Treatment of the gastrocnemius muscle myofascial pain syndrome in plantar fasciitis with Photobiomodulation: a study protocol.

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Abstract

Plantar fasciitis is the most common cause of inferior heel pain. The etiology of plantar fasciitis is still unclear but many authors proposed that the presence of myofascial trigger points (MTrPs) within gastrocnemius muscles proximal play an important role in plantar heel pain. Myofascial pain syndrome is characterized by trigger points in the muscle. The standard treatment is inactivation of trigger points through dry needling but photobiomodulation has been widely studied in

treating musculoskeletal pain, including myofascial. In this sense, this study aims to evaluate the effect of photobiomodulation in treating myofascial pain of gastrocnemius muscles in patients with plantar fasciitis. A clinical, double-blind, controlled and randomized study will be carried out. This study is in accordance with the research ethics guidelines of the University's Research Ethics Committee. About 20 patients with plantar fasciitis associated with a gastrocnemius myofascial pain will be selected at the Orthopedics and Physiatry Service of the Goias Federal University. Those selected will be divided into two groups: one that will be submitted to dry needling (with acupuncture needle size 25x30) associated with Low-Level Laser Therapy (Laser Therapy XT, DMC brand, device power of 100mW, wavelength of 785nm, energy of 1J/cm^2/point, applied in 04 points per muscle, during 40 seconds, three times a week for 12 sessions) and a second group in which dry needling will be used for under the same conditions as before, associated with placebo laser Therapy group (the same device turned off).The primary outcome will be evaluated by the application of the Visual Analogue Scale. The secondary outcome will be measured by the patient's functionality, through the Foot Function Index Scale, which will be applied before and after the intervention (on the last day of intervention and 4 weeks later). The data will be statistically analyzed and the results reported.

Biography

Ana Cristina Ferreira Garcia Amorim: Adjunct Professor of Physical Medicine and Rehabilitation at the Federal University of Goiás. Graduated in Medicine from the Federal University of Goiás. Medical Specialty in Physical Medicine and Rehabilitation from the University of São Paulo. Doctorate study by the Post-

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