Lateral Ankle Instability Surgical Treatment: A Comparison between Primary Repair and Revision Surgery

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AOFAS Annual Meeting, Seattle, 2017
Disclosures

- The author(s) declare no conflicts of interest with respect to the research, authorship, and publication of this project.
- The author(s) did not receive financial support for this research.
Lateral Ankle Instability

• Estimated incidence of ankle sprains is 2 million per year:
  – 40% of all sports injuries
  – Up to 34% of patients re-sprain their ankle in 3-year period
  – Persistent instability in up to 33% of patients. Some studies predict as much as 70%.

• Risk factors include:
  – Males between the age of 15 to 24
  – Females between the age of 30 to 99
  – Increased BMI
  – Hindfoot or midfoot malalignment
  – General laxity
Treatment of Ankle Instability

- Most acute sprains initially treated non-operatively
  - Immobilization, bracing, PT

- Surgical treatment (Broström-Gould) indicated after failure of non-operative treatment
  - Technically easy while preserving subtalar motion and achieves full range of ankle motion
  - > 85% of patients with good outcomes
Study Objectives

• To compare patient’s characteristics and complication rates of primary repair versus revision surgical procedures for lateral ankle instability.
Methods

• In this IRB approved retrospective study, we reviewed the charts of patients who underwent surgical treatment for lateral ankle instability from 2010 to 2016.
• A total of 233 patients were included.
• 162 female and 71 male, with a mean age of 48.4 (range: 19-65) years.
• Average follow-up was 48.4 (range: 6-55) weeks.
Methods

• Patients were separate into two groups based on their primary vs. revision surgery status:
  – 200 (85.8%) primary cases
  – 33 (14.2%) revision cases

• Procedures done by 4 different surgeons were reviewed based on:
  – Age, gender, BMI, procedure type and number of incisions, comorbidities, and complications.
Methods

• Data was compared between primary repair and revision surgery groups using T-test
  – P < 0.05 was considered significant
Results

• The Broström-Gould procedure was used in 69.5% of the primary repairs and 63.6% of the revision surgeries.

• CFL repair performed in 68% of primary repairs and 81.8% of revision surgeries.

• **No significant** differences found between the two groups regarding comorbidities:
  – Smoking (23.4% vs. 27.2%)
  – Diabetes (6.8% vs. 6.0%)
  – BMI (28.5% vs. 24.2%)
Results

• Significantly higher incidence of complications in the revision group (48.4%) when compared to the primary repair group (24.0%)
  – Sural neuritis (15.1% vs. 3.4%)
  – Superficial peroneal neuritis (12.1% vs. 4.5%)
  – Skin problems (9% vs. 7.4%)
Conclusion

• Patients who undergo revision procedures have significantly higher incidence of complications than those who undergo primary repair.

• No significant difference were found between the two groups in regards to smoking status, diabetes, and BMI.
Reference


