OUTCOMES FOLLOWING LATERAL ANKLE LIGAMENT REPAIR VS RECONSTRUCTION

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DISCLOSURE

Outcomes Following Lateral Ankle Ligament Repair versus Reconstruction

The following relationships exist:

2. Speaker’s Bureau
   • One of the authors (TOC) is on the speaker’s bureau for Small Bone Innovations and Smith & Nephew

3b. Consulting Income
   • One of the authors (TOC) serves as consultant for Arthrex and Stryker

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INTRODUCTION

- The incidence and frequency of ankle sprains has been well documented in the literature, reporting ankle sprains as one of the most common musculoskeletal injuries with approximately 23,000 ankle injuries per day in the United States.

- Specifically, lateral ankle sprains account for up to 40% of all sport related injuries and approximately 85% of ankle sprains in general.
INTRODUCTION

- Injuries about the lateral ankle may include an isolated anterior talofibular ligament (ATFL) injury, to a combined ATFL and calcaneofibular ligament (CFL) injury (20% occurrence rate), to injury of all 3 lateral ligaments including ATFL, CFL, and posterior talofibular ligament (PTFL)
- Various surgical options exist for the treatment of lateral ankle instability
The purpose of this study was to document outcomes following lateral ankle ligament repair versus lateral ankle ligament reconstruction with allograft.
METHODS

- This study was Institutional Review Board approved.
- Between 9/2009 and 3/2011, all patients ≥18 years, who underwent surgical repair or reconstruction of the lateral ligament(s) of the ankle were included in this study.
**METHODS**

- Patients were excluded if they were under 18 years of age or previously underwent TAA of the ipsilateral ankle.
- All data were collected prospectively and reviewed retrospectively.
- Detailed surgical findings were recorded at time of surgery.
METHODS

- Patients completed a subjective questionnaire at initial evaluation and at minimum 1 year following ankle surgery

- Outcomes measures included
  - Foot and Ankle Disability Index (FADI) activities of daily living (ADL) subscale and sport subscale
  - Foot and Ankle Ability Measure (FAAM) activities of daily living (ADL) subscale and sport subscale
  - Lysholm score
  - Tegner activity scale
  - Patient satisfaction with outcome
RESULTS

- 77% Follow-up (n=40)
  - Average follow-up time = 16.9 months (12.2 - 34.0)
- No patients underwent revision surgery following lateral ankle ligament repair or reconstruction
## Results

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>Repair</th>
<th>Reconstruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>38</td>
<td>38.5</td>
</tr>
<tr>
<td>FADI ADL</td>
<td>90% (50-100)</td>
<td>96% (84-100)</td>
</tr>
<tr>
<td>FADI Sport</td>
<td>74% (9-100)</td>
<td>88% (65-100)</td>
</tr>
<tr>
<td>FADI Total</td>
<td>87% (41-100)</td>
<td>94% (80-100)</td>
</tr>
<tr>
<td>Lysholm</td>
<td>83 (37-100)</td>
<td>87 (75-100)</td>
</tr>
<tr>
<td>Median Tegner</td>
<td>6 (1-10)</td>
<td>6 (3-6)</td>
</tr>
<tr>
<td>Median Patient Satisfaction</td>
<td>9 (1-10)</td>
<td>9 (3-10)</td>
</tr>
</tbody>
</table>
## RESULTS

Concomitant Pathologies

<table>
<thead>
<tr>
<th></th>
<th>Reconstruction Group</th>
<th>Repair Group</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chondral Defects</strong></td>
<td>29%</td>
<td>29%</td>
</tr>
<tr>
<td><strong>Synovitis</strong></td>
<td>57%</td>
<td>51%</td>
</tr>
<tr>
<td><strong>Osteophytes</strong></td>
<td>57%</td>
<td>33%</td>
</tr>
</tbody>
</table>
RESULTS

- A significant difference was seen between the repair and reconstruction group in average time from injury to surgery.
- The repair group had a significantly lower average time from injury to surgery (6.5 years) than the reconstruction group (16.0 years) ($p=0.005$) (Mann Whitney U Test).
LIMITATIONS

- This study is retrospective in nature; however, all data were collected prospectively.
- This study was conducted at a referral center and may not be representative of the general population.
- Although this is a comparative study, each group is not identical in size, with the reconstruction group being smaller.
- More research is necessary to determine if there is a difference in revision rates and long-term outcomes following each of these procedures.
CONCLUSIONS

- Outcomes following lateral ankle ligament repair and reconstruction were similar.
- Patients who underwent reconstruction had a significantly longer time from injury to surgery, which may indicate more chronic and severe ligament injuries.
- No patient underwent revision surgery in either group; however, more data are necessary to document longer-term follow-up.
REFERENCES