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The effect of oscillating-energy manual therapy on lateral epicondylitis: a randomized, placebo-control, double-blinded study

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Abstract

Symptoms of lateral epicondylitis (LE) are attributed to degenerative changes and inflammatory reactions in the common extensor tendon induced by microscopic tears in the tissue after repetitive or overload functions of the wrist and hand extensor muscles. Conventional treatments, provided on the premise of inflammatory basis of LE, have shown 39-80% failure rate. An alternative approach suggests that symptoms of LE could be due to active tender points developed in the origin of hand and wrist extensor muscles after overuse or repetitive movements. Oscillating-energy Manual Therapy (OEMT), also known as V-spread, is a craniosacral manual technique that has been clinically used for treating tender points over the suture lines in the skull. Considering symptoms of LE may result from active tender points, the purpose of this study was to investigate the effect of OEMT on pain, grip strength, and functional abilities of subjects with chronic LE. Twenty-three subjects with chronic LE (>3mo) between ages of 24 and 72 years participated in this study. Before their participation, all subjects were screened to rule out cervical and other pathologies that could possibly contribute to their lateral elbow pain. Subjects who met the inclusion criteria were randomized into treatment and placebo treatment groups by a second (treating) therapist. Subjects were blinded to their group assignment. Subjects in the treatment group received OEMT for six sessions. During each treatment session, first a tender point was located through palpation. After proper hand placement, the therapist focused the direction of the oscillating energy on the localized tender point. Subjects in the placebo group underwent the same procedure, but the direction of the oscillating energy was directed to an area above or below the tender points, not covering the affected area. Jamar Dynamometer, Patient Specific Functional Scale (PSFS), and Numeric Rating Scale (NRS) were used to measure grip strength, functional status, and pain intensity and limited activity due to pain, respectively. The screening therapist who was blinded to the subjects' group assignment performed pretest, posttest, and six-

month follow-up measurements. Subjects in the treatment group showed both clinically and statistically significant improvement in grip strength ($p=0.03$), pain intensity ($p=0.006$), function ($p=0.003$), and limited activity due to pain ($p=0.025$) compared with those in the placebo group. Follow-up data, collected after six months, showed no significant difference between posttest and follow-up measurements in functional activity ($p=0.35$), pain intensity ($p=0.72$), and activity limitation due to pain ($p=0.34$). Of all the subjects contacted for follow-up assessment, 91% maintained improved function and 73% remained pain free for at least six months. OEMT seems to be a viable, effective, and efficient alternative treatment for LE.

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