

All-arthroscopic anatomical reconstruction of anterior talofibular ligament using semitendinosus autografts

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Category: Arthroscopy

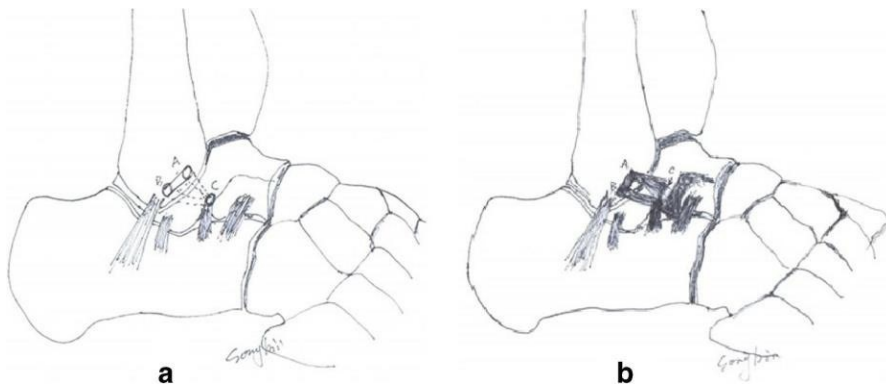
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Introduction/Purpose: We introduced a new technique of all-arthroscopic anatomical anterior talofibular ligament (ATFL) reconstruction using semitendinosus autografts.

Methods: From June 2012 to June 2013, 28 patients with chronic ATFL rupture underwent arthroscopic anatomic reconstruction of the ATFL. They were divided into the Broström group (n = 16) and reconstruction group (n = 12). The American Orthopaedic Foot and Ankle Society (AOFAS) score and visual analogue score (VAS) was recorded before the operation, 12 months after the operation and 30 months after the operation. Physical examination and radiographs were performed in follow-ups.

Results: The patients had higher AOFAS score after the operation in both the Broström group and the reconstruction group. 12 months after operation, the patients in the reconstruction group showed significantly higher AOFAS score and lower VAS score than those in the Broström group ($P = 0.003$ and 0.001 , respectively), while the difference between the two groups was not statistically significant 30 months later ($P = 0.425$ and 0.323 , respectively). Contemporary numbness of the lateral dorsal part of the foot appeared in one (8.3%) patient in the reconstruction group and two (12.5%) patients in the Broström group, and the symptoms diminished after neurotrophic treatment. No other complications, including recurrent instability, were encountered. No donor-side morbidity such as infection or delayed wound healing was observed.

Conclusion: The novel surgical technique enhanced postoperative rehabilitation by providing better ankle joint function than modified Broström procedure at 12 months after operation, while the advantage was not statistically significant 30 months later. The long-term outcome requires further investigation. The technique of all-arthroscopic anatomical ATFL reconstruction using semitendinosus autografts proved to be a viable option for ATFL injuries.



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