Prospective Cohort Study of Rotator Cuff Repairs – Pain and Function at 60-months of 2600 Shoulders

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Orthosports
New Zealand
I (and my co-authors) have nothing to disclose

Co-Authors

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Aim of the current study

Introduce the New Zealand Rotator Cuff 5 year cohort follow up

Analyse the 5 year outcomes
   Pain, Function, Complications
   Trend over time

Role of Surgical techniques in outcome
   Surgical Approach
   Acromioplasty
   Single vs Double Row
   Long Head of Biceps
Pre Operative

Demographic data
Baseline Pain and Flex SF

Operative

Operative Day data
Collected by Surgeon

Follow up

6, 12, 24mo, 5 years
Flex SF, Pain Post operative form

Flex SF – Validated shoulder functional score
Out of 50
Clinically important difference 3 points
2603 Primary

Operative

134 Revision
74 Deceased

Follow up

81% Follow up
Flex SF Trend

Score out of 50
3 points = “Clinically Important”
Average Improvement
15 points
Pain Score Trend

- **Pain Base**
- **Pain 6 mo**
- **Pain 12 mo**
- **Pain 24 mo**
- **Pain 5 yr**

Small change after 12 months (p < 0.05)
No difference beyond 24 months
Complications

Re-operation rate 5.5%

Self Reported
Re-tear likely under reported

Predictors of Re-tear
Three tendon tears
Large or Massive tear
Poor tendon
Tendon retraction
Unreducible tendon
Surgical Approach

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Arthroscopic</td>
<td>18%</td>
</tr>
<tr>
<td>Mini-Open</td>
<td>39%</td>
</tr>
<tr>
<td>Open</td>
<td>43%</td>
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</tbody>
</table>

- No difference in Flex SF
- Arth – lower Pain at 6 months
- 90% Infection in Open approaches
  - n=50 vs 5, p 0.07
- Re tear – lower in Arth group 5% vs 7%
- Open repairs...
  - Larger Tears (<0.01)
  - More Retracted (<0.01)
  - More difficult to reduce
  - Poor tendon (23 vs 9%)
Acromioplasty

92% had Acromioplasty

Biggest difference in Atraumatic Tears
  40 vs 34, p 0.05

Higher Flex SF score
  40 vs 38, p 0.01

No difference in Pain
Single (44%) Vs Double (56%) Row repairs

No difference at 5 years
Pain
Flex SF
Re-tear rate

Including with subgroup analysis
Long Head of Biceps Pathology

50% had biceps procedure
26% tenotomy:24% Tenodesis

- **Damaged**
  - Any biceps procedure higher Flex SF and Pain: 40 vs 38, p 0.05

- **Dislocated**
  - Tenodesis higher Flex Imp
  - Tenodesis higher Pain Imp
    - 16 vs 12, p <0.01

- **Damaged**
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- **Dislocated**
  - Tenodesis higher Flex Imp
  - Tenodesis higher Pain Imp
    - 16 vs 12, p <0.01
Take Home Points

Rotator cuff repairs provide sustained clinical improvements out to 5 years

Most surgical techniques produce equivocal results

Acromioplasty – higher Flex SF in particular atraumatic
Open approaches - higher infection, higher re-tear
Biceps procedures better Flex SF if biceps pathology