ABSTRACT BODY:
Background & Purpose: There is evidence for the use of eccentric strengthening exercises for the treatment of Achilles tendinopathy as a conservative approach; however, the recommended treatment period for this approach is 12 weeks. Instrument-assisted soft tissue mobilization (ISTM) is an innovative manual therapy approach for the treatment of tendon disorders and has the potential to yield positive outcomes in a reduced treatment time. ISTM is a technique utilized primarily for the treatment of soft tissue dysfunction; the technique provides a controlled amount of microtrauma into an area of excessive scar tissue or fibrosis, which has been found to stimulate healing and reorganization of the affected tissue. Research performed in animal models is showing favorable effects in regards to collagen formation and organization. However, current evidence is limited in regards to clinical trials with only case studies and case series being present in the literature. The purpose of this case series is to describe outcomes in three patients with Achilles tendinopathy who received ISTM as their primary therapeutic intervention. One patient presented with an acute Achilles tendinopathy and the other two had chronic Achilles tendinopathies.

Case Description: The case series is currently ongoing. To date there are three patients who had signs and symptoms consistent with Achilles tendinopathy and met the inclusion and exclusion criteria of the study. All the patients had limitations in function directly due to their Achilles tendinopathy. Each patient received the same treatment regimen, which consisted of a warm-up, ISTM, stretching and eccentric exercises for the calf complex. The number of visits was dependent on the length of time required to meet the patient’s goals; the average number of visits was 7 performed at a frequency of twice per week over a 4 week period. Outcomes were measured with the Lower Extremity Functional Scale (LEFS) and the numeric pain rating scale (NPRS) at the initial evaluation and re-evaluation.

Outcomes: All three patients completed the study. The mean pain improvement was 3.3 on a 0-10 NPRS, reaching a clinically meaningful change in pain in all three patients. The mean improvement in the LEFS was 9 points, with two of the three patients reporting 80/80 and the remaining patient 79/80. All patients returned to their previous level of recreational activities.

Discussion: The results of this case study demonstrate the potential effectiveness of ISTM as a manual therapy approach for the treatment of tendinopathies. Since the treatment regimen included exercise, the effect of ISTM cannot be isolated; however, despite this limitation the treatment combination did yield positive outcomes in relatively few visits. Future directions for research will include the continuation of the current case series with the goal of developing a randomized clinical trial.

KEYWORDS: soft tissue mobilization, achilles tendinopathy, manual therapy.