

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

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Introduction/Purpose: Lateral ankle instability is a common cause of disability in the active population. Although the majority of patients can be treated conservatively, surgical repair of the ligaments, with or without reinforcement, represents an excellent option for refractory cases. Failed primary surgical repair, recurrence of the ankle instability and need for revision surgery can rarely happen and is probably affected by multiple variables. That includes patient's characteristics such as BMI and comorbidities and surgical aspects such as the use of suture anchors and soft-tissue reinforcement. The purpose of this study was to compare patient's characteristics and complication rates of primary repair and revision procedures.

Methods: We retrospectively reviewed 231 patients (160 Female, 71 Male) who underwent surgical treatment for lateral ankle instability between 2010-2016. Thirty-two were revision cases (14.2%), including 24 females and 8 males, and 199 were primary direct repairs (85.8%). The mean age at the time of the surgery was 39 (19-65)years, and average follow-up was 9 (2-55) months. The procedures were performed by four different surgeons. All cases were reviewed based on age, gender, BMI, procedure type and number of incisions, comorbidities, and complications. Data found was compared between the two groups (primary repair and revision surgery) by T-test. A p-value <0.05 was considered significant.

Results: The Brostrom-Gould procedure was used in 69.5% of the primary repairs and 63.6% of the revision cases. The use of suture anchors was also similar in both groups (51%). Repair of the calcaneofibular ligament was performed in 68% of primary repairs and 81.8% of the revisions. We didn't find significant differences regarding comorbidities between two groups: smoking (23.4% x 27.2%, p-value 0.371); diabetes (6.8% x 6%, p-value 0.951) and body mass index above 30 (28.5% x 24.2%, p-value 0.347). We found significant difference in the complication rate of the procedures, with a higher incidence in the revision group (48.4%) when compared to the primary repair group (24%). That included: sural neuritis (15.1% x 3.4%), superficial peroneal neuritis (12.1% x 4.5%), skin problems (9% x 7.4%).

Conclusion: Our study of 231 patients that underwent surgical treatment for lateral ankle instability found significant higher incidence of complications in patients who had revision procedures when compared to primary repair. No differences regarding smoking status, diabetes and BMI were found.

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