The Effect of Oscillating Energy Manual Therapy on Lateral Epicondylitis: A Randomized, Placebo-Controlled Study. Mohammad Reza Nourbakhsh, PT, PhD, OCS, Frank Fearon, DHSc

Abstract

Symptoms of lateral epicondylitis (LE) are attributed to degenerative changes and inflammatory reactions in the common extensor tendon induced by microscopic tear 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 that develop 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 that symptoms of LE may result from active tender points, the purpose of this study was to investigate the effect of localized tender point treatments with OEMT on pain, grip strength, and functional abilities of subjects with chronic LE.

Subjects: Nineteen subjects between ages of 24 and 72 participated in this study. Considering the number of subjects with bilateral symptoms, a total of 24 cases of chronic LE (>3 mo) were included. Prior to their participation, all subjects were screened by an orthopedic clinical specialist 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 oscillating energy was directed to an area above or below the tender points, not covering the affected area. A Jamar dynamometer, the Patient-specific Functional Scale, and the Numeric Rating Scale were used to measure grip strength, functional status, pain intensity and pain limitation, respectively. The screening therapist who was blinded to the subjects’ group assignment performed pretest, posttest, and six-month follow-up measurements.

Results: Subjects in the treatment group showed both clinically and statistically significant improvement in grip strength, pain intensity, functional activity, and arm use after treatment compared with a placebo group. This abstract has been presented as a poster at the CSM-2006 in San Diego.

Using the Torque–Velocity Test of the BTE-Primus to Measure Sincerity of Effort of Grip Strength. Orit Shechtman, PhD

Abstract of your presentation

Background: An inverse relationship exists between torque and velocity, with torque increasing as velocity decreases and vice versa. For example, maximal torque is produced during isometric effort, when velocity equals 0. For a single joint movement, such as knee extension and elbow flexion, the inverse torque–velocity relationship is linear for the mid-range torques and velocities. This linear relationship is maintained when maximal effort is exerted, regardless of age, training level, and fatigue. It is hypothesized that submaximal effort does not produce a linear torque–velocity relationship because replicating a submaximal isotonic contraction requires an enormous amount of proprioceptive feedback and the nervous system may not be able to accurately replicate both force and speed of contraction. If this hypothesis is true, the torque–velocity test of the BTE-Primus may be an effective method for assessing sincerity of effort.

Purpose: The purpose of this study was to examine if differences exist in the linear torque–velocity relationship between maximal and submaximal grip-strength effort. An