

A Conservative Manual Therapy Approach Using Instrument-Assisted Soft Tissue Mobilization For The Treatment of Bilateral Plantar Fasciitis: A Case Series

Abstract from 3rd Fascia Congress

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ABSTRACT BODY:

Background & Purpose: Plantar fasciitis is a common overuse injury experienced by 10-16% of the population that can lead to a significant loss of function. Instrument-assisted soft tissue mobilization (IASTM) is a non-invasive, manual therapy technique utilized for the treatment of soft tissue dysfunction. Current research suggests that incorporating IASTM into treatment protocols may reduce treatment time through stimulation of healing and reorganization of connective tissue. However, the known effects of IASTM remain limited in human models. The purpose of this case series is to describe outcomes in three patients with bilateral plantar fasciitis treated with an IASTM approach.

Case Description: Three patients presented with pain and functional limitations directly related to bilateral plantar fasciitis. Two reported acute (<3 months) and one chronic (>3 years) symptoms. None were wearing orthotics or taking prescription medications, one patient reported taking ibuprofen as needed. Each patient was evaluated by one examiner and treated by another. All subjects received the same treatment regimen consisting of a warm-up, IASTM, strengthening and stretching exercises and ice massage, including a home program. IASTM was performed two times a week over a period of 4 weeks for a total of 8 treatment sessions. Outcomes were assessed with the numeric pain rating scale (NPRS), the Lower Extremity Functional Scale (LEFS), and physical measurements relevant to the foot and ankle region.

Outcomes: Patients achieved a mean decrease in pain of 3/10 per the NPRS and a mean LEFS improvement of 11.2%. All subjects reported a return to previous levels of recreational activities and demonstrated an increase in great toe extension, dorsiflexion, and plantarflexion range of motion. A 5 month follow-up revealed all patients remained pain free with only one patient reporting a flare-up in one foot after a sudden increase in running miles. This subject had one IASTM session with subsequent pain reduction.

Discussion: The results of this case study demonstrate the potential effectiveness of IASTM as a manual therapy approach for the efficient treatment of bilateral plantar fasciitis in combination with exercise. A clinically significant decrease in pain was found. A clinically significant increase on the LEFS was not obtained; most likely due to a ceiling effect in the two subjects with acute symptoms who had reported high pre-treatment scores. Future research is needed including dose response studies with consideration of symptom duration.