Functional and Structural Outcome in Patients with Re-Tear Who Had Large or Massive Cuff Tears Treated by Arthroscopic Surgery: Association with Tear Propagation After Re-Tear

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We have no financial relationships to disclose.
Methods

196 cases w/ large / massive tears

✓ Complete repair during ARCR
✓ Re-tear at PO 3 ~ 6 months
✓ F/U > 2 years after ARCR
Subjects

Sugaya classification Types Ⅳ & V

39 pts
Patients Assignment

UCLA score (Max 35 points)

≥ 28

Satisfactory

23 pts

≤ 27

Unsatisfactory

16 pts
UCLA score

- **Satisfactory**
- **Unsatisfactory**

<table>
<thead>
<tr>
<th>Time</th>
<th>N.S</th>
<th>PO 3 months</th>
<th>PO 12 months</th>
<th>PO 24 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>BO</td>
<td>N.S</td>
<td></td>
<td>*</td>
<td></td>
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<tr>
<td>PO 3 months</td>
<td>*</td>
<td>N.S</td>
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<tr>
<td>PO 12 months</td>
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<td>N.S</td>
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</tr>
<tr>
<td>PO 24 months</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>N.S</td>
</tr>
</tbody>
</table>

* Significant difference
## Multivariate Analysis

<table>
<thead>
<tr>
<th>Location of Facet</th>
<th>P value</th>
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<tbody>
<tr>
<td>(in which the tendon was unpreserved)</td>
<td>0.002</td>
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</table>

<table>
<thead>
<tr>
<th>Preop Goutallier stages:</th>
<th></th>
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<tbody>
<tr>
<td>SSP</td>
<td>0.003</td>
</tr>
<tr>
<td>ISP</td>
<td>0.001</td>
</tr>
</tbody>
</table>
ROC Curve

Middle Facet

Sensitivity vs. 1-Specificity

Preoperative Goutallier stages of the SSP

Goutallier Stage 2

Preoperative Goutallier stages of the ISP

Goutallier Stage 2
Changes of Tear Sizes after Re-tear:

- Satisfactory Group

Coronal Plane

- BO
- PO 3 months
- PO 12 months
- PO 24 months

Sagittal Plane

- BO
- PO 3 months
- PO 12 months
- PO 24 months

BO: Baseline
PO: Postoperative
N.S: Not Significant
Changes of Tear Sizes after Re-tear:

Unsatisfactory Group

Coronal Plane

Sagittal Plane

BO  PO 3 months  PO 12 months  PO 24 months

BO  PO 3 months  PO 12 months  PO 24 months

N.S

*
Pathomechanics:
Worse Outcome in Pt w/ Re-tear

High grade fatty change in SSP & ISP (≥ Goutallier stage 3)

Tear propagation

Unpreserved tendon in the Middle facet

Worse functional outcome
SSP / ISP Insertion

Mochizuki et al. JBJS 2009

Tear Propagation
Conclusions

In pts with re-tear:

SSP / ISP fatty degeneration (stage 3 or more)

contribute to worse clinical outcome