



**SCREENING SCALES FOR THE ASSESSMENT
OF COGNITIVE DISORDERS
IN CHRONIC CEREBROVASCULAR PATHOLOGY**

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Annotation. *Currently, with the progressive trend towards an increase in human life expectancy, the number of patients with various degrees of cognitive impairment, including dementia, in the clinical picture of the disease has increased significantly. These disorders have a significant impact on the quality of life of both the patient and his relatives. Therefore, it is extremely important to identify and differentiate cognitive defects as early as possible in order to start active treatment of patients with cognitive disorders at the pre-dementia stage (mild and severe moderate violations). For this purpose, it is advisable to use screening neuropsychological scales in the examination of each patient with vascular pathology complaining of memory and attention disorders.*

Key words: *encephalopathy, cognitive impairment, dementia, neuropsychological basic research, screening scales.*

Introduction. The condition, manifested by a progressive multi-focal disorder of brain function caused by cerebral circulatory insufficiency, is defined as dyscirculatory encephalopathy (DE) [1]. This term is widely used in our country both in the medical literature and in clinical practice, but it is not included in the ICD 10th revision (1995). Taking into account the etiological factor, in accordance with ICD 10, this pathology can be interpreted as “cerebral atherosclerosis” (I67.2), “hypertensive encephalopathy” (I67.4), “other specified lesions of cerebral vessels” (I67.8) and others. The most important clinical manifestations of DE are cognitive impairment and dementia, and therefore patients with DE are observed and treated by neurologists in



the early stages of the disease, and by psychiatrists in the later stages of the disease. Unfortunately, work is currently not actively underway to identify the initial impairments in cognitive functions, allowing early targeted therapy to begin and support the social activity of patients. Meanwhile, further decline cognitive functions in patients are beginning to play a significant role among the causes leading to permanent disability and social maladjustment. In 1974, V.C. Hachinsky proposed the term “vascular cognitive disorders” to denote disorders of higher brain functions due to cerebrovascular pathology. In 1997, R.S. Petersen proposed using the term “mild cognitive impairment” (MCI) to describe

the meaning of cognitive impairment in the pre-dementia stages of organic brain damage. To the present In the most general form, criteria for moderate cognitive disorders are formulated by S. Gauthier and J. Touchon (2004):

- complaints of memory loss or other cognitive problems on the part of the patient and/or people who know him;
- indications from people who know the patient that during the last year his cognitive functions or functional capabilities have decreased compared to the previous level; moderate impairments of memory and/or other cognitive functions (speech, visual-spatial, regulatory, or others) detected during neuropsychological examination;
- the absence of the influence of a cognitive defect on daily activity (only mild difficulties occur when performing the most complex daily activities);
- maintained general level of intelligence and absence of dementia (the result of a Short scale of assessment of mental status of at least 24 points).

According to Russian researchers, along with the syndrome of moderate cognitive impairment, it is advisable to distinguish the syndrome of mild cognitive impairment. Such violations are invisible to others, but are felt by the patient himself and they are confirmed by careful examination using sensitive techniques. Taking into account the available literature data, the approximate correspondence of the level of cognitive disorders to the stages of DE can be presented as follows.



The first stage of DE usually corresponds to mild cognitive disorders, mainly neurodynamic disorders in the form of slowness, decreased performance, exhaustion, and fluctuations attention.

However, patients generally perform well on tests that do not take into account the time they are performed. Such disorders go beyond the age norm, but they do not limit the vital activity of patients. The second stage of DE most often corresponds to moderate cognitive disorders, which, along with neurodynamic disorders, include regulatory disorders (dysregulatory or subcortical frontal cognitive syndrome). In patients, the performance of even those

neuropsychological tests is disrupted, in which no time limit was introduced, but nevertheless The ability to compensate for a cognitive defect is less preserved, which is reflected in preserved recognition and the effectiveness of mediating procedures, in particular , prompts in tests of logical memory and abstract thinking. Such a defect fully meets the criteria of a moderate cognitive disorder and, although it does not lead to a limitation of the patient's household independence, it can make it difficult to perform complex (usually instrumental) types of daily activities and contribute to a decrease in the quality of life of patients.

The third stage of DE corresponds to pronounced dysmnestic and intellectual disorders that form vascular dementia syndrome, which often comes to the fore in the clinical picture. Undoubtedly, these correlations between the severity of cognitive impairments and the stages of DE are not always revealed.

The basis for conducting a neuropsychological examination is complaints of memory loss or decreased mental performance. These complaints may come from the patient himself, so it is from his relatives, friends, colleagues. Information from this circle of people is an important diagnostic tool for I am familiar with it, since the patient's assessment of the state of his cognitive functions is not always objective.

As a rule, in clinical practice , neuropsychological research can be limited to simple screening scales, such as the Mini mental state examination (MMSE). However , approximately half of the patients with active With complaints of memory loss, the use of simple screening scales does not confirm the presence of cognitive impairment.



The most common cause of subjective complaints of memory loss in the absence of objective confirmation are emotional disorders in

the form of increased anxiety or decreased mood background. Therefore, all patients with complaints of memory loss should carefully evaluate the emotional sphere. Depression is especially likely in young or middle-aged people who complain of memory loss.

Another reason is that when active complaints of memory loss lack objective evidence of cognitive impairment, and the lack of sensitivity of neuropsychological screening scales. Therefore, in addition to assessment and drug correction of the emotional state in such cases, dynamic monitoring of the patient and repeated clinical and psychological studies with an interval of 3-6 months are advisable. Along with MMSE, the following diagnostic scales are used: Frontal Dysfunction Battery (Dubois et al., 1999), Global deterioration scale, Reisberg B. et al., 1982), clinical dementia rating scale, 5-word test, clock drawing test. The clock drawing test is a very simple and highly informative test, including for mild dementia, which makes it one of the most commonly used tools for diagnosing this clinical syndrome.

The minimum time the doctor takes is the test A Mini Cog consisting of 3 consecutive items: repeating 3 words, drawing a clock, remembering 3 words. Significant difficulties in drawing a clock or difficulty playing with a hint though

at least one word indicates the presence of clinically significant cognitive impairments. This test can be used even at an outpatient appointment. The integrated use of scales makes it possible to expand the possibilities of early detection of cognitive disorders and increase the differential diagnostic value of the study. It should be borne in mind that cognitive disorders do not always become a manifestation of a primary brain disease. It is not uncommon for dementia or less severe disorders occur as a result of systemic metabolic disorders, which, in turn, complicate various endocrine or somatic diseases.

Most often, cognitive disorders of a dysmetabolic nature are associated with hypothyroidism, liver or kidney diseases, and vitamin deficiency. B12 or folic acid. Therefore, the detection of dementia or less severe cognitive impairments requires a



comprehensive assessment of the patient's health status and treatment of concomitant somatic and endocrine diseases.

RECOMMENDED LITERATURE

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