

Technical Note

Simplified Single-Portal V-Shaped SLAP Repair

Eduard Buess, M.D., and Constanze Schneider, M.D.

Abstract: We present a simplified and cost-effective method for repair of a type II SLAP lesion that requires only 1 working portal in the rotator interval—the lateral anterosuperior portal (LASP)—which is about 3 cm more lateral than the standard ASP. The rotator cuff tendon or muscle are not violated when using this portal, which provides an unproblematic 30° angle for the drill hole. The biceps root can be firmly reattached anteriorly and posteriorly using 1 double-loaded absorbable bone anchor with a suture eyelet. The first stitch is performed using a straight suture hook to pierce the anterior biceps root from the front. A PDS utility suture helps to shuttle the braided suture in a retrograde manner through the labrum. We then tie a sliding knot seating solidly on top of the labrum. The second stitch is placed with a 45° curved suture hook allowing us to pierce the labrum posteriorly to the biceps from above. Again, a sliding knot will be seated on top of the posterior biceps root, pressing it firmly onto the previously abraded bone. The completed repair looks like a V and produces secure fixation of the biceps, thus eliminating the peel-back phenomenon. **Key Words:** SLAP lesion—SLAP repair—Portals—Shoulder arthroscopy.

The interest in lesions of the superior labrum and biceps anchor has been rapidly increasing since Snyder's first description and classification of SLAP-lesions in 1990.¹ Many aspects of SLAP (superior labrum anterior and posterior) lesions remain controversial like the mechanism of injury and the technique of repair.² The symptoms are often confusing because of overlap with symptoms originating from concomitant partial or complete rotator cuff tears. In athletic patients, a SLAP lesion can present as a dead-arm syndrome.³ The most useful clinical tests seem to be the O'Brien and the Jobe relocation tests.⁴

A SLAP lesion can be found either isolated or

combined with all patterns of anterior, posterior, or multidirectional instability, and with rotator cuff tears. Its repair aims at restoring the hoop stress of the intact labral circle and the glenoid "suction cup" that enhances stability by means of adhesion and cohesion.^{3,4}

A type II SLAP lesion is considered significant according to Burkhart if the following signs are found at diagnostic arthroscopy: (1) an uncovered glenoid of 5 mm or more medial to the corner, (2) a displaceable vertex, and (3) a positive peel-back sign.³ The peel-back sign has proven to be very useful in our experience.

Numerous proposals for the technique of SLAP repair have been published, but suture anchors can now be considered as the state of the art. Different operative approaches to the superior glenoid have been advocated, e.g., through the rotator interval,⁵ through the rotator cuff,^{4,6} or through the supraspinatus muscle.⁷

Our purpose was to develop a reliable, fast, economical, and easy-to-teach technique for type II SLAP repair using 1 double-loaded suture anchor and the smallest number of portals and amount of disposable material possible.

From the Orthopedic Department, Sonnenhof Clinic, Berne, Switzerland.

Address correspondence and reprint requests to Eduard Buess, M.D., Buristrasse 11, CH-3006 Berne, Switzerland. E-mail: ebuess@shoulder-care.ch

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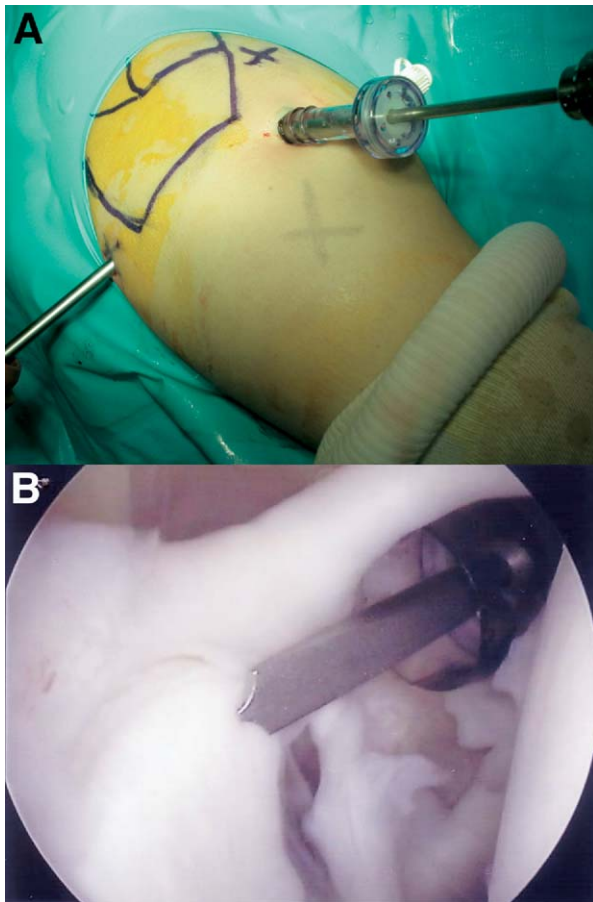


