

## THE RELEVANCE OF PSYCHOTIC DISORDERS IN THE ACUTE PERIOD OF A STROKE

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**Abstract.** *Despite the many works devoted to mental disorders after a stroke, psychotic disorders are not given enough attention. The relevance of the study of psychotic disorders in the acute period of a stroke is determined in some cases by the fact that psychoses come to the fore and determine the severity of the disease. Delirium is the most common mental illness after a stroke.*

**Keywords:** *mental disorders, psychosis, acute period stroke, then stroke.*

**Introduction.** The relevance of the study of cerebral stroke is associated with its prevalence, high rates of death and disability. Acute cerebrovascular disease (UMC) ranked second among the causes of adult mortality before cancer [1-3]. According to the incidence of cerebrovascular diseases was 469 cases per 100,000 inhabitants, of which 34,7 had ischemic stroke, while deaths from diseases of the circulatory system accounted for 51,6% of the total number of deaths [4-7]. And in the composition of the causes of primary disability of adults, diseases of the circulatory system occupy the first place (19,1%). According to various authors, the frequency of delirium ranges from 2,3 to 66% [8-10].

Delirium can be a complication of a stroke or the first symptom of a developing disease. Risk factors for the development of delirium during acute stroke are aging, vision disorders, joint infections, taking anticholinergic drugs, and drastically stopping alcohol consumption [11-13]. The development of delirium in the acute period of a stroke worsens the prognosis, increases the risk of death, develops dementia and prolongs hospital stay. In addition to movement disorders, neuropsychological disorders play an important role in crippling patients with acute cerebrovascular accident [14-16].

Neuropsychological diseases occur in 12-57% of patients with stroke and are manifested by a decrease in memory, attention, mental performance and intelligence. According to literary data, cognitive disorders dominate lesion localization in the dominant cerebral hemisphere [17-19]. This is because the length of the left hemisphere exceeds the length of the right hemisphere in more than 54% of cases, the total area of the lower frontal gyrus in the right hands is larger than the left, in the left hemisphere areas 44 and 45 (Brock's speech region) the size of the neurons of layers III and IV is larger than the right [20-21]. More involvement of the left hemisphere in an important social function — is associated with speech and speech activity of other higher brain functions, which, in particular, include categorical perception, speech memory, the implementation of logical conclusions, delayed repetition of information, arbitrary regulation of higher brain activity. At the same time, the right hemisphere is known to be relatively dominant in non-verbal Gnostic processes, direct memorization, and automated mental functions [22-26].

Should be remembered about the systematic principle of the psychological structure of higher brain functions in accordance with the Vygotsky concept. Thus, a lesion that appears in one of the hemispheres leads not only to a violation of the functions of this hemisphere, but also to a violation of interhemispheric interaction, and also affects the preserved hemisphere, which leads to an imbalance in the interaction of specific and non-specific anatomical and functional structures of the brain, including interhemispheric diachysis and abduction syndromes [27-29]. The high frequency of post-stroke cognitive disorders leads to the need to diagnose them as early as possible and initiate recovery measures [30].

Research in recent years has shown that post-stroke cognitive disorders lead to poor recovery of motor functions, decreased life expectancy, domestic, social and professional malfunctions [31-34]. Despite the importance of detecting and correcting kr, most were either unrecognized or diagnosed only when they reached severe levels [35-37].

The purpose of the study: is to study impaired consciousness in the acute period of a stroke to create a treatment tactic and a subsequent rehabilitation program.

**Materials and methods.** Seventy-three patients with dementia were examined during the acute period of the stroke. Males were 49 and females 24. The median age was 65 years. Neurological and mental state, anamnestic data were analyzed. The study group does not include patients with dominant right hemispheres, as well as patients with pronounced motor, visual, speech disorders, impaired consciousness up to the level of sopor or coma, interfering with neuropsychological examination, as well as patients with Stage III, IV of chronic disease. Heart failure (according to NYHA). Diagnosis of ischemic stroke is the study of complaints, medical history, Life, General somatic condition, severity of neurological condition on the National Institutes of Health Stroke Scale (National Institutes of Health Stroke Scale), laboratory indications, instrumental examination data (magnetic resonance imaging of the brain, computed tomography of the brain, electrocardiography, ultrasonic duplex scanning brachiocephalic trunks, fundus, if necessary-Echo cardiography, chest X - ray).

Most of those tested were hospitalized for up to 6 hours from the moment of the onset of the stroke - 37%, up to 12 hours - 19%, up to 24 hours - 16%, and more than 48 hours - 28%. The neuropsychological condition was studied for 5-9 days from the moment the stroke developed. A short mental state assessment scale (KSHOPS) (KSHOPS, Mini-Mental State Examination, or MMSE) was used for this. KSHOPS allows you to study the following mental functions: orientation of the patient in time and place, perception, memory, attention and arithmetic calculation, oral and written speech, constructive Praxis. The survey on this test lasts 10-15 minutes, the highest score on the scale is 30 points. In addition to KSHOPS, a watch drawing test is used for screening cognitive functions, according to which the highest score reaches 10 points. Statistical processing of the results was carried out on the IBM Pentium 4 computer using SPSS 16.0 FULL and Microsoft Excel-2018 computer programs for statistical computing. The Pearson or Spirman criterion was used to analyze the correlation of quantitative characters. To assess the strength of relations between Nominal variables, the criteria  $\phi$  and V Cramer are considered, with normality testing using the Kolmogorov Smirnov criteria. In all statistical criteria, a value of 0,05 was adopted for the value of the degree of significance.

