

INVESTIGACIÓN - FISIOTERAPIA

VASCULAR PHOTOBIOMODULATION AS AN ADJUVANT TO THE TREATMENT OF LOW BACK PAIN: PILOT CLINICAL TRIAL

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Low back pain is a prevalent condition that significantly impacts public health. Vascular photobiomodulation demonstrates promising therapeutic effects due to its sedative, antispasmodic, and analgesic properties. Furthermore, interventions such as mobility exercises, abdominal strengthening, and manual therapy have proven effective in the recovery and management of low back pain. The objective of this pilot project was to evaluate the effect of vascular photobiomodulation (VPBM) combined with manual therapy and therapeutic exercises on patients with low back pain during the initial period. Twenty participants completed the Oswestry Disability Index 2.0, Roland Morris Questionnaire, and Pain Analogue Scale (VAS) questionnaires and were divided into two groups: G1 (manual therapy + exercises + sham MVBP) and G2 (manual therapy + exercises + active VPBM). Treatment lasted four consecutive

weeks (twice a week) with VPBM application for 30 minutes in each session. Data were analyzed using statistical tests (SAS for Windows). v.9.4) such as the Student's t-test and the chi-square test, and the repeated measures model with the Wald test. In all analyses, statistical significance was considered at $p < 0.05$. Regarding pain using the VAS, a statistically significant difference was observed between the groups ($p = 0.026$), with a lower score for the VPBM group. Responses to the Roland Morris ($p = 0.007$) and Oswestry Index 2.0 ($p = 0.0322$) questionnaires demonstrated intragroup improvement before and after treatment and between groups ($p < 0.05$). It was possible to conclude in this pilot study that the use of VPBM in the treatment of low back pain in the first weeks of pain can be considered a promising adjuvant.

Palavras-chave: low back pain; vascular photobiomodulation; manual therapy.