Lasers Med Sci (2015) 30:1097–1107
DOI 10.1007/s10103-015-1716-7

ORIGINAL ARTICLE

Effectiveness of high-intensity laser therapy and splinting in lateral epicondylitis; a prospective, randomized, controlled study

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Received: 11 September 2014 / Accepted: 12 January 2015 / Published online: 23 January 2015

Abstract Lateral epicondylitis (LE) is a common disorder that causes pain on the outside of the elbow, as well as pain and weakness during gripping. In this prospective, randomized, controlled, assessor-blinded trial, we planned to investigate the effects of high-intensity laser therapy (HILT) in patients with LE and to compare these results with those of a brace and placebo HILT. Patients were randomly assigned to three treatment groups. The first group was treated with HILT. The second group (sham therapy group) received placebo HILT, while the third group (brace group) used the lateral counterforce brace for LE. The patients were assessed for grip strength, pain, disability, and quality oflife. Outcome measurements and ultrasonographic examination of the patients were performed before treatment (week 0) and after treatment (after 4 and 12 weeks). HILT and brace groups showed significant improvements for most evaluation parameters (pain scores, grip strength, disability scores, and several subparts of the short-form 36 health survey (physical function, role limitations due to physical functioning, bodily pain, general health, and vitality)) after treatment (after 4 and 12 weeks). However, the improvements in evaluation parameters of the patients with LE in HILT and brace groups were not reflected to ultrasonographic findings. Furthermore, comparison of the percentage changes of the parameters after treatment relative to pretreatment values did not show a significant difference between HILT and brace groups. We conclude that HILT and splinting are effective physical therapy modalities for patients with LE in reducing pain and improving disability, quality of life, and grip strength.

Keywords Lateral epicondylitis· High-intensity laser therapy· Splinting · Pain · Disability · Quality oflife

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