Brief Neuropsychological evaluation of cognitive abilities in patients affected by Multiple Sclerosis

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Background: For decades it has been believed that cognitive deficits did not belong to the diagnosis of Multiple Sclerosis (MS) and that they were less important than what the disease could cause like disability to walk, see, incontinence, but cognitive disorders, albeit mild, can interfere in the daily life of a person instilling feelings of uncertainty and concern. Many people, when they are seen by a neurologist, complain of memory problems, and often return home with prescriptions of anxiolytics and/or antidepressants drugs. We want to demonstrate that by using a valid and easy to administer tool, a short monitoring (30 minutes) of cognitive functions can be performed, not a complete assessment, but that still allows a first discrete and reliable cognitive assessment.

Methods: The sample of 12 women diagnosed with Relapsing-remitting MS (RRMS), aged between 32 and 65 years. Eight out of twelve complained of short-term memory problems and inattention. Four showed obvious changes in mood and anxiety. Each patient has been subjected to: Preliminary meeting with the neurologist, psychological interview, previous and current history of psychopathological issues, administration of tests, return to the patient, sending for any rehabilitation program and/or psychological support. Tests used for the investigations were:

- **BICAMS** (Brief International Cognitive Assessment for MS);
- **Language:** Phonemic fluencies and semantic fluencies, Rey 15-item Memorization Test;
- **Short-term memory:** Digit span forward, Digit span backward;
- **Long-term memory:** Babcock Story Recall Test, Raccontino di Anna Pesenti (Novelli e coll., 1986);
- **Attention:** Trial Making Test (A-B).

Findings: In most cases, the neuropsychological evaluation didn't show any loss of performance to neuropsychological tests and only the qualitative analysis allowed to highlight the presence of blurred and slight difficulties, not of pathological significance.

Discussion: From the qualitative neuropsychological evaluation, only for 2 patients, the neuropsychological evaluation showed poor performance in one or more cognitive domains. Deficits due to attention, cognitive flexibility, speed of information processing, Visual-Spatial Memory are highlighted. Language, access skills and lexical recovery are preserved. The results are in line with current scientific research on cognitive deficits in patients with MS.

Acknowledgements: Rao, S.M., et al., Cognitive dysfunction in multiple sclerosis. I. Frequency, patterns, and prediction. *Neurology*, 1991. 41(5): p. 685-91. Swirsky-Sacchetti, T., et al., Neuropsychological and structural brain lesions in multiple sclerosis: a regional analysis. *Neurology*, 1992. 42(7): p. 1291-5.