

COGNITIVE CHANGES DURING AND AFTER MULTIPLE SCLEROSIS RELAPSES

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Background: Cognitive problems are common in Multiple sclerosis (MS). Limited data is available about the changes in cognition during MS relapses.

The aim of the study is to compare the neuropsychological test results of the persons with MS (PwMS) at the baseline, during MS relapse and one month after the relapse and to assess the sensitivity of different tests for tracking cognitive changes during relapses.

Methods: Neuropsychological test battery (Buschke Selective Reminding Test (immediate and later recall, logical memory („Cowboy Story“, immediate and later recall), 10/36 Visuospatial Memory Test, Trail Making A&B, Symbol Digit Modalities Test, PASAT, Verbal Fluency (semantic “animals”), Bender Copies (5 sec recall)) was administered to the control group and PwRRMS at the baseline, during relapse (before the treatment) and one month after the relapse.

Participants: 50 PwMS with relapsing-remitting MS and 53 healthy controls participated in the study.

Results: The only statistically significant differences in neuropsychological tests during baseline and relapse were in verbal fluency subtest ($p < 0.05$), baseline and one month later in tests measuring immediate and later recall ($p < 0.05$) in logical memory, verbal memory (controlled long term retrieval, $p < 0.05$), executive functions (Trail A & B, $p < 0.05$), in tests measuring logical memory and Trail Making A & B (all $p < 0.05$) during relapse and one month later.

Conclusions: Most cognitive functions seem to be intact during MS relapse. The most sensitive tests for the cognitive changes during relapses is verbal fluency subtest. Cognitive speed recovered already one month after the relapse.