

Long-term effects of pulsed high-intensity laser therapy in the treatment of post-burn pruritus: a double-blind, placebo-controlled, randomized study

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Abstract We assessed the long-term effects of pulsed high-intensity laser therapy (HILT) in post-burn pruritus treatment. A total of 49 adult burn patients with mean age of 31.53 ± 10.14 years participated, with 24 patients randomly assigned to the active laser group (ALG) and 25 in the placebo laser group (PLG). The ALG received HILT three times per week for 6 weeks, while the PLG received placebo HILT. Both groups received 10-mg cetirizine tablets twice daily and 10 mg at bedtime. All patients were advised to massage their burn scars with coconut oil for 5 min four times daily. The outcomes measured were the itch severity scale (ISS), impairment of pruritus-related quality of life (QoL), pain level by the visual analog scale (VAS), hand grip strength by handheld dynamometer, and daily cetirizine intake. Repeated-measures ANOVA was used to compare the baseline and post-treatment measurements and after 12 weeks of follow-up. Statistical significance was set at $P < 0.05$. ISS decreased significantly in the ALG after 6 weeks of treatment and after 12 weeks of follow-up compared with the PLG. The QoL results showed a significant improvement in the ALG compared with the PLG, which continued after 12 weeks. VAS results significantly decrease, hand grip strength significantly improved, and cetirizine intake significantly decreased post-treatment in the ALG relative to the PLG. HILT combined with cetirizine seems more effective in patients with post-burn pruritus than a placebo laser procedure with cetirizine.

Keywords Post-burn pruritus · HILT · ISS · Pain · QoL · Antihistamine

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