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A comparison of the efficacy of physical therapy and radial extracorporeal shock wave therapy in the treatment of carpal tunnel syndrome: A randomized controlled study

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Objective: To compare the efficacy of physical therapy (PT) and radial extracorporeal shock wave therapy (RESWT) in the treatment of Carpal Tunnel Syndrome (CTS).

Patients and Methods: Patients diagnosed with mild to moderate CTS were allocated into three groups in this prospective randomised controlled study of 95 patients (125 wrists). The control group (Group 1, n=42) was treated with splinting and a home exercise program. Group 2 (n=42) was treated with a total of three sessions of RESWT, splinting and a home exercise program. Group 3 (n=41) was treated with a total of 15 sessions of PT modalities (paraffin, transcutaneous electrical nerve stimulation and intermittent ultrasound), splinting and a home exercise program. Each patient was evaluated before, three weeks after and twelve weeks after treatment using a visual analogue scale (VAS), the Boston carpal tunnel questionnaire (BCTQ), the Leeds assessment of neuropathic symptoms and signs pain scale (LANSS) and electrodiagnostic testing.

Results: The reduction in VAS, BCTQs, BCTQf, LANSS and improvement in sensory nerve conduction velocity was greater at the third and twelfth week follow up in Groups 2 and 3 when compared to Group 1 ($p<0.001$). More improvement was observed in all clinical parameters in Group 2 when compared to Group 3 ($p<0.001$).

Conclusion: This is the first study to compare the treatment outcomes of PT and RESWT in the treatment of CTS. The results of this study show that both PT and RESWT are effective in the treatment of CTS however, RESWT showed superior treatment effects when compared to conventional PT. The practicalities of administering RESWT and its efficacy in the treatment of CTS may make it the treatment of choice.

Biography

Selin Ozen completed her specialist training in the area of Physical Medicine and Rehabilitation in 2017 and continues to work at the Physical Medicine and Rehabilitation Department of Baskent University Faculty of Medicine in Ankara, Turkey. Selin Ozen is a member of the Turkish Board of Physical Medicine and Rehabilitation and a fellow of the European Board of Physical and Rehabilitation Medicine. Selin Ozen has a special interest in musculoskeletal physical therapy and neurorehabilitation.

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