Effects of 904-nm low-level laser therapy in the management of lateral epicondylitis: a randomized controlled trial.

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OBJECTIVE: The aim of this study was to evaluate the effectiveness of 904-nm low-level laser therapy (LLLT) in the management of lateral epicondylitis.

BACKGROUND DATA: Lateral epicondylitis is characterized by pain and tenderness over the lateral elbow, which may also result in reduction in grip strength and impairment in physical function. LLLT has been shown effective in its therapeutic effects in tissue healing and pain control.

METHODS: Thirty-nine patients with lateral epicondylitis were randomly assigned to receive either active laser with an energy dose of 0.275 J per tender point (laser group) or sham irradiation (placebo group) for a total of nine sessions. The outcome measures were mechanical pain threshold, maximum grip strength, level of pain at maximum grip strength as measured by the Visual Analogue Scale (VAS) and the subjective rating of physical function with Disabilities of the Arm, Shoulder and Hand (DASH) questionnaire.

RESULTS: Significantly greater improvements were shown in all outcome measures with the laser group than with the placebo group (p < 0.0125), except in the two subsections of DASH.

CONCLUSION: This study revealed that LLLT in addition to exercise is effective in relieving pain, and in improving the grip strength and subjective rating of physical function of patients with lateral epicondylitis.

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