Is Revision Anatomic Ankle Ligament Repair Augmented with Suture-Tape a Valuable Alternative for Patients with Failed Broström Procedure?
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Introduction/Purpose: Recurrent instability after previous anatomic ankle ligament repair has been known to be a poor prognostic factor for revision modified Broström procedure, and ligament reconstruction procedures using an allograft or autograft tendon have commonly been recommended. This prospective study was performed to evaluate the intermediate-term outcomes after revision anatomic ankle ligament repair augmented with suture-tape for failed modified Broström procedures.

Methods: Thirty patients with failed modified Broström procedures consecutively underwent revision procedures for recurrent ankle instability. Of these patients, 27 patients who could be followed for more than 2 years were analysed in the current study. The clinical evaluation consisted of the Foot and Ankle Outcome Score (FAOS), Foot and Ankle Ability Measure (FAAM) score. Talar tilt angle and anterior talar translation were measured to evaluate radiologically the changes of mechanical ankle stability.

Results: FAOS and FAAM scores significantly improved from preoperative averages of 53.6 and 45.6 points to 87.5 and 85.1 points at final follow-up, respectively (p < 0.001). Talar tilt angle and anterior talar translation had significantly improved from preoperative averages of 15.1° and 12.4 mm to 2.8° and 4.1 mm at final follow-up, respectively (p < 0.001). Preoperative side to side comparison in stress radiographs demonstrated statistically significant difference (p < 0.001), but there was not significant side to side difference in these radiographic measures at final follow-up (p > 0.05). Postoperative complications included 2 cases of local wound problems, 2 cases of superficial peroneal nerve injury, and 1 case of recurrent instability.

Conclusion: The revision modified Broström procedure augmented with suture-tape appears to be an effective treatment method for recurrent ankle instability in patients with prior failed modified Broström procedure. This combined procedure can provide reliable stability and satisfactory clinical outcomes through supplementation of the anatomic repair of attenuated ligaments using suture-tape.