Comparison between Absorbable and Nonabsorbable Suture Material in Modified Broström Operation

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Introduction/Purpose: The current clinical standard for the surgical treatment of lateral ankle instability remains the modified Broström procedure. Almost surgeons are using non-absorbable suture material because of their strength & permanent. But this has several complications such as irritation, surface tenderness, etc. So we compare the clinical result between nonabsorbable and absorbable suture material.

Methods: All patients who underwent the modified Broström operation of the anterior talofibular ligament and/or the calcaneofibular ligament by a single surgeon between July 2011 and May 2015 were included in this study. A total of 96 patients were included in this study: 63 men and 33 women (mean age, 33.16 years; range, 14-72 years). Non-absorbable suture (2-0 Fiberwire®, Arthrex, Naples, FL) patient were 50 (33 men, 17 women) and absorbable suture (0-Vicryl®, Ethicon, Sommerville, NJ) patient were 46 (30 men, 16 women). Mean follow-up duration was 2.5 years (range, 1.0-4.7 years).

Patients completed a subjective questionnaire. Outcomes measures included the Foot and Ankle Disability Index (FADI), American Orthopaedic Foot and Ankle Society (AOFAS) and Reoperation cases by the recurred lateral ankle instability. All data were collected prospectively and reviewed retrospectively.

Results: In non-absorbable suture group, The mean talar tilt angle in preoperative talar tilt test was 14.4 and in absorbable suture group, 13.7, respectively. The mean talar tilt angle in postoperative talar tilt test was 5.3 and in absorbable suture group, 6.1, respectively. There were no significant differences between non-absorbable suture method and absorbable suture method with talar tilt angle in varus stress x-ray (P > .05). There was no significant difference in FADI (87 vs 91; P = .553), AOFAS (83 vs 87; P = .372) score between non-absorbable suture method group and the absorbable suture method group. During follow up, Except of 2 patients, they were no clinical symptom. Each one patient in non-absorbable and absorbable suture group underwent revision lateral ligament surgery.

Conclusion: As compared with non-absorbable suture in open modified Broström procedure, absorbable suture method produced similarly favorable outcomes.