Functional Outcomes of Peroneal Reconstruction with Peroneal Tendon Transfer

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Disclosures

The authors have no relevant disclosures to this presentation.

A full list of author disclosures is available in the AOFAS app and are up-to-date with AAOS.
Peroneal tendon tears are frequently encountered in the clinical setting

Conservative management
- ASO braces, NSAIDs, Physical Therapy

With continued symptoms, surgery may be indicated
- Debridement
- Repair/tubularization
- Excision/ local tenodesis
- Allograft reconstruction

Orthopedic Associates of Dallas
Recent cadaveric study claimed superiority of allograft transfer due to risk of clinical imbalance of foot with tenodesis surgery.

Cadaveric biomechanical study – represents only time zero and not physiologic conditions

No functional correlation
To analyze functional results of local peroneal tendon transfer

Hypothesis: excision of diseased peroneal tendon and local tendon transfer will result in significant improvements in pain and function at one year.
Methods

- Retrospective review of all peroneal surgeries performed by single surgeon
- Included all patients with local tendon transfer (brevis to longus or longus to brevis) with preoperative and one-year postoperative VAS and AOFAS hindfoot scores
- Statistical analysis with paired student t-test for improvement at one year (p<0.05)
Results

- 14 patients identified that underwent peroneal reconstruction with excision of diseased (torn) tendon and local transfer to the adjacent peroneal tendon
- No revision surgeries within one year
- Average follow-up 26.7 months (range 12-67 months)
- Significant improvement in both VAS and AOFAS hindfoot scores
## Results

<table>
<thead>
<tr>
<th>Demographics</th>
<th>n=14</th>
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<tbody>
<tr>
<td>Age (years)</td>
<td>41.2 (35.1-47.3)</td>
<td></td>
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<tr>
<td>Male</td>
<td>5 (35.7%)</td>
<td></td>
</tr>
<tr>
<td>Laterality (Right Ankle)</td>
<td>7 (50.0%)</td>
<td></td>
</tr>
<tr>
<td>Length Follow-up (mo)</td>
<td>26.7 (18.1-35.3)</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Scores</th>
<th>Preoperative</th>
<th>Postoperative</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAS</td>
<td>6.5 (5.3-7.7)</td>
<td>1.6 (0.7-2.5)</td>
<td>&lt;0.0001</td>
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<tr>
<td>AOFAS</td>
<td>51.9 (39.7-64.1)</td>
<td>90.7 (87.3-94.1)</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

Table 1: Patient data is displayed including demographics and functional scores both before and after surgery. There was significant improvement in patient pain (VAS) and function (AOFAS) measurements. 95% confidence intervals are included for continuous data.
Peroneal reconstruction with local tendon transfer results in clinically significant improvement in both pain and function at one year.

Limitations
- Retrospective, small cohort
- No comparison to allograft transfer

Eliminates cost/risk of allograft tissue

Authors believe allograft reconstruction should be reserved for revision situations or when significant disease of both tendons is present.
References