**Results and their discussion.** One or another clinical form of consciousness disorder has been observed in 56 patients with ischemic stroke, 14 patients with hemorrhagic stroke, and 3 patients with subarachnoid hemorrhage. In 40 patients (57,1%), the right hemisphere localization

of the lesion was found, in 25 patients (35,7%) the left hemisphere, in 5 patients (7,2%) the root. Disorders of consciousness were manifested by delirium, oneiroid and amentiv syndromes. In most cases, patients have developed a state of delirium (in 63 cases). The Oneiroid state is in 6 states and in 4 states – the amentiv state. In most cases, impaired consciousness developed 1-3 days after the onset of a stroke. The duration of the disorder of consciousness is often limited to a few days. In a number of patients, impaired consciousness syndromes lasted up to several hours, but were prone to recurrence. Changes in symptoms over time were noted with an increase in symptoms in the evening-night hours. Oneiroid syndrome is primarily diagnosed in patients with hemorrhagic stroke. The development of Amentiv syndrome was prognostically unfavorable.

The history of patients with psychotic disorders has identified risk factors such as severe somatic disorders, intoxication, and brain damage. In some cases, psychotic symptoms occurred against the background of mental trauma, the addition of an acute respiratory viral infection. The length of stay of patients with psychotic disorders exceeded the time of hospitalization of patients without psychosis. When patients were discharged from the hospital, an improvement in overall clinical performance, stabilization of the neurological condition, was not accompanied by a complete decrease in psychotic disorders. Asthenic symptoms, disorientation, delusional symptoms, which worsen during the evening-night hours, remained. According to the clinical-neuroimaging study, the patients under study were divided into three groups according to the localization of the lesion: the first group was dominated, patients with stroke in the left hemisphere; the second, subdominant, right hemisphere; the third, in the cerebellum and trunk.

The average score on the short mental state assessment scale in the first group was  $22,8 \pm 0,8$ . At the same time, the study rates conducted were in 9 patients (20,5%) as part of normal rates, in 12 patients (27,3%), and in 23 patients (52,3%) there were dement cognitive disorders. In the second group, the average for KSHOPS was  $25,3 \pm 0,6$  points, which corresponds to the average cognitive impairment. In this group, cognitive functions were normal in 10 (26,3%) patients, and unspecified diseases were found in 20 (52,6%) and different levels of dementia - 8 (21,1%) of those examined. The average score to perform the short mental state assessment scale in the third group was  $24,8 \pm 0,8$ . Navy scale 4 (19%), 11 (52,4%) at non-demental cognitive disorders and at 6 (28,6%) different levels of dement disorders were within normal values. This results analysis revealed a statistically significant difference between the localization of the ischemia foci and the degree of cognitive impairment ( $p < 0,05$ ).

Thus, with stroke in the dominant hemisphere, dement cognitive disorders prevailed reliably, with stroke in the subdominant hemisphere and in the cerebellum and trunk - moderate VPF diseases. The study shows that the majority of patients with acute ischemic stroke show a decrease in cognitive function - in 77.6% of cases, mainly in the form of non-demental diseases (in 41,7% of cases). A moderate correlation was found between the age of patients and the rate of neuropsychological disorders, as half of young people had no impaired brain functions and 89,2 percent of those over 60 were impaired, which was also confirmed by the results of the clock drawing test. The results obtained are explained by the fact that in old age there are a number of joint diseases that reduce cerebral circulation and mechanisms of adaptation to hypoxic conditions in onmc. Our study showed that the localization of the lesion is characterized by the development of certain features of disorders of high brain function. Thus, in the dominant hemisphere, a stroke was accompanied by dement diseases in 52.3% of cases, in most patients specific disorders of the following parameters were found:

time, space, perception, delayed auditory memory, speech functions and focus areas. In the first group, the predominance of cognitive disorders in the kshops and clock drawing test is explained by the great participation of the left hemisphere in the performance of upper brain functions. Constructive Praxis disorder with focus localization in the right hemisphere has prevailed statistically significantly (in 65.8% of cases). Differences depending on the hemisphere affected. However, high frequency of constructive apraxia occurred not only in patients with subdominant localization of focus, but also in 54,5% of patients with ischemic focus in the dominant hemisphere. In this case, it is possible to functionally suppress the activity of the parietal-occipital parts of the same region, that is, the opposite hemisphere. Thus, onmc found an increase in somatosensory induction potential indicators on the opposite side of focus during the acute and subacute periods. At the same time, the results and assumptions obtained about diachysis, which occurs in patients with ischemic stroke, require a detailed examination using modern neuroimaging methods.

In the group of patients with cerebellar blood vessels or brainstem, we did not find significant differences in cognitive disorders compared to those of the blood vessels of the subdominant Hemisphere, where both groups were dominated by non - demential cognitive disorders-in 52,4 and 52,6% of cases, respectively. However, memory, attention, speech, reading disorders of auditory speech are most often observed. The results obtained are explained by the phenomena of diachysis, in addition, it is known that the cognitive functions of the cerebellum are associated with speech processes through Mnestic functions, attention, fatigue, constructive ability, as well as frontal-bridge-cerebellar, occipital-temporomascotor-cerebellar, cerebello-thalamocortical pathways. It should be noted that detailed neuropsychological studies often make it possible to identify damage to parts of the brain that are not described by instrumental research methods.

**Conclusions.** With the development of psychotic disorders in patients during the acute period of stroke, delirium diseases predominated. Oneiroid consciousness disorders have been observed primarily in patients with hemorrhagic stroke. Psychotic disorders in most cases were also maintained against the background of stabilization of the neurological condition and normalization of general clinical indicators in patients. Patients need additional follow-up and treatment by a psychiatrist at the place of residence, which requires continuity to be ensured.

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