FIGURE 1. (A) Arthroscope in the posterior viewing portal with an 8.25-mm working cannula in the LASP closely related to the anterior edge of the acromion. (B) Drill bit inside cannula meeting the glenoid joint surface at a 30° angle. Drill hole may be 1 to 2 mm inside the articular cartilage.

SURGICAL TECHNIQUE

The patient is placed in the beach-chair position with 3 kg of anterior skin traction. After diagnostic evaluation with the arthroscope in the standard posterior portal and confirmation of a SLAP lesion type II we routinely perform the peel-back test as described by Burkhart and Morgan^{3,4} to get an impression of the biomechanical relevance of the SLAP lesion. In our experience, it is often not easy to distinguish between a type I lesion (to be debrided and left alone) and a type II lesion (to be repaired).

Once the decision is made to repair, we establish, in an outside-in fashion, a lateral anterosuperior portal (LASP), which is about 3 cm more lateral than the standard anterosuperior portal (Fig 1A) and passes directly above the superior glenohumeral ligament, as

close to the biceps and as lateral as possible. The anterior border of the supraspinatus tendon is left untouched. This portal provides an unproblematic 30° angle for the drill hole in relation to the glenoid joint surface (Fig 1B). After probing with a needle, we introduce a switching stick and equip the LASP with a 8.25-mm working cannula. No other portals are needed for the entire procedure.

The lesion is debrided with a shaver down to cancellous bone. After that, a 2.9-mm drill hole is established with a step-drill directly at the edge of the articular cartilage or 1 to 2 mm inside it. We then introduce an absorbable Panalok Loop anchor (DePuy Mitek, Norwood, MA) containing a suture eyelet loaded with a white No. 2 Panacryl and a green No. 2 Ethibond (Ethicon, Somerville, NJ) suture. The double-loaded anchor is pushed in and locked. The can-

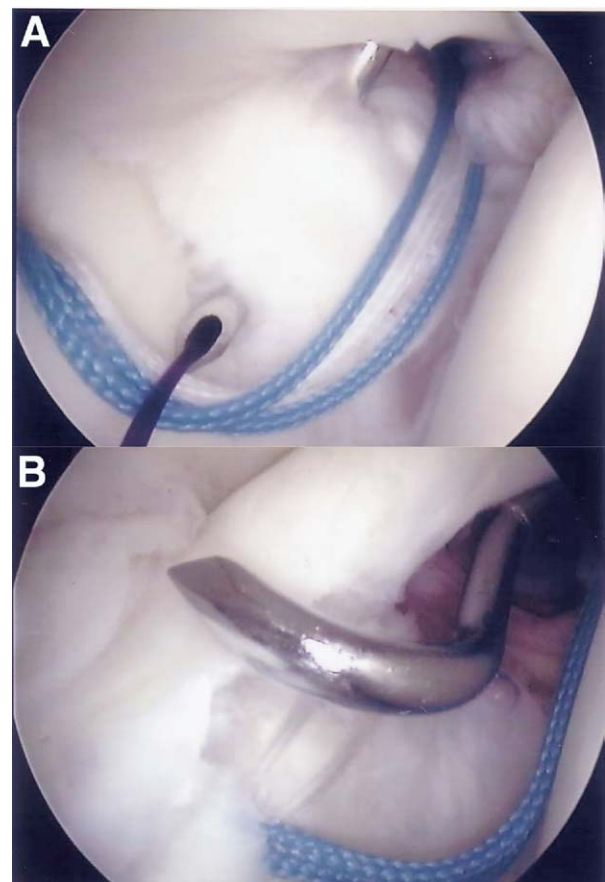


FIGURE 2. (A) The Spectrum suture hook “straight” piercing the anterior biceps root. The PDS utility suture strand is fed into the joint to retrieve the white Panacryl suture. (B) The suture hook “45° left curve” is ideal to pierce the (biomechanically more important) posterior biceps root.

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