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PRPMS-Prediction of rehabilitation potential in multiple sclerosis by neuromuscular assessment

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Rehabilitation in multiple sclerosis needs neuromuscular assessment using tensyomiography (TMG) for predicition the muscle changes. We studied 20 patients, selected conform to certain criterias, Thus, according to diagnosis and MS level. The studied group was divided into 2 subgroups: subgroup A, consisting of 13 MS patients with clinically detectable gait disorders, and subgroup B, made up of 7 MS patients without clinically detectable gait disorders. TMG determines the diagnosis of a certain muscular type and muscular status/condition (fatigue, stress influence on the body, etc), the diagnosis of a functional muscular symmetry. The investigation has been performed on the shank muscles. The parameters evaluated through TMG were: contraction time (Tc) and the amplitude of muscular displacement in transverse direction- Dm (mm) a parameter which is also correlated with Tc values and depends on the flexibility of muscular tissue. Results: Dm in the case of gastrocnemius muscles (mG) data analysis shows an evolution of functional bilateral right-left asymmetry, which is more pronounced in subgroup A. At the level of posterior shank. Dm values in subgroup A are lower, which means that patients in subgroup A have a higher muscular tone and a maximum response to stimulation. Concerning Tc values, this parameter indicates muscular fatigue at the level of anterior tibialis. Conclusions: TMG, besides classical methods of paraclinical investigation, improves data generation, standardization, helps to desing the rehabilitation goals of lower limb, regarding balance and gait,identifies correlations which may facilitate a precocious diagnosis in morphofunctional changes evolution at muscular level at MS patients.

Biography

Professor and sport medicine and rehabilitation physician, Ligia Rusu has completed her Ph.D at the age of 36 years from Univrsity of Medicine and Pharmacy Craiova, Romania. She was director for many national research grant focused on neurologic assessment and rehabilitation. She is the director of Research Centre of fo Study Human Body Motricity and also director of Sports Medicine and Kinesiology Department from University of Craiova, Romania. She is the member of research committee of European College of Sport Physician(ECOSEP). She has published more than 100 papers in journals and prestigious conferences and serving as an editorial board member od MEDICINA SPORTIVA (Journal of Romanain Sport Medicine Society), World Cademy of Science and Technology Journal, and Journal of Clinical RehabilitativeTissue Engineer Research.

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