

DOES RADIAL EXTRACORPOREAL SHOCK WAVE THERAPY REDUCES POST STROKE HAND SPASTICITY?

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Background and Aims

Hand spasticity after a stroke decreases residual hand functions and independence of every day activities. It is associated with pain, contractures and high level of disability. Radial extracorporeal shock wave therapy (RESWT) is an enticing treatment option for focal spasticity. The main goal of this clinical study was to evaluate the effects of RESWT on the hand spasticity after stroke. Afterwards to assessed the efficiency of RESWT in motor and functional recovery of a spastic hand poststroke.

Methods

This controlled clinical trial included 90 patients with spastic hand post stroke, assigned in to examined group (EG) and control group (CG). The EG received RESWT and standard rehabilitation treatment and the CG received only a standard rehabilitation treatment. For evaluation of treatment efficacy were used: Modified Ashworth Scale (MAS), Disability Assessment Scale (DAS) and the subscore for motor recovery of the Fugl-Meyer assessment for upper extremity. The clinical findings were evaluated at the same time points for both groups: before the start of the rehabilitation, immediately after the end of the 2nd, 6th and 14th week from the start of the rehabilitation.

Results

In the EG the results indicated a significantly lower MAS score for more than one average score (<0.05). Analysis of the results in the EG for DAS domains showed a significant disability reduction in maintaining hand hygiene, dressing, limb position abnormality and pain due to spasticity in all control measurements. The RESWT resulted in significantly better hand motor control in all three control measurements in the EG.

Conclusion

Study results showed that RESWT reduced hand spasticity after stroke. This treatment resulted in reduced disability leading to better quality of life in this patients. Given that no side effects were observed it remains that RESWT is a safe, non-invasive treatment for spastic hand after a stroke.

Keywords: spasticity, radial, extracorporeal, shock, wave