

Focused and Radial Extracorporeal Shock Wave Therapy for Lateral Epicondylitis: Preliminary results

Author:

Yavuz Yildiz, T. Aydin

Institution:

Gulhane Military Med. Academy, Sports Medicine Dep., 06018 Etlik, Ankara, Turkey

Device and producing company:

Duolith SD 1, Storz Medical

Introduction:

Extracorporeal shock wave therapy (ESWT) has been used in the treatment of lateral epicondylitis for several years. The results from previous studies have been conflicting. The aim of this study was to evaluate the effectiveness of focused and radial extracorporeal shock wave therapy (ESWT) for the treatment of lateral epicondylitis.

Methods:

Twenty recreational athletes aged between 20 and 30 years (mean age: 25.2 ± 3.1 years) with unilateral lateral epicondylitis participated in this study. All participants underwent clinical and instrumental diagnosis (X-rays and ultrasonography). They had been previously treated with physical therapy, local injections and other conservative procedures for at least 6 months. Focused and Radial ESWT were assigned to 3 treatments, 1 per week for 3 weeks. In each session, 1000 pulses of 0.1 to 0.15 mJ/mm² and 3000 pulses of 1.4 to 2.2 bar depending on the participant's pain tolerance, were administered respectively. Overall elbow pain using the visual analogue scale (VAS) and maximum pain-free grip strength (MPFGS) were used to evaluate each subject before the treatment and 4 weeks after the treatment. Isokinetic peak torque of the wrist flexor and extensor muscles were assessed eccentrically and concentrically at test speeds of 1200/s in pre and post treatment sessions.

Results:

Before treatment, concentric and eccentric extensor strength were found to be significantly lower in the lateral epicondylitis wrist compared to the healthy control.

Conclusion:

ESWT appeared to be an effective treatment for chronic lateral epicondylitis.