



**Manual Physical Therapy and Exercise Versus Electrophysical Agents and Exercise in the Management of Plantar Heel Pain: A Multicenter Randomized Clinical Trial**

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It is estimated that 10% of Americans experience heel pain, or plantar fasciitis, annually. There has been some debate regarding the pathology of plantar fasciitis. Recent histological reviews indicate that what we commonly refer to as plantar fasciitis is not an inflammatory disease but rather a non-inflammatory degeneration of the fascia. In light of these findings, physical therapists must re-evaluate the treatment approaches they choose, are modalities for inflammation enough? Or is it more beneficial to use skilled manual therapy techniques to combat degenerative changes in the fascia? The investigators of this study wanted to compare the effectiveness of the 2 conservative treatment options utilized by physical therapists: 1) electrophysical agents and exercise (EPAX) and 2) manual therapy and exercise (MTEX).

The study was a randomized clinical trial where sixty subjects between the ages of 18 and 60 were selected for participation and randomly assigned to either the EPAX or the MTEX treatment groups. The EPAX group received the following treatment: therapeutic US (3mHz @ 1.5 W/cm<sup>2</sup>, 100-Hz frequency, 20% duty cycle for 5 min), iontophoresis with dexamethasone (40 mA-min), instruction in gastrocnemius and soleus stretching, plantar fascia stretching, and strengthening exercises for the intrinsic muscles of the foot 3x/day for 4 weeks of treatment. At the end of each treatment, ice was applied for 15 min. Patients were also instructed to avoid any activities that aggravated symptoms. The MTEX group received 5 minutes of aggressive soft-tissue mobilization to the triceps surae and the insertion of the fascia and medial calcaneal tubercle, rearfoot eversion mobilization, an evaluation of hip, knee and ankle mechanics/movement dysfunction that was then addressed with mobilization techniques as necessary. All manual techniques were standardized via instruction by clinical investigators. Additionally, all patients in MTEX group were instructed to perform an ankle eversion self-mobilization exercise and manual soft-tissue mobilization of the plantar fascia at home. They were instructed to perform the gastrocnemius and soleus stretches performed by EPAX group and were also instructed to avoid activities that aggravated symptoms.

Participants from both treatment groups demonstrated statistically significant improvement with regards to pain and function at the 4 week and 6 month follow-ups, but the MTEX groups' improvement was greater than that of the EPAX group at both follow-ups. Conclusions from this study indicate that incorporation of manual therapy techniques performed by an experienced physical therapist significantly decrease pain and impairment in patients with plantar fasciitis. While modalities are also effective for addressing inflammatory processes and help to promote tissue healing, it is important for Physical Therapists to address biomechanical deficiencies throughout the kinematic chain using skilled manual therapy techniques.

**THERAPIST SPOTLIGHT**



**Corie M. Good, DPT**

Corie graduated from the University of Puget Sound in 2004 with a Doctorate in Physical Therapy and has been practicing in the orthopedic outpatient setting since her graduation. Her treatment approach emphasizes manual therapy skills and focuses on functional rehabilitation. Her clinical interests include pediatric sports injuries and aquatic therapy. Her continuing education includes NAIOMT, Mulligan and Strain Counter Strain. In her free time, she enjoys travelling, swimming, cycling and running.



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