Chronic Achilles Tendinopathy
A Prospective Randomized Study Comparing the Therapeutic Effect of Eccentric Training, the AirHeel Brace, and a Combination of Both

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Abstract

Background: Previous studies have shown that eccentric training has a positive effect on chronic Achilles tendinopathy. A new strategy for the treatment of chronic Achilles tendinopathy is the AirHeel brace.

Hypothesis: AirHeel brace treatment improves the clinical outcome of patients with chronic Achilles tendinopathy. The combination of the AirHeel brace and an eccentric training program has a synergistic effect.

Study Design: Randomized controlled clinical trial; Level of evidence, 1.

Methods: One hundred patients were randomly assigned to 1 of 3 treatment groups: (1) eccentric training, (2) AirHeel brace, and (3) combination of eccentric training and AirHeel brace. Patients were evaluated at 6, 12, and 54 weeks after the beginning of the treatment protocol with ultrasonography, visual analog scale (VAS) for pain, American Orthopaedic Foot and Ankle Society (AOFAS) ankle score, and Short Form-36 (SF-36).

Results: The VAS score for pain, AOFAS score, and SF-36 improved significantly in all 3 groups at all 3 follow-up examinations. At the 3 time points (6 weeks, 12 weeks, and 54 weeks) of follow-up, there was no significant difference between all 3 treatment groups. In all 3 groups, there was no significant difference in tendon thickness after treatment.

Conclusions: The AirHeel brace is as effective as eccentric training in the treatment of chronic Achilles tendinopathy. There is no synergistic effect when both treatment strategies are combined.

Clinical Relevance: The AirHeel brace is an alternative treatment option for chronic Achilles tendinopathy.