Barral Institute Case Report

Neural Manipulation - Plantar Fasciitis

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**Abstract**

Plantar Fasciitis is often a chronic issue before it gets any treatment. By then, treatment can become quite difficult due to the adaptive changes. In this case study we see the impact of the plantar nerves on pain producing tensions in the foot and the effect of neural tension on gait patterns.

**Key Words**

Neural Manipulation, Lateral Plantar Nerve, Plantar Fasciitis

**Introduction**

12 year old boy with low arches and right foot pain worse first thing in the morning. He plays many sports, primarily beach volleyball. He has a prior history of repetitive inversion ankle sprains bilateral, more frequent on the right.

**Method**

Gait analysis reveals an over pronated right foot, limited dorsiflexion on the right and decreased great toe involvement in toe off. Passive dorsiflexion was limited to about 1/3 normal with a fairly soft, then abrupt end feel, primarily restricted on the medial part of the joint.

General listening went to the right foot, medial aspect. Local listening at the tarsal tunnel with a buzzy feel. Manual therapy of the fascial tunnel first, followed by the tibial nerve. A subsequent listening of the tibial nerve led to a distal strain on the medial plantar nerve. The medial plantar nerve was treated with elongation induction. Followed by treatment of the medial and lateral plantar nerves together with ankle and foot movement to augment the release.

Another test of dorsiflexion was done, which revealed ROM had increased to ½ normal with a capsular end feel isolated to the medial joint. Joint mobilizations were completed to restore movement to nearly full.

**Results**

Immediate gait reassessment showed less pronation but proprioceptively wobbly. Increased use of the great toe.

**Discussion**

Literature has suggested that the presence of heel spurs does not indicate the presence of plantar fasciitis. In one study, up to 19% of those with heel spurs have no plantar fasciitis or plantar foot pain. This suggests that there might be a more common etiology such as nerve entrapment. Even conservative manual therapy is in disagreement about how to treat this condition. Is it rest to decrease the swelling and chronic pull of the fascia on the calcaneous or is it stretching the tight plantar fascia, but create more inflammation in the process? Here we see an option where we can liberate the plantar nerves that the fascia may be guarding in a way that does not increase the inflammatory response. In this way we achieve the best of both worlds.

**References**

Barral, J. P., Barral, J. P., & Croibier, A. (2007). *Manual therapy for the peripheral nerves*. Elsevier Health Sciences.

Baxter, D. E., & Pfeffer, G. B. (1992). Treatment of chronic heel pain by surgical release of the first branch of the lateral plantar nerve. *Clinical orthopaedics and related research*, *279*, 229-236.

Coppieters, M. W., Alshami, A. M., Babri, A. S., Souvlis, T., Kippers, V., & Hodges, P. W. (2006). Strain and excursion of the sciatic, tibial, and plantar nerves during a modified straight leg raising test. *Journal of Orthopaedic Research*, *24*(9), 1883-1889.

Cole, C., Seto, C., & Gazewood, J. (2005). Plantar fasciitis: evidence-based review of diagnosis and therapy. *Am Fam Physician*, *72*(11), 2237-42.