7<sup>th</sup> International Conference & Exhibition on

## **Physiotherapy & Physical Rehabilitation**

March 25-26, 2019 | Rome, Italy

## Complex rehabilitation programmes for diabetic neuropathy patients

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The modern diabetology explains clinical patterns of the continuum: metabolic syndrome->non-insulinodependent diabetes mellitus->diabetic neuropathy (DN). Etiopathogenetic mechanisms include metabolic and vascular factors, converging to oxidative stress and development of segmentary demyelinization or/and axonal (Waller) degeneration of the peripheral nerves of diabetic patients. The diabetic neuropathy (somatic or autonomic) is a "silent" pathology provoquing severe complications. The purpose of our study is to create an algorithm for functional assessment and physical therapy of different DN-types and to evaluate qualitatively and quantitatively the efficacy on signs and symptoms of DN-patients. We evaluate a total of 1023 DN-patients (sensorimotor form, proximal or distal type). The complex physical-therapeutic and rehabilitation (PhThR) programmes include: physiotherapy (analytic exercises, soft tissue techniques-massage, PIR, stretching, tractions, mobilizations); peloidotherapy (fango/mud/ or sea lye compresses); patient education; pre-formed physical modalities (iontophoresis, TENS, FES, magnetic field, LASER therapy, Deep Oscillation). For database management we used t-test (analysis of variances ANOVA) and Wilcoxon signed rank test (non-parametric distribution analysis). The comparative analysis of the results before and after therapy demonstrates statistically significant beneficial effects on many clinical patterns (part of them remain stabilized one month after the treatment): decrease of irritative sensory signs (VAS), tendency to normalization of hypopallesthesia (vibroesthesiometer of Riedel-Seifert); reduction of the muscle weakness (manual muscular testing); tendency to normalization of quantitatively and qualitatively altered electro-excitability of peripheral nerves in response to stimulation with galvanic or neofaradic currents (excitomotory electrodiagnostics). The complex rehabilitation programme must be individualized in every concrete case.

## Biography

Ivet Borissova Koleva is a Medical Doctor, Specialist in Neurology and in Physical & Rehabilitation Medicine with 30 years of clinical practice. She has completed her PhD thesis on 'Physical Prevention and Therapy of Diabetic Polyneuropathy' and a thesis for Doctor-es-Medical Sciences on 'Neurorehabilitation in patients with socially important neurological diseases'. She received the titles of Associate professor in 2006 and Professor in PRM at 2010. She works at the Medical University of Sofia, Bulgaria. She is the Author of scientific papers, monographs and manuals in the fields of Rehabilitation, Manual Medicine, Grasp and Gait rehabilitation, Functional evaluation and Pain management.

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