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Cognitive impairment in patients with clinically isolated syndrome

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Background: Cognitive impairment is a known topic in multiple sclerosis, but it is not well known in patients with clinically isolated syndrome (CIS).

Methods: Patients with CIS (N=35) and healthy control participants (N=35), were assessed by the Brief International Cognitive Assessment for MS (BICAMS). The maximum time between first demyelinating event and cognitive evaluation was 1 year. Symbol Digit Modality Test (SDMT) to test of information processing speed, California Verbal Learning Test (CVLT) to test verbal memory, and Brief Visuospatial Memory test-Revised (BVM-T-R) to test visual memory, were used. The normal range for each test was obtained from the matched healthy control group and the test was considered failed if the score was outside of the normal range.

Results: Nineteen patients (54.3%) obtained scores less than the normal range in at least one test. Eight patients (22.4%) failed in two tests. Impairment on all three tests, was not observed. Patients had impairment in SDMT (42.9%), CVLT (40%), and BVM-T-R (17.1%) in decreasing order of frequency. Regarding to CIS presenting symptoms, optic neuritis (N=20), spinal cord involvement (N=8), and brain stem involvement (N=7), there was no significant difference in cognitive performance.

Conclusion: Our findings indicate that there is a significant cognitive dysfunction from the very earliest stage of the disease.