EuroSciCon

March 25-26, 2019
Rome, Italy

JOINT EVENT
7th Edition of International Conference on
Pain Management
&
8th Edition of International Conference on
Internal Medicine & Patient Care

Ivet B Koleva, Int J Anesth Pain Med 2019, Volume 5
DOI: 10.21767/2471-982X-C1-004

Interdisciplinary approach towards analgesia in low back pain and lumbo-sacral radiculopathy: Impact of paravertebral infiltrations, laser therapy and deep oscillation (a comparative study of five rehabilitation complexes)

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The goal of current work is to compare the impact of drug therapy versus different pre-formed physical modalities in the complex rehabilitation algorithm of patients with back pain. We observed a total of 455 patients with low back pain and lumbo-sacral radiculopathy; randomized into five therapeutic groups (of 91 patients each one). In all patients we applied a complex physiotherapy programme, including analytic exercises; soft tissue techniques (post-isometric relaxation, stretching, manual massage, tractions and mobilizations); patient education in the back school principles. In patients of the first group (gr 1) we added paravertebral infiltrations (with corticosteroide, lidocaine and B vitamines). In the next two groups a preformed physical modality was included: lasertherapy (gr 2 - Laser) or deep oscillation (DO - gr 3). Patients of the last two groups received combined therapy (drugs plus physical analgesia): gr 4 – infiltrations and laser; gr 5 – infiltrations + DO. Patients were controlled before, during and at the end of the rehabilitation course and one month after its end using a battery of traditional and contemporaneous methods for objectivization of the vertebral and radicular syndromes (including visual analogue scale of pain, vibroesthesiometry; thermosensibility; lassegue sign; ICF assessment). Based on this detailed qualitative and quantitative evaluation we proved the efficacy of application of paravertebral infiltrations, laser therapy and deep oscillation in the complex rehabilitation algorithm of patients with back pain and lumbo-sacral radiculopathy. Drug therapy is most effective during the first days, physical analgesia begins slowly, but the effect is most durable. We obtained better results in groups with combined therapy (infiltrations and physical analgesia). We discuss some theories, concerning the mechanisms of physical analgesia. Some aspects of spinal biomechanics and kinesiology are mentioned. The evidence proved the better efficacy of combined analgesia in patients with low back pain and lumbo-sacral radiculopathy.

Biography

Ivet B Koleva is a Medical Doctor, Specialist in Physical and Rehabilitation Medicine and in Neurology with European certification in PRM. She defended two theses (Philosophy Doctor and Doctor in Medical Sciences) in the field of Neurorehabilitation. Her scientific interest are in the field of Pain and Physical Analgesia; Grasp and Gait rehabilitation; Functional assessment, etc. Actually, she is Professor at the Medical University of Sofia, Bulgaria.

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