Superior Capsule Reconstruction using Dermal Allograft: Early Outcomes and Survival

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Disclosures

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Background:

Irreparable Massive Rotator Cuff Tears (RCT)

The Outcome and Repair Integrity of Completely Arthroscopically Repaired Large and Massive Rotator Cuff Tears
By Leisa M. Galatz, MD, Craig M. Ball, FRACS, Sharlene A. Toffey, MD, William D. Middleton, MD, and Ken Yamaguchi, MD
2004 by The Journal of Bone and Joint Surgery,

The Outcome and Structural Integrity of Arthroscopic Rotator Cuff Repair with Use of the Double-Row Suture Anchor Technique
By Laurent Lafosse, MD, Roman Brozeka, MD, Bruno Toussaint, MD, and Reuben Gobezie, MD
Copyright © 2007 by The Journal of Bone and Joint Surgery,

Re-tear in 17/18 repairs

The chart shows the outcome of repairs, with categories for Large Tears and Massive Tears, indicating the integrity of repair over time.
Background: irreparable massive RCTs

**Surgical Strategies**

- Pain Resolution
  - Biceps Tenodesis +/- Partial Repair

- Dynamic Restoration of Force Couple
  - Tendon Transfers

- Humeral Head Depression
  - Superior Capsule Reconstruction
Background: clinical outcomes of SCR

Original Technique
- Irreparable supraspinatus
- Fascia lata autograft (8mm)
- Improved clinical outcomes
- No re-tears

Limited publications in North America despite widespread utilization

Variability in:
- Technique
- Indications
- Demographics
- Revision Surgery
Purpose:

- Analyze a single institution’s experience with SCR
- Examining factors that predict success/failure
**SCR: MGH Experience**

**Methods:**
- January 1, 2015 to November 31, 2017
- 65 patients treated with SCR
- 6 fellowship trained surgeons
- 34 patients (≥ 6 months follow-up)

<table>
<thead>
<tr>
<th>Patient Demographics</th>
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<tbody>
<tr>
<td>Age (years)</td>
<td>60</td>
</tr>
<tr>
<td>Gender (male)</td>
<td>62%</td>
</tr>
<tr>
<td>Work Comp.</td>
<td>29%</td>
</tr>
<tr>
<td>Smokers</td>
<td>18%</td>
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<tr>
<td>Prior RC Repair</td>
<td>53%</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Goutallier Classification Infraspinatus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 0</td>
</tr>
<tr>
<td>Grade 1</td>
</tr>
<tr>
<td>Grade 2</td>
</tr>
<tr>
<td>Grade 3</td>
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<tr>
<td>Grade 4</td>
</tr>
</tbody>
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## SCR: Clinical Outcomes (n=34)

<table>
<thead>
<tr>
<th></th>
<th>Preop</th>
<th>Postop</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elevation</td>
<td>95°</td>
<td>105°</td>
<td>0.24</td>
</tr>
<tr>
<td>Ext Rot.</td>
<td>33°</td>
<td>36°</td>
<td>0.89</td>
</tr>
<tr>
<td>Abduction</td>
<td>72°</td>
<td>73°</td>
<td>0.91</td>
</tr>
<tr>
<td>VAS Pain</td>
<td>4.9</td>
<td>5.0</td>
<td>0.59</td>
</tr>
<tr>
<td>SSV (%)</td>
<td>27%</td>
<td>46%</td>
<td>0.27</td>
</tr>
</tbody>
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Mean Follow-up: 12 months (6-23)
SCR: Survival Free of Reoperation

1 yr: 64%
2 yrs: 44%

Reoperations:
- Reverse Shoulder Arthroplasty (n=5)
- Latissimus Dorsi Transfer (n=2)
- Arthroscopic Debridement (n=1)

Overall Reoperation: 24% (8/34)
Survival Free of Clinical Failure

1 yr: 34%
2 yrs: 16%

Overall Failure: 65% (22/34)

Modified Neer Classification
- Excellent: no pain, >140°, >140° elevation, >45° ER, satisfied
- Satisfactory: no/mild pain, >90° elevation, >20° ER, satisfied
- Failure: additional surgery or failed to meet “satisfactory” outcome
Factors Associated with Failure

- **Revision Surgery** *(p=0.03)*
  - 80% (16/20) failure rate

- **Fatty Infiltration** *(p < 0.01)*
  - Grade ≥ 2 Infraspinatus
  - 84% (16/19) failure rate

- **Female Gender** *(p<0.01)*
  - 100% (13/13) failure rate
SCR has a high failure rate
- 65% (n=22/34)

Factors predicting failure include:
- Revision surgery
- Grade ≥ 2 fatty infiltration (infraspinatus)
- Female Gender

Narrowed indications are recommended
Thank you for your time!