



ELSEVIER

# Arthroscopic Management of Superior Labrum Anterior and Posterior (SLAP) Lesions

Christopher A. Kurtz, MD, Robert J. Gaines, MD, and Jerome G. Enad, MD

**Shoulder injuries, including tears of the superior labrum, are common in the active-duty military population. When sufficiently symptomatic, repairs may be undertaken using arthroscopic techniques. Currently, repair of unstable tears generally involves the use of suture anchors and arthroscopic suture passage and tying. Surgical repair of unstable superior labrum anterior and posterior (SLAP) lesions is predictably successful in the majority of patients with most able to return to their preinjury level of function including active military duty.**

**Oper Tech Sports Med 13:157-161.**

**KEYWORDS** SLAP, superior labrum, arthroscopy, military, superior labrum anterior posterior

The evolution of shoulder arthroscopy saw the discovery of previously unappreciated shoulder pathology. Principle among these discoveries is disruption of the superior labrum. The initial description by Andrews and coworkers<sup>1</sup> detailed the arthroscopic findings in 73 overhead athletes. They described the continuity of the biceps-labrum complex and the apparent avulsion of the anterior-superior labrum. In a review of 700 shoulder arthroscopies, Snyder and coworkers<sup>2</sup> identified 27 superior labral injuries and subclassified them into 4 types. They described these lesions of the superior labrum as extending from anterior to posterior and coined the term "SLAP." The type I lesion has fraying at the superior labral margin. The type II lesion has a detached biceps anchor (Fig. 1). The type III lesion has a bucket-handle tear of the superior labrum (Fig. 2). The type IV lesion has a labral split that extends into the biceps tendon (Fig. 3). Maffet and coworkers<sup>3</sup> added 3 additional combined types.

The type V lesion is a type II combined with a Perthes/Bankart lesion. The type VI lesion is a combination of types II and III. The type VII lesion involves superior labral detachment with extension under the middle glenohumeral ligament.

Surgical management of SLAP lesions usually entails arthroscopic debridement or repair. In general, repairs are performed with either an absorbable tack<sup>4-8</sup> or with suture repair.<sup>9-18</sup> Each approach has its unique set of advantages and disadvantages. Current implant designs and advances in arthroscopic techniques have made suture repair technically less daunting, effectively offsetting the relative ease of absorbable tack insertion.

Shoulder problems in active-duty military patients are common. This unique patient population engages in extremely strenuous activities that can rival many high-end athletes. As such, superior labral injuries are not uncommon. In addition to the standard medical concerns, our patient population has the added burden of returning to full duty as a productive member of the armed services. Return to full-duty success, therefore, is often synonymous with surgical outcome.

## Clinical Evaluation

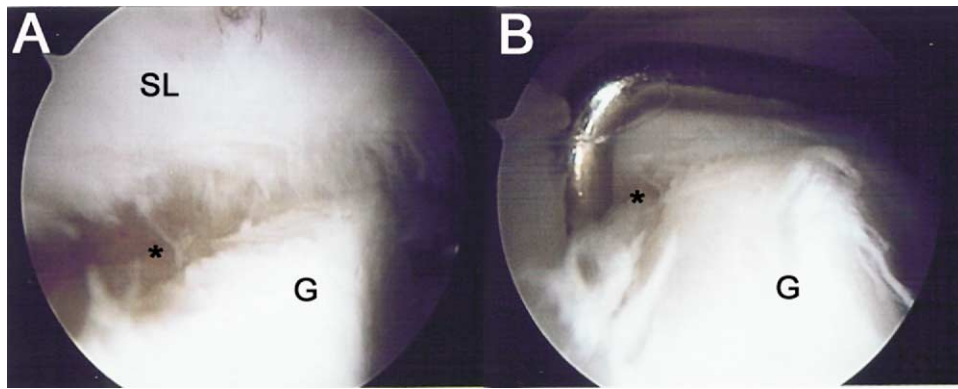
The patient with a SLAP tear will frequently complain of deep, nonspecific pain. Often they will localize the pain posteriorly. Symptom onset may be related to trauma, repetitive overuse, or may be insidious in nature. In addition to complaints of pain, patients may relate feelings of instability, catching, grinding, or weakness.<sup>19</sup> SLAP lesions may coexist with other shoulder disorders including impingement, rota-

Department of Orthopaedic Surgery, Bone and Joint/Sports Medicine Institute, Naval Medical Center Portsmouth, Portsmouth, VA.

The views expressed in this article are those of the authors and do not reflect the official policy or position of the Department of the Navy, Department of Defense, or the United States Government.

The authors are military service members (or employees of the U.S. Government). This work was prepared as part of their official duties. Title 17 U.S.C. 105 provides that "Copyright protection under this title is not available for any work of the United States Government." Title 17 U.S.C. 101 defines a United States Government work as a work prepared by a military service member or employee of the United States Government as part of that person's official duties.

Address reprint requests to Christopher A. Kurtz, MD, Department of Orthopaedic Surgery, Bone and Joint/Sports Medicine Institute, Naval Medical Center Portsmouth, 27 Effingham Street, Portsmouth, VA 23708. E-mail: cakurtz@mar.med.navy.mil.



