COMPLICATED FORMS OF CEREBRAL STROKE, FEATURES CLINICS, DIAGNOSIS AND TREATMENT

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Numerous clinical observations and experimental results indicate that the clinical manifestations, course and outcome of stroke (cerebral and acute myelogenous circulatory disorders) depend not only on its nature, severity, localization process, but also to a large extent on several factors: the patient's condition before the disaster brain, concomitant diseases, as well as from the accession of complications. There is every reason to believe that complications are, in most cases, one of the reasons for a poor prognosis of stroke or death. In particular, it may indicate that there is not always a parallelism between the size of brain lesion, its location and severity, the nature of the course and outcome of stroke. Moreover, at autopsy, often are quite large (greater than 10 mm in diameter) cystic cavity, histologically, no doubt resulting from stroke. Their walls include hemosiderin, indicative of hemorrhage. At the same time an objective history of the disease do not meet the clinical manifestations (not recorded a stroke or traumatic brain injury). A neurosurgical manipulation on the brain, sometimes with removal of its vast areas on various pathological processes, often do not cause corresponding disturbances, neurological symptoms. This fact is explained, despite the specificity and complexity of the morphology and function of the nervous system, in practice large compensatory capacity of the brain, it has so-called "silent zones".

Cerebral stroke is a complication of the disease or pathological process (hypertension, atherosclerosis and their combination, etc.), significantly alters the clinical presentation and course of illness, which caused acute stroke. After catastrophe cerebral it becomes a major pathological process in the body, which required a different therapeutic and diagnostic, medical, social and other therapeutic measures. It is not accident, in the WHO ICD-10 cerebrovascular diseases (CVD) became an independent nosological form and have separate rubric.

Violations of neurological function in CVD lead to the breakdown of regulation of the organs, body systems and their interactions. Prerequisites and conditions create a favorable environment for the development of other pathological processes that complicate CVD. Thus, develop "complications of complications".

Criteria of what symptoms are direct manifestations of stroke or it complications not yet developed. For example, seizures, cardiovascular disorders, pneumonia, bleeding in the infarction zone, hemorrhage or infarcts in the brain and meningeas, topically or by the time criteria not connected with the main focus.

To this issue has not paid attention in modern neuroscience in most literature sources. Most authors consider only such processes as complications of a stroke, few of them attached importance to the study of the pathogenesis and characteristics of the mutual influence of possible treatment of a patient with such a course of stroke. However, in many cases, these complications of stroke can complicate diagnosis, differential diagnosis of stroke, treatment and prevention of complications.

Apparently, quite rightly should be attributed to complications of stroke and other forms of stroke pathological processes associated with the pathogenesis of stroke (according to the theory nervism), but are not required for its expression and localization of this form of brain damage. It is clear that that emphasizes complications of stroke significantly increasing the severity of the disease and can alter its clinical manifestations, course and worsen prognosis, but also requires further specific measures at different stages of treatment and rehabilitation of the patient. Acute stroke with its complications should be considered as a qualitatively different form of the disease complicated by stroke.

In practice, the complicated forms of stroke is not differ from standard approaches in diagnosis, treatment and rehabilitation, and adverse for him and death are, in most cases, due to his difficult character.

Complicated forms of stroke caused by development of the following pathological processes (Table 1).

The concept of complicated stroke remains poorly known, is not undisputed. For example, cardiologists are studying complicated forms of myocardial infarction, and it is possible to achieve positive results in working with patients in many roles.

