Eccentric Loading, Shock-Wave Treatment, or a Wait-and-See Policy for Tendinopathy of the Main Body of Tendo Achillis

A Randomized Controlled Trial

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Background: Few randomized controlled trials compare different methods of management in chronic tendinopathy of the main body of tendo Achillis.

Purpose: To compare the effectiveness of 3 management strategies—group 1, eccentric loading; group 2, repetitive low-energy shock-wave therapy (SWT); and group 3, wait and see—in patients with chronic tendinopathy of the main body of tendo Achillis.

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

Methods: Seventy-five patients with a chronic recalcitrant (>6 months) noninsertional Achilles tendinopathy were enrolled in a randomized controlled study. All patients had received unsuccessful management for >3 months, including at least (1) peritendinous local injections, (2) nonsteroidal anti-inflammatory drugs, and (3) physiotherapy. A computerized random-number generator was used to draw up an allocation schedule. Analysis was on intention-to-treat basis.

Results: At 4 months from baseline, the Victorian Institute of Sport Assessment (VISA)-A score increased in all groups, from 51 to 76 points in group 1 (eccentric loading), from 50 to 70 points in group 2 (repetitive low-energy SWT), and from 48 to 55 points in group 3 (wait and see). Pain rating decreased in all groups, from 7 to 4 points in group 1, from 7 to 4 points in group 2, and from 8 to 6 points in group 3. Fifteen of 25 patients in group 1 (60%), 13 of 25 patients in group 2 (52%), and 6 of 25 patients in Group 3 (24%) reported a Likert scale of 1 or 2 points (“completely recovered” or “much improved”). For all outcome measures, groups 1 and 2 did not differ significantly. For all outcome measures, groups 1 and 2 showed significantly better results than group 3.

Conclusion: At 4-month follow-up, eccentric loading and low-energy SWT showed comparable results. The wait-and-see strategy was ineffective for the management of chronic recalcitrant tendinopathy of the main body of the Achilles tendon.

Keywords: Achilles pain; tendinopathy; eccentric loading; shock wave therapy

Although Achilles tendinopathy is common and extensively studied, there are remarkably few randomized and controlled studies to clarify the causes, pathologic changes, and the optimal management of tendinopathy of the main body of the Achilles tendon.

In a recent Cochrane review, only 9 clinical trials for a total of 697 patients were of sufficient quality to be considered. The review showed weak evidence from 3 trials of a modest benefit of nonsteroidal anti-inflammatory drugs (NSAIDs) for the alleviation of acute symptoms. Low-dose heparin, heel pads, topical laser therapy, and peritendinous steroid injection produced no difference in outcome when compared with no treatment. The results of a comparison of glycosaminoglycan sulfate with an NSAID were inconclusive. Overall, there was insufficient evidence from the randomized controlled trials to determine which method is the most appropriate for managing Achilles tendinopathy.