**Figure 1** Two images of a type II SLAP tear in the same patient viewed from the posterior portal in a right shoulder. Patient is in the beach chair position. (A) Arm in the late-cocking position showing a “peel-back” phenomenon with exposure of subchondral bone (\*). (B) Superior labrum probed with arm at the side also exposing subchondral bone (\*). SL, superior labrum; G, glenoid rim. (Color version of figure is available online.)

tor cuff tears, instability, acromioclavicular arthrosis, and perilabral cysts. The nonspecific nature of the complaints juxtaposed with other associated pathologies combine to make diagnosis by history difficult.

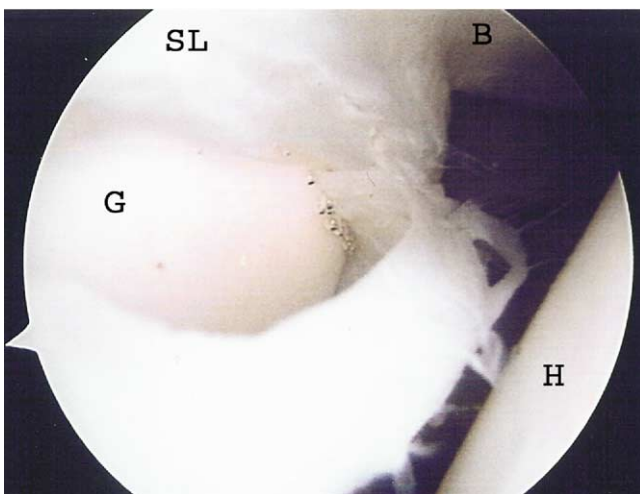
Physical examination is equally problematic. Numerous examination maneuvers have been described including Speed’s biceps tension test, Yergason’s test, the apprehension test, the O’Brien maneuver,<sup>20</sup> the crank test,<sup>21</sup> Kim’s biceps load test,<sup>22</sup> and the Jobe relocation test.<sup>23</sup> A study by Guanche and Jones<sup>24</sup> found only the O’Brien maneuver, the Jobe relocation test, and the apprehension sign to correlate with the presence of a SLAP tear found at arthroscopy. Even combined, none of these showed diagnostic specificity. It is recommended that multiple maneuvers be performed when examining a shoulder with a suspected SLAP tear, and the combined results may be suggestive but not definitively diagnostic.

Imaging, like history and physical examination, can be

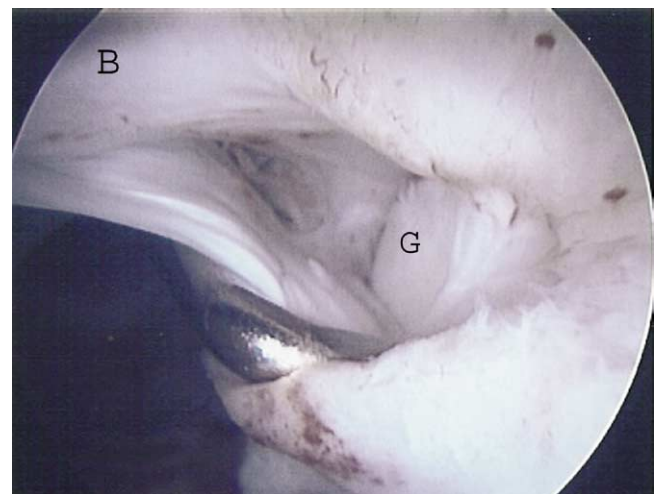
suggestive but not completely sensitive. Plain radiographs, although indicated in the evaluation, are generally noncontributory. Magnetic resonance imaging, especially when performed with intra-articular gadolinium, can aid in the diagnosis (Fig. 4). Sensitivity is approximately 80% with specificity over 95%.<sup>25</sup> In short, the diagnosis of SLAP tears through all means can be a challenge. When history, examination, and imaging all suggest the diagnosis, then it is reasonable to pursue definitive treatment via arthroscopy.

## Surgical Indications

Surgery is indicated in patients with the presumptive diagnosis of a SLAP tear and in whom the symptoms interfere with their activities such that they are willing to undergo surgery and commit to the postoperative rehabilitation. A trial of conservative management is reasonable but not required. Nonoperative treatment before surgery may help op-



**Figure 2** A type III SLAP tear viewed from the posterior portal in a right shoulder. Patient is in the beach chair position. SL, superior labrum; B, biceps tendon; G, glenoid; H, humeral head. (Color version of figure is available online.)



**Figure 3** A type IV SLAP tear viewed from the posterior portal in a left shoulder. Patient is in the beach chair position. Note the tear extension into the biceps (B) and the glenoid (G) visualized through the defect. (Color version of figure is available online.)

Download English Version:

<https://daneshyari.com/en/article/9357020>

Download Persian Version:

<https://daneshyari.com/article/9357020>

[Daneshyari.com](https://daneshyari.com)