Great difficulties represents in the differential diagnosis of symptoms and complications. For example, a seizure is often one of the first significant signs of subarachnoid hemorrhage and its recurrence may be

Table 1. *Pathological processes caused by complicated forms of stroke*

1.	Pronounced cerebral edema, which has no correlation with the nature, size of brain lesion and can develop in the absence of a macroscopic lesion. Perhaps as a result of diffuse axonal lesions of the hypoxic brain
2.	Secondary dislocation neurological syndromes
3.	Hemorrhage or hemorrhagic impregnation in the infarct zone
4.	Infarct of the brain associated with the focus of hemorrhage
5.	Secondary hemorrhagic or ischemic lesions, not topically related to the primary main focus
6.	Rheologic and blood coagulation changes, that are not the direct consequence of CVD: a disseminated intravascular coagulation syndrome (DIC), often manifested thrombus
7.	Aseptic inflammatory syndrome
8.	Progressive autoimmune syndro me, especially in chronic CVD
9.	Epileptic syndrome
10.	Cognitive impairment
11.	Progressive dementia
12.	Neuro-degenerative syndromes, early and late cachexia, decubitus, anorexia, bulimia.
13.	Early and late contracture of the muscles
14.	Internal organs and systems impairment: heart attacks, cardiac arrhythmias, persistent malignant hypertension, pulmonary-heart disease, disorders of the urinary system and others.
15.	Infections and inflammatory processes: pneumonia, exacerbation of chronic infections and inflammatory processes
16.	Mielo-, radiculo-, plexo-, neuropathy
17.	Different processes recur, progress, exacerbate in the body

due to recurrent hemorrhages, which often observed in intracranial arterio-venous malformations. Recurrent seizures, caused by other factors should be considered as a complication of meningeal hemorrhage, which can subsequently be transformed into epileptic disease (even when vascular malformation healed). During predisease period patient may be a potential epileptic, and may be triggered a lot of pathological processes. We should consider this fact in the diagnosis of complicated forms through an additional examination of patients.

The above discussion highlights the complexity of the selection, diagnosis and study of complicated forms of CVD. However, in practice there is a need to consider this aspect in the treatment and rehabilitation of patients with these forms of the CVD.

The clinical signs of complicated forms of CVD are:

- Heavy progressive impairment of any function of the nervous system with a poor prognosis requiring intensive care and even reanimation measures. Complicated forms occur 3 times more often in severe than moderate stroke.
- The presence of concomitant diseases: diabetes, postinfarction heart failure, cardiac arrhythmias, cardiomyopathy (dilated or hypertrophic), pulmonary pathology, a history of CVD.
- Localization of the focus in the deep structures of the cerebral hemispheres, vertebrobasilar pool, spinal cord.
- Vascular lesion of tonsilar-limbic-reticular system of the brain.
- Mismatch of the volume, nature and location of the lesion of the nervous system on the one hand with clinical severity on another. Sometimes neurovisualization shows that in small focus localized in a meaningless functional area of the brain stroke may be severe.
- Significant aggravation of following syndromes: respiratory rate, depth, hythm violations, cardiovascular failure, pulmonary edema, aggravation of neurological, especially cerebral manifestations (impaired consciousness from a coma to stupor), hyperkinesis and other symptoms and syndromes.
- Deterioration in homeostasis: DIC syndrome, hrombohemorrhagic manifestations, systemic or local microcirculation in different vessels.
- Hemorheological changes.
- Increasing of the concentration of products of lipid peroxidation, increase anaerobic glycolysis, nitric oxide metabolites fluctuation, active neuroendocrine substances.
- Sudden deterioration of the patient, the severity of cerebral and focal manifestations of non-recurrent episode (recurrent vascular process in the nervous system).

Wide polymorphism of clinical manifestations, course, outcome CVD probably more due to the formation of complicated forms of CVD that occur in at least 15–30% cases at different stages of the stroke . We can distinguish several features of clinical manifestations and course of complicated forms CVD.

Complicated forms CVD can often be characterized by unexplained sudden deterioration of the patient, exacerbation of neurological focal cerebral and somatic system and organ failure that lead to a sharp deterioration of the patient. In practice this is often due to the aggravation or recurrence of the pathological process in the brain (ischemic deepening of the process, re-bleeding, etc.). In many cases, complication is a reason for the revision of the initial diagnosis and provide additional examination of the patient.

Thus, the complicated forms of CVD are characterized by features of pathogenesis of pathological processes, clinical manifestations, hemodynamic homeostasis autonomic processes, trends, outcomes and close relationship to primary vascular at different stages of the disease.