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Comparison of the effectiveness of two physiotherapy programs for female patients with lumbar spine discopathy

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Statement of the Problem: Lower back pain is one of the most common problems in the human body related to the disturbances of motor organ's structure and function. They challenge contemporary physiotherapy which aims to reduce or, where possible, eliminate pain, restore fitness for everyday life, and prevent recurrences. The purpose of this study was to compare two physiotherapy programs in terms of lowering pain intensity, improvement of lumbar and thoracolumbar spine mobility, as well as functional ability in females with lumbar spine discopathy.

Methodology: The study included 100 women aged 45-50 with lumbar spine discopathy being improved in outpatient conditions. The patients were divided into two 50-person groups depending on the program used. The physiotherapy program for group I included kinesiotherapy, classic massage and interferential currents, and in group II: kinesiotherapy, classic massage and ultra-sound. The research tool was a numerical scale of pain intensity (NRS), Roland Morris Disability Questionnaire (RMDQ) and measurements of lumbar and thoracolumbar spine mobility. Wilcoxon and Mann-Whitney U tests were used for the analysis.

Findings: After completion of the physiotherapy, women in group I had significantly lower pain ($p=0.037$) and higher functional efficiency ($p=0.001$). The range of improvement, assessed by the difference in the results of study II and III, was significantly higher for group II women ($p=0.002$). One month after completion of therapeutic treatment, there were no statistically significant intergroup differences ($p=0.169$, $p=0.067$).

Conclusion & Significance: The use of interferential currents in physiotherapy of people with lumbar spine discopathy compared to ultrasound therapy allows for greater improvement in reducing pain intensity, lumbar and thoracolumbar spine mobility, as well as higher functional efficiency. The effectiveness of ultrasound is increasing over time since the end of therapy and only after one month in the case of both physiotherapy programs similar effects can be observed.

Biography

Ewa Puszczalowska-Lizis specializes in the treatment of adult and pediatric patients with congenital abnormalities, joint contractures and neuromuscular disorders. She has received her PhD from the University School of Physical Education in Cracow, Poland, in 2010. Her research interests focus on the development of vertebral column, changes in body posture in various developmental periods and effects of musculoskeletal disorders treatment. Problems of her research also consider the efficiency of the foot in static and dynamic conditions, frequency of deviations below the norm and variability in foot structure in different periods of ontogeny. She has published 1 book, 15 book chapters and more than 70 articles in peer-reviewed scientific journals.

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