

THE DEGREE OF TENDINOSIS IS RELATED TO SYMPTOM SEVERITY AND PHYSICAL ACTIVITY LEVELS IN PATIENTS WITH MIDPORTION ACHILLES TENDINOPATHY

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ABSTRACT

Background: Achilles tendinopathy negatively affects a person's ability to be physically active. However, remaining physically active during the rehabilitation process does not impact clinical outcomes when a pain-monitoring model is followed. There are several factors, such as the progression of pain and structural changes, kinesiophobia, functional impairments, or medical advice, which may explain why some patients become physically inactive while others maintain a physically active lifestyle.

Purpose: The purposes of this study were 1) to compare the clinical presentation of patients with Achilles tendinopathy with high and low activity levels 2) to examine the relationship between tendon thickening and symptom severity in patients with Achilles tendinopathy and 3) to determine the proportion of patients with Achilles tendinopathy who have a high degree of kinesiophobia and if this proportion differs based on activity level.

Study Design: Cross-sectional

Methods: Fifty-three patients with Achilles tendinopathy were dichotomized into low activity (n=30) and high activity (n=23) groups based on their physical activity level. Patient characteristics, symptom severity, kinesiophobia, tendon thickening, and lower leg function were quantified and analyzed to test the study hypotheses.

Results: Patients with low activity levels had greater tendon thickening and a larger body mass compared to patients with high activity levels. There were no differences in symptom severity, kinesiophobia, or lower leg function between groups. A negative relationship ($r = -0.491$; $p < 0.001$) was found between tendon thickening and symptom severity. Thirty-eight percent of patients demonstrated a high degree of kinesiophobia, but the proportion did not differ between groups.

Conclusion: Patients with Achilles tendinopathy who have low physical activity levels demonstrate greater tendinosis than patients who are highly active. These structural changes are negatively associated with symptom severity. However, symptom severity, kinesiophobia, and functional deficits do not differ between patients with different activity levels.

Level of evidence: Level 3

Key words: Achilles tendon, kinesiophobia, physical activity, tendon structure

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