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Editorial Open Access

Cognitive Rehabilitation in Multiple Sclerosis

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Editorial

Multiple sclerosis (MS) is a progressive disease of the central nervous system characterized by the production of widespread lesions in the brain and spinal cord. As a result of the widespread nature of the myelin plaques and axonal injuries, MS results in different symptoms, including visual, bulbar, sensory, motor, sphincter, cognitive, and neuropsychiatric, and variable clinical presentations and disease courses.

Cognitive impairment is a common clinical feature of MS at both the earlier and later stages of the disease, with prevalence rates ranging from 43% to 70% [1,2]. MS has been shown to affect negatively various aspects of cognitive function including those associated with attention, efficiency of information processing, executive function, processing speed, and new learning and memory.

Cognitive impairments are associated with reduced functional status in MS. Cognitive impairment often has a deleterious impact on someone's personal, occupational, and social functioning, as well as overall quality of life (QOL) [2]. Rao et al. found that people with MS who have cognitive impairments were less likely to be employed, were engaged in fewer social and vocational activities, had greater difficulties in carrying out routine household tasks, and were more vulnerable to psychiatric illness with respect to those patients with a purely physical disability [1].

Despite that cognitive disorder in MS patients are studied for a long time few efforts have been made to find appropriate pharmacological and rehabilitative strategies to improve them.

Indeed, few studies have assessed the efficacy of interventions on cognitive deficits in MS, and many authors have highlighted the need for additional effective techniques [2].

Cognitive rehabilitation aims at reducing cognitive deficits, improving patients' awareness and ability to take their cognitive impairments into account in their daily living and promoting positive neurobiological changes.

Although these interventions are still at the beginning, there have been some well-designed studies of cognitive rehabilitation in patients with MS that might provide new insight to advance the field.

Most of the intervention implemented involved learning and memory-based interventions, but recently the focus has moved to other domains such as executive function and attention, since these are the cognitive functions mostly affected by this illness. Interventions based on these functions appear to lead to more consistent results. This element of novelty, however, requires further investigations [3].

Many methodological limitations of studies so far conducted must be addressed to move forward, including increased methodological rigor in the definition of cognitive impairment, documentation of current medications and other ongoing MS treatments, increased sample sizes, which will lead to the ability to determine if specific interventions differentially benefit different types of MS, reporting of the specific disease course and other disease-related information, the reporting of significantly greater details of the methodology of the interventions, investigation of evidence-based protocols that have been successful in other clinical populations, and investigation of the extent of generalization of treatment to daily life and the resultant impact of cognitive rehabilitation on daily functioning [2].

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