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MUSCLE SPASTICITY AND THE EFFECTS OF REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION IN PATIENTS WITH MULTIPLE SCLEROSIS

Kateva V, Kmetska K, Milushev E, Milanov I

University Hospital for Neurology and Psychiatry - Sofia, Bulgaria

Introduction: Over a 14 days course we studied the effects of high frequency repetitive Transcranial Magnetic Stimulation that was applied over the primary motor cortex (M1) bilaterally to patients with Multiple Sclerosis (MS) with EDSS ranging from 2,5-6,5. All procedures were done in a clinical setting. In addition to that, we have applied Cu So4 electrophoresis over the Spinal cord region. We studied a heterogeneous group of 65 patients with MS - 51 of them with muscle spasticity; 30 with decreased muscle strength; 25 with bladder control impairment and 50 with mood changes and fatigue.

Methods: We used Timed 25 foot walk test; Modified Ashworth Spasticity scale; The five point scale for muscle strength; Bowel and Bladder control scales from the Multiple Sclerosis Quality of life inventory and Fatigue Severity scale; and Depression inventoty scale. The patients were tested on the first and 14th day of the treatment.

Results: Most of the symptoms (excluding fatigue) were significantly improved. 67% of the patients showed decreased muscle spasticity and thus, less weakness and improved gait. 68% showed improved mood.

18% reported positive outcome in Bladder control impairment. Faster (in 5-7 procedures) improvement was recorded in patients with EDSS from 2,5 to 4. None of the patients had any serious adverse side effects.

Conclusion: High frequency repetitive Transcranial Magnetic Stimulation is beneficial in the management of motor and affective symptoms in patients with Multiple Sclerosis . The procedure is well tolerated and has an excellent safety profile

Biography

Violeta Kateva is Practicing Neurologist at University Hospital for Neurology and Psychiatry- Sofia, Bulgaria since 2012. She is also rTMS clinician/ teacher. She completed an Intensive Course in Neurology in 2015 & Intensive Course in Transcranial Magnetic Stimulation in 2016 at Harvard Medical School. She also did a Multiple Sclerosis Preceptorship Program, Tel Aviv, Israel in 2015.

v_kateva@yahoo.com