

International Conference on

# Targeting Diabetes and Novel Therapeutics

September 14-16, 2015 Las Vegas, Nevada, USA

## Impact of physical modalities in prevention and rehabilitation of Diabetic Polyneuropathy and Neuropathic diabetic foot

Ivet Borissova Koleva

Medical University of Sofia, Bulgaria

Diabetic polyneuropathy (DPNP) is one of the frequent complications of Diabetes Mellitus (DM). DPNP is a predisposing factor for the development of Diabetic Foot (DF) and ulcers, and cause for amputations and restrictions of autonomy and quality of life of patients. Our own clinical experience (of 25 years) and studies (on over than 2, 500 diabetic patients) proved significant efficacy of a complex neurorehabilitation programme, including different natural and preformed physical modalities: exercises, soft tissue techniques, electro & light therapy, balneo & peloido therapy. The programme is adapted to predominant clinical patterns (DPNP signs and symptoms) of every patient. For neuropathic pain and burning feet we apply low or middle frequency electric currents: iontophoresis with analgesic drug (Novocain, Lidocaine), Transcutaneous Electro-Neuro-Stimulation (TENS), interferential currents, sinusoidal modulated currents, Kotz currents; low intensity low frequency magnetic field; and mud applications. For muscular dysbalance we use exercises, soft tissue techniques (post isometric relaxation - PIR, manual massages), underwater procedures. In case of peripheral paresis (peroneal and/ or tibial and/or femoral) we prefer analytic exercises (after manual muscle testing), functional electro-stimulations with low frequency currents (exponential form of the impulse), mineral baths and underwater gymnastics (mineral waters with sulfate), peloids. For diabetic foot of Charcot type we propose middle frequency currents, magnetic field, light therapy, stretching of plantar fascia, sea lye compresses. In case of trophic ulcers laser therapy and magnetic field are most effective. We expose our own theory of mechanisms of action of physical modalities in DPNP & DF.

### Biography

Ivet Borissova Koleva is Doctor in Medicine, specialist in Physical & Rehabilitation Medicine & in Neurology (Medical University of Sofia-Bulgaria). Her studies are in the field of Neurorehabilitation: PhD thesis (Physical prevention and rehabilitation of Diabetic Polyneuropathy), thesis for Doctor in Medical Sciences (Neurorehabilitation algorithms); more than 100 papers, 10 monographs and 10 manuals. She is Associated Professor (2006); Professor (2010) in PRM. She is Editor-in-Chief of 3 Bulgarian scientific journals, Member of UEMS – PRM Section & Board – from 2007. She is Head of the Department "Medical Rehabilitation and Occupational Therapy" at the Medical Faculty - Medical University of Sofia, Bulgaria.

[yvette@cc.bas.bg](mailto:yvette@cc.bas.bg)

Notes: