



## Significance of Neuro-Ophthalmological Examinations in Stroke before Hospital Stage

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**Relevance of the problem:** The change of the nervous system is expressed in all stages and forms of hypertension, diabetes mellitus, generalized changes in vascular pathology, especially if lesions of cerebral vessels prevail, then cerebral circulation disorders, crises and strokes are determined. They are often characteristic of stage III hypertension accompanied by sclerosis of cerebral vessels and depend on the height of blood pressure and its fluctuations under various unfavorable conditions. Stroke (from lat. Insultus, from insulto - jump up, attack) - acute cerebrovascular accident, leading to impaired brain function. Stroke is one of the most important medical and social problems of modern society.

**Purpose of the study:** Establish the patterns of neuro-ophthalmological examinations in stroke before the hospital stage.

**Material and methods:** Under our supervision from 2019 to 2020, there were 1003 patients with brain stroke: 300 (29.9%) - hemorrhagic stroke and 700 (69.7%) patients with ischemic stroke. Men-393, women-610. Patients in terms of growth were distributed as follows: from 30 to 40 years old-100, from 40 to 50 years old-99, from 50 to 60 years old-200, from 60 to 70 years old-403, older 70 years old-200 patients. Blood circulation disorder in the carotid basin is characterized by a combination of hemiparesis 800 (79.7%) and hyperkinesis 50 (4.9%) with impaired higher cerebral functions: aphasia 205 (20.4%), with involvement of the middle cerebral artery, paralysis is more pronounced in the face and arm, with involvement of the anterior cerebral artery - in the leg 927 (92.4%). When blood circulation in the vertebrosilar basin was impaired, symptoms associated with damage to the brainstem occurred (impairment of the function of one or more cranial nerves, for example, oculomotor, facial or bulbar 76 (%). Lesions of the occipital lobes, unilateral loss of visual fields 12 (%) or bilateral cortical blindness 5 (%). Such patients complained of blindness in both eyes, objective vis OU- 0 (zero), fundus, macular part of the retina without change. MSCT of the brain was performed, a stroke of the mating lobe of the brain was detected. Ophthalmic diagnostic results for all stages of hypertensive disease, diabetes mellitus: fundus unchanged 135 (13.3%), fundus change: retinal angiopathy 516 (51.4%), angiosclerosis, Gunn-Salus symptom 1 stage 72 (7.1%), stage 2 58 (5.7%), stage 3 29 (2.8%), hypertensive retinopathy 7 (0.69%), hypertensive neuroretinopathy 5 (0.4), diabetic angiopathy 18 (1.7%), diabetic non-proliferative retinopathy 8 (0.7%), diabetic proliferative retinopathy 5 (0.4%). Stage 37 disc congestion (3.6%), stage 12 II (1.1%). Acute disturbance of the central retinal artery 4 (0.3%), acute disturbance of the central retinal vein 11 (1.09%).

**Differential diagnostics.** It is often impossible to distinguish an ischemic stroke from an intracerebral hemorrhage by neuro-ophthalmological signs. The most reliable diagnostic method is computed tomography; if it is not available, a lumbar puncture was resorted to. The diagnosis was confirmed by computed tomography of the head and lumbar puncture (receipt of bloody

cerebrospinal fluid). In the first few days, 10% of patients died, subsequently deaths are mainly associated with repeated hemorrhage, secondary cerebral spasm leading to the development of ischemic stroke, or hydrocephalus.

**Treatment.** Most cases of stroke are indications for urgent hospitalization. With depression of consciousness, sharp respiratory and hemodynamic disorders, epileptic status, impaired swallowing, it is advisable to place patients in the intensive care unit. Baseline therapy included measures that are carried out in any option (maintaining breathing, stabilizing hemodynamics, correcting the water-electrolyte balance and blood sugar content, reducing intracranial hypertension and hyperthermia). Their task was to prevent complications that cause secondary brain damage. With an ischemic stroke in the first 3-6 hours, it is possible to prevent the death of ischemic and functionally inactivated but viable neurons that form ischemic "penumbra" around the necrosis site. To do this, the patency of the blocked vessel was restored using thrombus dissolving drugs (fibrinolytics), and neuroprotective agents were introduced that increase the survival of neurons in hypoxia.

**Exodus.** The state of the fundus, gives a version to clarify the type of stroke and treatment tactics. Acute impairment of cerebral blood treatment often depends on the time and determination of the nature of cerebral stroke, on which an adequate treatment tactic depends, including differential therapy, so the beginning of treatment within the next 3-6 hours gives the most favorable result in stroke.