Management of the Failed Rotator Cuff Repair

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Disclosures

- No conflicts of interest regarding the content of the talk
Success In RCR

- >90% satisfactory results
  - Millett JSES 2011
  - Improved VAS pain
  - Improved ASES function
  - Improved SF 12/36

- 60-90% show healing on postop imaging
  - Slabaugh Arthroscopy 2010
  - Healed RCR improved function/pain over non healed
Failure in RCR
Define Our Terms

- 6-8% of patients
  - Cofield JBJS 2001
  - Pain
  - Weakness
  - Require revision

- Not all patients have pain and poor function

- Not all pain due to cuff failure  Williams Aca Ortho Surg 1997
  - C-spine, neurogenic
  - DJD, adhesive capsulitis, bicep, AC, impingement etc
History and Physical

• History – What is the CC?
  • Pain preop vs postop
  • History of trauma or noncompliance
  • Patient age and activity
  • Original tear factors

• Physical
  • C-spine
  • Palpation
  • Shoulder ROM passive/active
Workup of the Potentially Failed RCR

- Injections- Diagnostic and Therapeutic
- Imaging- Not immediate
  - X-ray
  - MRI
  - US
  - CT
## Causes of Failure

<table>
<thead>
<tr>
<th>Patient Related</th>
<th>Surgeon Related</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Patient Age &gt; 65</td>
<td>• Experience and Skill</td>
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<tr>
<td>• Massive Tear &gt; 5cm</td>
<td>• Proper visualization</td>
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<tr>
<td>• Retraction &gt; 2.5cm</td>
<td>• Identifying tear pattern</td>
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<tr>
<td>• Fatty Atrophy</td>
<td>• Mobilization and releases</td>
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<tr>
<td>• Age of Tear</td>
<td>• Tying knots</td>
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<tr>
<td>• DM, Smoking</td>
<td>• Anchor placement</td>
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<tr>
<td>• Compliance</td>
<td>• Tensioning</td>
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<td></td>
<td>• Rehab Protocol</td>
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</tbody>
</table>
Management of the Failed RCR

• Dependent of many factors
  • Age – chronologic/physiologic
  • Activity level
  • Current complaints pain/weakness
  • Current function
  • Imaging
    • DJD
    • Type I vs II tear
    • Other causes of dysfunction
Imaging

- **Xray**

- Retear type
  - Type I tendon torn from repair site
  - Type II tendon left at repair site tear at musculotendinous junction
  - Cho NS, AJSM 2010

- **Fatty Atrophy**
  - Goutallier D JSES 2003
Management of the Failed RCR

• Nonop- Injections, PT, activity modification
  • Older patient
  • Less active
  • Larger tear
  • Better function

• Surgery
Surgical Options

- Arthroscopic debridement
- Treating other causes of pain
- Debridement with partial repair
Surgical Options

• Revision rotator cuff repair
• Allograft augmentation  
  • Human dermis  
• Xenograft augment  
  • Bovine achilles
Surgical Options

- Superior capsular reconstruction
Surgical Options

- Arthroplasty
- Hemiarthroplasty
- Reverse total shoulder arthroplasty
Summary

- RCR successful 90%
- Define Failure
- Commonly treated nonop
- Don’t go straight to MRI
- Many revision options are out there obtain consult from experienced shoulder surgeon
Thank You