Balance and gait Neurorehabilitation in multiple sclerosis with significant fatigue and spasticity

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Abstract:

Multiple sclerosis (MS) is a socially important disease, with a high level of acquired disability in a relatively young population. Motor weakness, spasticity, balance and coordination dysfunctions provoke severe difficulty in everyday activities of MS patients. Neurorehabilitation (NR) is an interdisciplinary thematic field between Neurology, Neurosurgery, Physical and rehabilitation medicine (PRM). According the White Book of PRM, Rehabilitation (including NR) is a functional therapy, based on a detailed functional assessment. Balance and Gait recovery are important goal in NR-clinical practice, essential for the independence of patients in activities in daily living.

We present the case of a 33-years old female, with definitive MS, cerebro-spinal form, relapsing-remitting evolution with secondary progression; admitted to our PRM-Department for NR 15 days after a relapse. Ad the entry, the patient had spastic inferior paraplegia, cerebellar ataxia; significant spasticity, and important fatigue. EDSS-score = 6,5.We applied a complex NR-programme, combination of traditional and modern methods, oriented to diagnosis (functional tests and scales, stabilometry and gait assessment; International Classification of Functioning) and therapy (proprioceptive neuromuscular facilitation - PNF; electrical stimulations; cryotherapy; balance and gait training; transcranial and transmedullar magnetic field, ergotherapy, LOCOMAT (Hocoma). Because of the significant spasticity, appearance of clonus and important fatigue, we divided the physiotherapy and robotic procedures in periods of 30 minutes. Complex NR-programme is effective for stimulation of activity-dependent neuroplasticity. We emphasize the impact of NR for functional recovery, amelioration of autonomy and quality of life of MS-patients. In case of fatigue and spasticity, we recommend fractionation of the NR-procedures.

Biography:

Ivet Koleva is a medical doctor, specialist in Neurology and in Physical & Rehabilitation Medicine (PRM). Her PhD thesis and her thesis for Doctor-es-Medical Sciences (DMedSc) are in the field of Neurorehabilitation (NR). Author of many publications in national and international scientific journals; books and monographs in the thematic field of rehabilitation, NR; grasp and gait rehabilitation, pain management. Actually, she works as Professor in PRM at the Medical University of Sofia, Bulgaria. Borislav Yoshinov is Bachelor in Physiotherapy, actually student in Medicine. Radoslav Yoshinov is Bachelor in Information technologies, actually student in Master's degree in Informatics.

Recent Publications:

1. Dr. Ivet Koleva, Journal of Neurophysiology research, 2020
2. Dr. Ivet Koleva, NEUROREHABILITATION & QUALITY OF LIFE, 2020
3. Dr. Ivet Koleva, J Alzheimers Neurodegener,2020
4. Dr. Ivet Koleva, Acta Scientific Orthopaedics, 2020
5. Dr. Ivet Koleva, Journal of medical and clinical studies

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