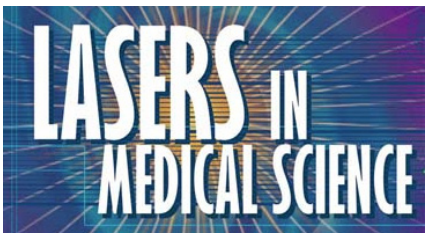
LASERS IN MEDICAL SCIENCE
Volume 31, Number 1, 2016, pp. 127-135

doi:10.1007/s10103-015-1840-4
LiteCure® Laser Used in Study



Photobiomodulation and Eccentric Exercise for Achilles Tendinopathy: A Randomized Controlled Trial

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Background: The common regime of eccentric exercise in use for Achilles tendinopathy is somewhat arduous and compliance issues can arise. This is the first study to investigate the effectiveness of a regime of fewer exercise sessions combined with photobiomodulation for the treatment of Achilles tendinopathy.

Methods: A double blind randomized controlled trial and intention-to-treat analysis were performed. Eighty participants, 18-65 years with Achilles tendinopathy and symptoms for longer than 3 months, were included in the trial. Participants randomized into one of four groups; 1 (Placebo + Ex Regime 1) or 2 (Laser + Ex Regime 1) or 3 (Placebo + Ex Regime 2) or 4 (Laser + Ex Regime 2). The primary outcome measure was the Victorian Institute of Sports Assessment- Achilles (VISA-A) questionnaire. Outcomes were collected at baseline, week 4 and week 12.

Background: Sixteen participants were lost to follow-up at 12 weeks, 4 of which due to adverse reactions. As per intention to treat, missing data were imputed, 80 participants were included in the final analysis. For VISA-A at 12 weeks, group 4 achieved significant gains over the other 3 groups: group 1 (18.5 [9.1, 27.9]), group 2 (10.4 [1.5, 19.2]), group 3 (11.3 [3.0, 19.6]). There was a moderate effect size in favour of exercise twice per week (7.2 [–1.8, 16.2], ES .7).

Conclusions: Twice-daily exercise sessions are not necessary as equivalent results can be obtained with two exercise sessions per week. The addition of photobiomodulation as adjunct to exercise can bring added benefit.

Key words: Dose response; Exercise therapy; Laser therapy; Rehabilitation