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Cognitive examination as a screening method in patients with syphilis

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Aim of the study. To test cognitive functions in the early diagnostics of nervous system lesion in patients with syphilis.

Methods. A total of 74 patients with syphilis were divided into 3 groups: the 1 group consisted of 49 (mean age 41,9±10,9 years) patients with neurosyphilis, the 2 group consisted of 25 (mean age 38,0 ± 9,3 years) patients who performed syphilis without nervous system damage. Control group consisted of 25 (mean age36,9 ± 12,8 years) healthy volunteers. Serological examinations and lumbar puncture were made to determine the diagnosis of syphilis. MMSE and clock draw test were used to examine cognitive function.

Results. Orientation to time didn't changed in any group. Rude mistakes of orientation to place weren't found. Registration and attention dysfunctions were demonstrated in group 1 (45% of patients) and 18% of them couldn't make the task. Group 2 (20% of patients) showed malfunction and 12% of them couldn't fulfill the instructions. In group 3 significant changes weren't observed. In group 1 memory loss was detected in 65% of patients (35% of them performed considerable decrease). Group 2 patients had the same differences (80% and 32% respectively). Language disorders were rare in all groups. Reading and writing malfunctions (dyslexia and dysgraphia) were detected in the 1 group (6% and 22%) and in the 2 group (16% and 8%) respectively. Praxis was changed only in groups of patients with the nervous system pathology.

Statistically significant results ($p<0,05$) showed clock draw test and MMSE as a whole. Cognitive impairment was found in 43% of patients with neurosyphilis, 28% of patients of the 2 group and 20% of patients of the control group. Dementia prevailed in the 1 group of patients while in the 2 group the number of patients with mild disorders and dementia was equal (16% and 12% respectively).

Conclusions. Cognitive impairment was observed not only in patients with proved diagnosis of neurosyphilis but in other variants of syphilis. Cognitive tests could be used as a screening method for assessment of nervous system injury in patients with syphilis. Estimation of cognitive functions could determine patients of risk groups for further examination of neurosyphilis.

Key words
cognitive function, MMSE, neurosyphilis

