



Heel Pain Manual Therapy

Pain on the bottom of the heel commonly called Plantar Fasciitis is a common over use injury, particularly in runners. Recently, there has been debate regarding the name and definition of this problem. The suffix "itis" infers there is an inflammatory process. Looking at the injured tissue under a microscope there should be "inflammatory cells". The classic clinical signs of inflammation are pain, swelling, increased temperature, and discoloration (redness). Often with heel pain, other than the symptom of pain, there are NO signs of inflammation and no inflammatory cells. If you look under the microscope there are signs of degeneration (wear and tear) of the plantar fascia. Therefore an alternative name of Plantar Fasciosis is a better term to describe "plantar heel pain".

Common interventions for plantar heel pain include anti-inflammation treatments such as: anti-inflammatory medications taken by mouth, steroid injections, ice therapy, massage, ultrasound with anti-inflammatory medication (phonophoresis) or electro therapy to drive anti-inflammatory medication (intophoresis) into the injured tissue. Critical review of the research demonstrates that the positive effects of these anti-inflammatory type interventions are short lived (3 months)..

A recent prospective randomized controlled clinical trial examined whether a combination of manual physical therapy techniques and exercise was more effective than electro-physical modalities (phonophoresis and inntophoresis) and exercise in patients with plantar heel pain (Cleland JA 2009). 101 consecutive patients presenting with heel pain were radominly assigned to control group (electro-physical modalities and exercise) or manual therapy and exercise group. Standardized self reported outcome measures were used to measure the effects of the intervention at baseline, 4 weeks and at 6 months.

The manual therapy techniques used in this study is a standard physical therapy intervention. One of the unique aspects of the manual therapy intervention in this study was that both hips, knees, ankles and feet were examined for impairment/restrictions, not just the injured foot. If impairment/restrictions were identified in the hips, knees, ankles, and feet they were treated with manual therapy to remove the restrictions even though the knee, hip, or uninjured foot was not symptomatic.

The results of this study provided evidence that manual therapy and exercise is a superior management approach over an electro-physical agents and exercise approach in the management of individuals with plantar heel pain at both the short and long term follow up.

Given there is controversy as to whether plantar heel pain is an inflammatory process or a degeneration this may be the reason why the group that received interventions aimed specifically at reducing inflammation did not do as well as the group receiving manual therapy plus exercise.

The investigators suggested that the positive results occurred as the intervention of manual therapy resulted in improved gait and weight bearing mechanics throughout the lower extremities. Also that resolving impairments and restrictions at adjacent joints (hip and knee) may help relieve abnormal stresses on the plantar fascia.

There are other interventions for plantar heel pain besides anti-inflammatory interventions (electro-physical modalities), manual therapy, and exercise that have been proven effective including the use of night splints, and orthotics (shoe inserts). Moderation of training load (running), gait training to alleviate faulty form have been proven effective in management of plantar heel pain. Because the subjects in this study did not receive these other types of standard interventions no inferences can be made as to whether they would be more effective than manual therapy or whether adding night splints, moderating running form would enhance the positive results.

Bottom line:

- For plantar heel pain in the long term the use of anti-inflammatory interventions (phonophoresis and inotonphoresis) is not as effective as manual physical therapy to address restrictions/impairments in the lower extremity.
- Perhaps manual physical therapy and exercise would be even more effective in the treatment of plantar heel pain if combined with moderation of running, night splints, and shoe inserts.