Failed SLAP: What Do I Do Now?

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Disclosures

• Joint Restoration Foundation – Consultant/Research Support
• Vericel – Consultant
• Arthrex – Consultant
• Mitek – Consultant
• Jaypee Publishing

SLAP Lesions in 2016

• Optimal management remains controversial
• Treatment recommendations based on
  – Age
  – Activity level
• Current data variable with respect to clinical outcomes and return to athletic activity
SLAP Repair Outcomes

- 14 studies → 506 patients with Type II SLAPs
- Good/Excellent satisfaction in 83% of patients
- 73% with return to previous level of play

All level 3/4 evidence
- Poorer outcomes in overhead athletes – 63% return to play

2012

SLAP Repair Outcomes

- Closer look → inconsistent outcomes in throwing athletes
- Return to pre-injury level of sports participation ranging from 22 to 85%

63% returning to previous level of play
64% returning to previous level of play

Pitchers – 48% RTP
Position – 85% RTP

SLAP Repair Outcomes

- 107 patients → Mean follow-up 5.3 years
- 10.3% re-operation rate
- Overall 88% satisfaction rate at 5 years

Subsequent Shoulder Surgery After Isolated Arthroscopic SLAP Repair

State-wide database study of 2,524 cases
- Overall 10.1% re-operation rate, 3.3% on biceps
Why Such Variable Outcomes?

- Persistent pain and limitations of post-operative ROM
  - Rigidity of the suture anchor fixation construct
  - Consequent loss of physiologic motion at the biceps anchor
  - Failure of superior labrum to heal
  - Highly innervated proximal portion of LHB \(\rightarrow 1°\) pain generator
  - Irritation from hardware/suture
  - High incidence of concomitant injuries

When Failure Occurs: What Next?

- Revision Repair
- LHB Tenotomy
- LHB Tenodesis

Failed SLAP Treatment Algorithm

Lack of Response to Nonoperative Treatment

- Age < 30, throwing athlete, no biceps pathology
  - Revision SLAP repair
  - Address associated pathology
- Age > 30, biceps pathology, concern regarding cosmetics
  - Open subpectoral or arthroscopic biceps tenodesis
  - Address associated findings
- Older, obese, poor biceps tendon quality, no cosmetic concern
  - Arthroscopic biceps tenotomy
  - Address associated findings
Surgical Goals

- Recreate anatomy, restore biceps anchor
- Eliminate pain generator/deforming force

Revision SLAP Repair
- Limited data on outcomes for revision SLAP repair
- 12 patients underwent revision repair, mean f/u 50 months
- Mean ASES score 72.5 and satisfaction score 6.4 (1-10 scale) after revision
- Mean return to work 57.8% of previous level
- Mean return to sport 42.2% of previous level
- Conclusion: outcomes of revision repair are inferior to those after primary procedure

Biceps Tenotomy
- No studies specifically evaluate tenotomy for failed SLAP repair
- Is an option for patients with biceps pathology in whom tenodesis may not be necessary
  - Older
  - Obese
  - Not concerned about cosmesis
Biceps Tenodesis

The Efficacy of Biceps Tenodesis in the Treatment of Failed Superior Labral Arthrodial Frontal Repair

46 patients with open subpectoral biceps tenodesis for failed type 2 SLAP, mean 3.5 year follow-up

- Significantly better ASES, WOSI, and SANE scores
- 81% return to active duty or sports

Conclusion: Biceps tenodesis is a predictable, safe, and effective way to manage failed SLAP tears

Biceps Tenodesis

17 patients with 2 year follow-up

- Achieved > 88% of shoulder ROM compared to unaffected shoulder
- Poorer outcomes in worker’s comp patients

Biceps Tenodesis

Series of 11 patients, mean follow-up 26 months

Conclusion: Biceps tenodesis demonstrates improved results in patients with failed SLAP repair
Advantages of Tenodesis

- Removes a significant pain generator
- Limits the importance of superior labral healing to the glenoid
- Eliminates repair construct issues
  - Rigidity
  - Over-constraint
  - Hardware/suture irritation
- Straightforward procedure
  - Excellent outcomes
  - Low complication rates

Safe Procedure

- 353 consecutive patients over three year period
- Overall 2% incidence of post-operative complications
  - 2 patients with persistent biceps pain
  - 2 patients with fixation failure
  - 1 deep infection requiring I&D
  - 1 musculocutaneous nerve palsy
  - 1 post-op RSD

Summary

- Options after failed SLAP include revision repair, biceps tenotomy, and biceps tenodesis
- Data on outcomes of these procedures for failed SLAP repair is limited
- Although an option in younger athletes, revision repair in patients with a failed SLAP should be approached with caution
- Open subpectoral biceps tenodesis is a technically easy procedure with excellent outcomes and low complication rates
Thank You