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Lecture

Neuropsychological functions and single photon emission computerized tomography (SPECT) in Greek multiple sclerosis patients: Efficacy of a computerized cognitive rehabilitation program

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Abstract

Cognitive dysfunction is common in multiple sclerosis (MS) patients and significantly influences their daily functioning abilities and quality of life. Cognitive impairment rates of between 30-60 % have been reported, whereas lifetime prevalence rates of 50-75% are now evident in many epidemiological studies, due to the degenerative nature of the disorder. Although disease modifying treatments may delay the onset of cognitive deficits, there is no empirical evidence regarding their efficacy for treating cognitive dysfunction. On the contrary, recent studies evaluating neurobehavioural interventions using cognitive rehabilitation have noted effective results in improving neuropsychological functions. More specifically, there is strong evidence from functional imaging studies utilizing f-MRI that cognitive rehabilitation may enhance the endogenous neuroplasticity of the brain in patients with MS through enhanced recruitment of brain networks subserving the trained cognitive functions. If such interventions are applied timely before brain atrophy becomes significant they may assist in significantly reducing cognitive decline. In this presentation we provide a brief overview of international studies regarding the efficacy of cognitive rehabilitation in this population. Furthermore, we present the results of a Greek functional imaging study utilizing Single photon emission computerized tomography (SPECT) and its correlation with neuropsychological functions in relapsing remitting MS patients. Moreover, we present the positive results achieved by utilizing a computerized cognitive rehabilitation program (REHACOM) in Greek RRMS patients who attended the University hospital of Patras neuropsychological laboratory in collaboration with the laboratory of neurophysiology, neuropsychology and cognitive rehabilitation of TEI Epirus, Department of Speech and Language Therapy

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