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Efficacy of neurodynamic techniques in comparison with sham therapy in the carpal tunnel syndrome: A preliminary study

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Objective: The purpose of this study was to compare the efficacy of neurodynamic techniques, with sham therapy in the mild and moderate carpal tunnel syndrome (CTS).

Methods: The study included 39 CTS patients (the average age 53.2; SD=11.5) who were randomly assigned to the NT group (neurodynamic techniques) or to the CG group (sham neurodynamic techniques). Nerve conduction study (NCS), pain severity (NPRS), symptom severity (SSS) and functional status (FSS) (Boston Carpal Tunnel Questionnaire-BCTQ) were assessed pre- and post-treatment. Therapy was conducted twice weekly and both groups received 10 therapy sessions. In the statistical analysis, the ANOVA model was used, supplemented with a post hoc test (p level 0.05).

Results: A baseline assessment revealed no group differences in NCS, NPRS, SSS and FSS (in all cases $p > 0.05$). Four weeks after the last treatment procedure, nerve conduction was examined again. In the NT group, median nerve sensory conduction velocity increased by 53%, motor conduction velocity by 10%, distal motor latency was decreased by 30% (in all cases, $p < 0.001$). There were no significant changes in NCS of median nerve in the CG group. Immediately after therapy were evaluated NPRS, SSS and FSS. In the NT group NPRS decreased by 308%, SSS decreased by 72% and FSS increased by 49%. There were no significant changes in NPRS, SSS and FSS in the CG.

Conclusion: Neurodynamic techniques had a positive effect on NCS, NPRS, SSS and FSS as compared with sham therapy in the mild and moderate CTS patients.

Biography

Tomasz Wolny has completed his PhD in 2006. He is a Researcher at the Department of Kinesitherapy and Special Methods in Physiotherapy, The Jerzy Kukuczka Academy of Physical Education in Katowice in Poland. He has published more than 67 papers in reputed journals and has been serving as an editorial board member of reputed. For many years he has been evaluating the efficacy of neurodynamic techniques in the treatment of CTS patients.

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