The relationship between the BICAMS battery, disease disability, duration and relapse rate in Lithuanian MS patients

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Abstract

**Background:** Cognitive impairment (CI) occurs frequently in multiple sclerosis (MS). It can present in patients at any time regardless of the disease severity. Recently the Brief International Cognitive Assessment for Multiple Sclerosis (BICAMS) has been created as a brief, simple, and specific instrument for the evaluation of CI in MS patients. However, it is unknown whether the BICAMS battery has the relation with the disease disability, disease duration and relapse rate.

**Objectives:** The purpose of the study was to assess the cognitive status of MS patients by the Lithuanian version of BICAMS and to evaluate the impact of CI on the disability, duration and relapse rate of the disease.

**Methods:** 50 MS patients and 50 cognitively normal control subjects, matched on age, gender, and the level of education were enrolled. Cognitive functions have been assessed by the BICAMS tests.

**Results:** MS patients performed significantly worse than controls on the three neuropsychological tests of BICAMS (p<0.001). The younger and working intellectually persons performed on these tests significantly better than older persons, manual workers or unemployed persons (p<0.05). MS patients with higher disability score, were tended to perform the tests worse (p<0.05), but the relationships between the BICAMS tests and the duration of the disease or relapse rate were not found (p>0.05). Test - retest reliability was excellent for all the three subtests (r>0.8, p<0.05).

**Conclusions:** Better performance of the BICAMS tests was associated with lower severity of the disability, however the relations between BICAMS tests, disease duration and relapse rate weren’t found.