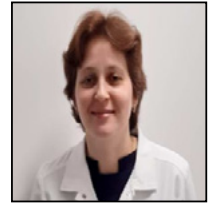# Kinesiotherapy for Back pain

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Abstract

Introduction: The treatment of back pain (BP) is one of the most common problems in medical practice. Often, BP correlates with detectable degenerative changes in the spine, but these changes do not always make the main contribution to the development of pain. We conducted an analysis of the clinical picture of patients with back pain and its correlation with the changes identified during neuroimaging to exclude true radiculopathy. An assessment was made of the condition of the patient with articular dysfunction syndrome and muscle pathology, including both local muscle changes and various functional disorders. Based on the information received, there was a rehabilitation treatment technique for this group of patients. The most effective methods of kinesiotherapeutic treatment were identified. The principle of their selection was developed for various nosologies.

Method: A retrospective cohort study was conducted of patients who complained of pain in various parts of the spine. A clinical assessment was conducted with a thorough collection of complaints and medical history, determination of neurological and neuroorthopedic status. Functional muscle testing was also performed on equipment with unstable footing. Patients with spinal injury were excluded from the study group. To assess the intensity of pain, a verbal analogue scale (VAS) was used. After a thorough diagnostic examination, rehabilitation treatment methods were applied in accordance with the principles of the "ladder of progression", including proprioceptive neuromuscular facilitation (PNF), work on block-type simulators (BTS) and systems with unstable footing (Sling systems and their analogues).

Results: A total of 121 patients were examined with complaints of pain in various parts of the spine, of which 94 (77.7%) patients with hernias or protrusions of the intervertebral discs (IVD) revealed at neuroimaging at various levels without clinical signs of radiculopathy. The remaining patients had minimal clinical signs of radicle compression at various levels in the form of not-rude sensory impairment and asymmetry of reflexes, and only 9 (7.4%) patients had minimal motor impairment in the form of paresis, equal to 4 points on a sixpoint muscle testing scale. Wherein, significant muscle disorders were revealed in the form of rigidity of the muscles of the posterior superficial line, muscle-tonic syndromes at various levels, impaired functioning of muscle tapes, confirmed by functional kinesiotherapeutic testing, as well as articular dysfunctions involving ileosacral and facet joints. And in all patients, functional deficiency of deep axial muscles and cor muscles was revealed to one degree or another. Subsequently, rehabilitation treatment was carried out aimed at restoring articular mobility, normalizing the elasticity of the superficial muscles when working on BTS and the functional inclusion of muscles, the insufficiency of which was revealed during the initial diagnosis. The key point in the rehabilitation was sparing work on systems with unstable footing to activate the deep back muscles. In the vast majority of cases, good results were obtained in the form of a decrease in the intensity of back pain: the average severity of pain before rehabilitation treatment was 6-8 points on the VAS scale, and 7 days after it began - 2-5 points. 30 days after the end of treatment, the severity of pain was 0-3 points.

Conclusion: In the course of the study, it was confirmed the need for rehabilitation work with the activation of deep muscles, cor muscles, as well as the functional inclusion of muscle tapes to achieve a long-term result. The use of the listed kinesiotherapeutic techniques in patients with back pain of a non-traumatic genesis makes it possible to obtain in most cases stable results, characterized by a significant reduction in pain and maintaining the effect for at least 30 days.

Biography:

Galina Zadorina Negoda is currently an assistant (lecturer) at the department of Sports medicine and medical rehabilitation at Sechenovskiy University in Moscow. After graduating from the Moscow Medical Academy named I.M.Sechenov, was trained in internship and traineeship in the specialty of neurology, in postgraduate department – neurology, rheumatology and functional diagnostics. For several years she worked as a researcher at the Moscow Institute of Rheumatology, aiming to study the characteristics of neurological pathology in patients with lesions of the cervical spine in rheumatoid arthritis. She also provided counseling to patients with various rheumatological diseases. Since 2010, she has been engaged in neurorehabilitation of patients with severe motor impairment in traumatic spinal cord disease, head injury, with post-stroke changes. And also, the restoration of cognitive functions in organic brain damage, using the method of neuropsychological correction. Subsequently, she headed a rehabilitation center specializing in the recovery of patients with pain syndromes. Currently, she works at the department of Sechenovskiy University, teaching students and doctors. The priority direction in scientific work and in practice is rehabilitation methods for pain syndromes, special attention is paid to pain in the back and neck.

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