Rotator Cuff Anterior Cable Reconstruction with the Long Head of the Biceps Tendon Autograft

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Financial Disclosures

- Dr. Voloshin reports personal fees from Innomed, personal fees from Arthrex, personal fees from Smith & Nephew, personal fees from ZimmerBiomet, personal fees from Arthrosurface
Introduction

- Massive Rotator Cuff Tears (RTC) are challenging to repair primarily
  - Low rates of healing (20-30%)\(^1\)

- Tears involving the Anterior Rotator Cable perform worse\(^2,3\)
  - Tear propagation
  - Worse functional outcomes
  - Lower rate of healing from repair
Introduction

- Novel Technique: Arthroscopic Cuff Repair
  - Reconstruct Anterior Rotator Cable
    - via
  - Long Head of Biceps (LHB) tendon autograft
Surgical Technique

1. Shoulder arthroscopy
2. Tenodesis of intact LHB tendon at superior bicipital groove
3. Repair apex of cuff tear to proximal LHB tendon
4. Release LHB origin
5. Advance cuff along LHB, incorporating tendon into cuff repair
6. Medial row fixation of cuff to GT
Methods

- Prospective Review: **23 patients**
- Arthroscopic cuff repair of massive cuff tear with LHB tendon autograft for anterior cable reconstruction
- Minimum **1 year follow-up**
- Outcomes:
  - VAS, ASES, PROMIS (NIH): Pain, Function, Mood
Results

![Graph showing VAS Score](image-url)
Results

PROMIS

- **PAIN**
  - Pre-Op: 39.0
  - 1 yr f/up: 46.0
  - p < 0.01

- **FUNCTION**
  - Pre-Op: 49.8
  - 1 yr f/up: 52.9
  - p < 0.01

- **MOOD**
  - Pre-Op: 44.9
  - 1 yr f/up: 63.2
  - p = 0.02
Results

ASSES

<table>
<thead>
<tr>
<th>SCORE</th>
<th>Pre-Op</th>
<th>1 yr f/up</th>
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<tr>
<td>0</td>
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<td>16.3</td>
</tr>
<tr>
<td>50</td>
<td>56.3</td>
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Discussion

- Anterior rotator cable is a vital anatomic structure\textsuperscript{2,4}
  - Key: stress transfer to GT of humerus
  - Significantly worse outcomes if torn

- Reconstruction of cable using LHB tendon:
  - Low morbidity procedure
  - Arthroscopic
Discussion

- Excellent outcomes at 1 year
  - VAS Pain scores improved (p<0.01)
  - PROMIS scores improved
    - Pain (p<0.01)
    - Function (p<0.01)
    - Mood (p=0.02)
  - ASES scores improved
References


