

Comparison of Two Surgical Methods for SLAP Lesions

Author: Holly Winiarczyk, Athletic Training Student
 Project Sponsors: Shellie Nelson, EdD, ATC; Nora Kraemer, Ph.D., ATC, CSCS
 Health, Exercise and Rehabilitative Sciences Department
 Winona State University

ABSTRACT

Clinical Scenario: Superior labrum anterior posterior (SLAP) tears are found in an overhead population, especially athletes. An overhead population includes people who do most of their work above their head, or who have repetitive movements above their head. Two surgical methods being researched for the best outcome include repairing the labrum tear or performing a biceps tenodesis. **Focused Clinical Question:** In patients with SLAP lesions what is the difference in repair versus biceps tenodesis on function through the ASES score? **Search Strategy:** For research methods, many data bases were used including PubMed, CINAHL Plus, Cochrane Library and ProQuest Nursing Collection. To narrow down the results, a variety of terms were searched on each of these databases. They are SLAP Lesion Treatment, repair, biceps tenodesis, return to play, and return to full function. Inclusion criteria were SLAP lesion repair, biceps tenodesis, return rates to full function. Exclusion criteria were multiple labrum tears, rotator cuff tears, or minimal function before injury or having another repair along with the labrum repair. **Evidence Quality Assessment:** The PEDro score is used to measure the quality of the studies that are done. The studies ranged from 5/10 to 8/10. And the Oxford levels ranged from 2-3. **Results and Summary of Search:** Studies found that in an older population biceps tenodesis could be a better option as to repairing the SLAP lesion. The recovery time was shown to be shorter and more of the patients returned to full function. The studies stated that repairing the SLAP lesion should be done in a young active overhead population, as opposed to biceps tenodesis is better for an older non-overhead population. Strengths in the studies were the amount of shoulders evaluated and worked on, whereas weaknesses include lack of follow up with patients. **Clinical Bottom Line:** Biceps tenodesis is better for an older non-overhead population, whereas SLAP repair is better for a younger overhead athlete population. This is because there could be a deficit with range of motion with biceps tenodesis, because this involves cutting the long head of the tendon. A SORT grade of B is given. **Implications:** This information can be used in clinical practice by Certified Athletic Trainers by helping guide a patient to see which procedure they should think about. This information can help patients weigh the pro's and con's to each option. Pro's can include recovery time with tenodesis whereas con's can come from issues with full range of motion due to the cutting of the biceps tendon. **Word Count: 433**

CLINICAL SCENARIO

- Superior labrum anterior posterior (SLAP) tears are common in an overhead population.¹
- A repair of the SLAP lesion involves reattaching the tendon to the labrum.³
- Tenodesis is cutting the long head of the biceps tendon and reinserting it on the humerus.²
- Tenodesis is typically performed on patients 35 years of age or older.⁴
- Repair of the SLAP lesion is performed on younger, generally more active individuals.⁴
- The outcome these studies are looking at function through ASES scores.

FOCUSED CLINICAL QUESTION

- In patients with superior labrum anterior posterior (SLAP) lesions what is the difference in SLAP repair versus biceps tenodesis using ASES scores?

SEARCH STRATEGY

- Databases: PubMed, CINAHL Plus, Cochrane Library and ProQuest Nursing Collection.
- Search Terms: SLAP Lesion Treatment, repair, biceps tenodesis, return to play, and return to full function.
- Inclusion Criteria: SLAP lesion repair, biceps tenodesis, return to full function.
- Exclusion Criteria: multiple labrum tears, rotator cuff tears, minimal function before injury or having another repair along with the labrum repair.

EVIDENCE QUALITY ASSESSMENT

- PEDro Scores ranged from 5 to 8.
- Oxford 2011 scores ranged from 2 to 3.

Figure 1. Biceps Tenodesis

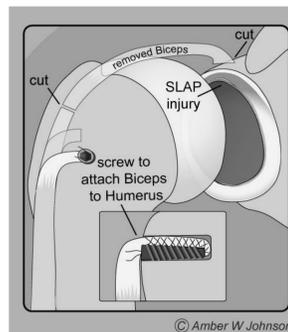


Figure 1. (Left) This image is showing biceps tenodesis. The long head of the tendon gets reattached to the humerus.

