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Impact of functional electrostimulations in the complex neurehabilitation algorithm of patients with multiple sclerosis

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Introduction: 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.

Aim: Our aim was to evaluate the impact of functional electrostimulations (FES) in the complex neurorehabilitation (NR) algorithm of MS patients (cerebro-spinal form, relapsing-remitting evolution).

Materials & Methods: We observed a total of 164 patients with clinically and MRI proved MS, with spastic paraparesis and cerebellar ataxia (static, locomotory and dynamic dyscoordination); 2-4 weeks after a relapse. Patients were randomized into two therapeutic groups (82 per group). The control was done before, during and at the end of the NR course (of 20 treatment days), and one month after its end - using a battery of clinical methods and functional scales. In all patients we applied a complex NR programme of cryophysiotherapy and ergotherapy; including proprioceptive neuromuscular facilitation techniques; balance, coordination and gait training; goal-oriented activities. Group (gr) 1 received only this NR programme. In gr 2 we added FES for the extensors of the ankles and feet.

Results: The comparative analysis of results demonstrates significant amelioration, most important in the FES group: diminution of spasticity; reduction of the motor weakness; amelioration of the gait stability and balance (Berg Balance scale); improvement of functional capacity (EDSS scale of Kurtzke), and autonomy (FIM–Transfers and Locomotion subscales; Barthel index - subscales Mobility and Stairs).

Conclusion: Functional electrostimulations are important part of the neurorehabilitation algorithm in MS patients.

Biography

Prof. Ivet Borissova Koleva is a medical doctor, specialist in Neurology and in Physical & Rehabilitation Medicine; with 30 years of clinical practice in the domain of NeuroRehabilitation. Actually, she works as a professor at the Medical University of Sofia, Bulgaria.

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