilized to bluntly dissect. A T-shaped laterally based capsulotomy is made to expose the glenohumeral joint. The vertical aspect is made first, followed by the horizontal aspect from lateral to medial, extending to the labrum. A Fukuda retractor is placed through the split to hold the humeral head laterally. The labrum is elevated, and the glenoid is prepared with rasp. Then labrum is repaired with knotted suture anchors until it is secure. One anchor is utilized for each "hour" of the clock face, with a minimum of 3 anchors. The anchors are placed on the articular margin of the glenoid. Sutures are passed from the anchor through the capsule and tied outside the capsule. The capsulotomy is then repaired with use of a suture. The suture is utilized to pull the inferior portion superiorly. The inferior portion is taken superiorly, and the superior leaflet is imbricated over the top. Finally, an examination is performed to ensure that the humeral head can be translated to

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but not over the anterior and posterior glenoid rims. No repair of the subscapularis tendon insertion is required. The incision is closed with deep dermal and subcuticular suture.

Alternatives: Nonoperative treatment options include rotator cuff and periscapular strengthening or immobilization. Operative treatment options include open Bankart repair with subscapularis tenotomy and repair, arthroscopic Bankart repair, or bone block augmentation procedures.

Rationale: This procedure is different from the alternative treatments in that it is an open procedure, which allows for a more robust repair because the capsule can be shifted and doubled over, leading to the described decreased recurrence and reoperation rates. Open Bankart repair is better suited for large lesions that would be difficult to repair via arthroscopy. This procedure differs from other open Bankart techniques because the subscapularis is split rather than tenotomized, which removes the need to repair the tendon and decreases the rate of avulsion of the subscapularis tendon repair. Finally, this procedure is less invasive than the Latarjet procedure because it does not require osseous osteotomies and fixation.

Expected Outcomes: This procedure provides adequate capsular shift and visualization of the Bankart lesion without the increased risk of postoperative subscapularis tendon injury.

Important Tips:

- If the subscapularis split alone does not provide adequate visualization, portions of the subscapularis tendon can be released from the lesser tuberosity.
- The location and origin of the upper and lower subscapular nerves can have variable courses, which could theoretically put them at risk for iatrogenic injury; however, studies have shown this subscapularis split technique to be safe from and prevent denervation of the muscle.

Acronyms and Abbreviations:

- GBL = glenoid bone loss
- EUA = examination under anesthesia
- MRI = magnetic resonance imaging
- HSL = Hill-Sachs lesion
- AHCA = anterior humeral circumflex artery

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