Figure 2. SLAP Injury

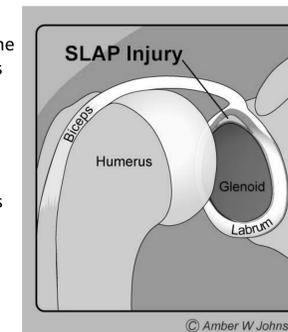


Figure 2. (Right) This image is depicting a SLAP lesion and where it occurs in the labrum. When repairing this they stitch the labrum back together.

Shukla R. SLAP Lesions: Coding Guideline of Arthroscopic SLAP Repair. Passionate In Knowledge. <https://passionateinknowledge.com/2017/06/16/slap-lesions-coding-guideline-of-arthroscopic-slap-repair/>. Published June 16, 2017. Accessed April 2, 2018.

Why do I need a biceps tenodesis for a labrum tear? | North Jersey Orthopaedic Clinic Blog. North Jersey Orthopaedic Clinic. <http://www.njortho.com/need-biceps-tenodesis-labrum-tear/>. Published May 16, 2016. Accessed April 2, 2018.

RESULTS AND SUMMARY OF SEARCH

Circle the number in the box that indicates your ability to do the following activities:
 0 = Unable to do 1 = Very Difficult 2 = Somewhat Difficult 3 = Normal

ACTIVITY	LEFT ARM	RIGHT ARM
1. Put on a coat	0 1 2 3	0 1 2 3
2. Sleep on your painful or affected side	0 1 2 3	0 1 2 3
3. Wash back/do up bra in back	0 1 2 3	0 1 2 3
4. Manage toileting	0 1 2 3	0 1 2 3
5. Comb/Wash Hair	0 1 2 3	0 1 2 3
6. Reach a high shelf	0 1 2 3	0 1 2 3
7. Lift 10 lbs. above shoulder	0 1 2 3	0 1 2 3
8. Throw a ball overhand	0 1 2 3	0 1 2 3
9. Do usual work- List:	0 1 2 3	0 1 2 3
10. Do usual sport- List:	0 1 2 3	0 1 2 3

Pain
 On the following scale of 0 – 10, please circle your answer.
 How bad is your pain today?

0 = No pain at all 10 = Pain as bad as it can be

0 1 2 3 4 5 6 7 8 9 10

Function
 On the following scale of 0 - 10, please circle what you consider to be the current overall function of your shoulder.

0 = My shoulder is Useless 10 = My shoulder is Normal

0 1 2 3 4 5 6 7 8 9 10

Figure 3. ASES Score Chart
 This is that form that patients filled out to measure their function and pain levels. (ASES - Orthopaedic Scores. http://www.orthopaedicscore.com/scorepages/patient_completed_score.html. Accessed April 2, 2018.)

RESULTS AND SUMMARY OF SEARCH, CONT.

Table. 1 Post operative ASES Scores for Biceps Tenodesis and SLAP Repair

Study	Post Tenodesis-ASES	Post SLAP ASES	P-value
Chamlers,Patrick ¹	87	84	Not sig.
Ek, Eugene ²	93.3	93.5	0.45
Gottschalk,Michael ³	87.5	86.7	<0.001
Denard, PJ ⁴	89.9	87.4	0.87

Table. 1 This table shows the ASES scores from four different studies. It also shows the level of significance through the p-value. This compares the numbers that were shown between SLAP repair and biceps tenodesis. There is no significant difference between the two.

CLINICAL BOTTOM LINE

- Biceps Tenodesis was found to have a quicker recovery time with return to full function as compared to a SLAP lesion repair.
- SLAP lesion repair is better for patients under 35 years of age.
- Overall, there was no significant difference between the two surgical methods on return to full function based on ASES scores.

IMPLICATIONS

- Patients need to be educated on the best option for their needs based on age and activity level.
- Tenodesis can have a quicker recovery time, however it can be linked to decreased range of motion because of the cutting of the biceps tendon.¹
- Repairing a SLAP lesion can lead to a longer recovery time however the biceps tendon remains in tact.²

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