Clinical And Functional Predictors Of The Development Of Acute Ischemic Stroke In Patients With Acute Myocardial Infarction

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Abstract The complexity of diagnosis in the case of a combination of myocardial infarction and stroke is associated with the prevalence of cerebral symptoms more often; success in this case depends on the rational use of modern diagnostic methods with stratification of risk factors, which allows choosing the optimal tactics for the treatment and prevention of cerebral and cardiac complications. Timely recognition of cases of a combination of stroke and myocardial infarction is extremely important, which underlines the need for further research.

Keywords: myocardial, infarction, patients

1. INTRODUCTION.
Relevance of the topic of dissertation work. In the last decade, much attention of researchers has been drawn to the study of problems at the junction of two areas of knowledge, an example of this is cardioneurology, which studies the relationship between the work of the heart and the brain in health and disease, in particular in such socially significant diseases as cerebral stroke and myocardial infarction (MI). The problem of stroke is very acute due to the significant frequency of its development, a high percentage of disability and mortality (Gusev E.I., 2016). Every year 6 million people worldwide have a stroke (Suslina Z.A. et al., 2015). According to the concept of pathogenetic heterogeneity of ischemic stroke (IS), cardiac pathology occupies one of the leading places among the causes of the development of acute disorders of cerebral circulation (ACVA) (Vereshchagin N.V. et al., 2017; Suslina Z.A., 2012). With the help of modern methods of examining blood vessels and the heart, in more than 70% of patients, various cardiac changes were revealed, which not only act as a cause of stroke, but also affect its course (Fonyakin A.B. et al., 2015).

Cases of a combination of myocardial infarction and stroke are especially dangerous, prognostically unfavorable. According to domestic scientists, the frequency of stroke in MI ranges from 1.3% to 12.8%, more often it is observed in the acute period of the disease, in the first 2 weeks. There is evidence that IS itself of a certain localization can cause the development of cardiac complications (Korpelein J.T. et al., 2009). From 2% to 6% of patients die from a cardiac cause in the first 3 months after IS (Prosser J. et al., 2017).

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which allows choosing the optimal tactics for the treatment and prevention of cerebral and cardiac complications. Timely recognition of cases of a combination of stroke and myocardial infarction is extremely important, which underlines the need for further research. Compliance of the topic of the thesis with the state scientific and technical program and priority areas of research in the Republic of Uzbekistan.

Providing the population with high-quality and affordable medical care is an important and priority area of healthcare in Uzbekistan. The planned dissertation work is devoted to the development and improvement of diagnostic and rehabilitation measures taking into account risk factors, clinical course and differential diagnosis of this pathology. The data obtained during the study lead to an improvement in the quality of life of patients with this pathology. This determines the priority of the directions of research and development in the Republic.

The relationship of work with state programs or thematic plans of research.

The dissertation work was performed in accordance with the research plan of the Bukhara State Medical Institute.

The degree of knowledge of the problem.

CVA and AMI cause enormous damage to the economy (costs of treatment, medical rehabilitation of patients, losses in production). Sometimes dangerous pathologies with a risk of death, such as stroke and heart attack, can occur simultaneously. A combination of two such serious diseases, each of which, even separately, is potentially dangerous and threatens with death. Almost 50% of deaths in Russia are associated with heart attacks, stroke and arterial hypertension. In the United States at the end of the 1990s, direct and indirect costs for each stroke survivor ranged from 55 to 73 million dollars per year (Kaste M. et al., 1998). In our country, material losses are much higher, since the number of patients is 4 times higher than in the United States and Western Europe (Makhsumov M.D. et al., 2015). Ischemic stroke is the most common pathology in adults and the elderly. On average, the incidence in patients over 40-45 years old is 15%, in people over 55, the risk is 20% and becomes higher with age. Mortality during the first month after ischemia ranges from 35 to 61%. Up to 70% are disabled as a result of stroke.

Research works on the study of the prevalence of OMNC and AMI, risk factors for their development, the development of effective methods of diagnosis and treatment were carried out in large medical centers, such as the Scientific Center of Neurology (Russia). In the USA, Great Britain, France, Germany, Japan, CIS countries and Eastern Europe.

Currently, more than 100 risk factors are known that contribute to the development of disorders of cerebral and cardiac circulation: age, gender, ethnicity, arterial hypertension, atrial fibrillation, other cardiac pathology, hyperlipidemia, physical inactivity, smoking, atherosclerosis of the carotid and coronary arteries, etc. (Skopina E.I., 2001; Elkind MS, Sacco RL, 1998).

According to M.B. Budanova (2008) planning specific treatment and prophylactic measures in individual regions involves studying the frequency of CVD and the contribution of various risk factors to their development. E.I. Gusev et al. (1997) proposed a four-stage system of care for patients with acute disorders of cerebral and cardiac circulation: prehospital - assistance is provided by a local therapist, a family medicine doctor, an ambulance or emergency doctor and specialized neurological and cardiological ambulance teams; intensive care - carried out in intensive care units, intensive care units or neurosurgical and
cardiological departments; rehabilitation treatment is carried out in departments for the treatment of patients with acute disorders of cerebral and cardiac circulation (neurovascular and angiographic departments) or in neurological and cardiological departments of a general profile, and then in rehabilitation departments and centers; dispensary provides for supervision by a neurologist, cardiologist and therapist of a district clinic. Despite advances in the diagnosis and treatment of OOMC and AMI in Uzbekistan, due to their fragmented nature, many questions remained outside the scope of research, which does not allow presenting a complete picture. The issues of complex rehabilitation of patients in various stages of stroke and heart attack have been studied especially little, methods and methods of rehabilitation measures in PHC conditions, hospitals, intensive care units and intensive care units, in sanatoriums, measures for the recovery of patients at various stages of providing them with medical care have not been studied and developed sick. Currently, prehospital care and hospitalization rates remain unsatisfactory everywhere, even in large cities.

2. OBJECTIVE OF THE STUDY:

   to identify risk factors and clinical and functional features of ischemic stroke in combination with myocardial infarction to justify additions to differential examination of patients in the acute period of the disease and to develop an algorithm for individual preclinical prediction.

3. RESEARCH OBJECTIVES

   To highlight the leading risk factors for the development of ischemic stroke in combination with myocardial infarction, taking into account the immunological characteristics.
   To characterize the clinical picture and immunological changes of ischemic stroke in combination with myocardial infarction, taking into account gender differences, pathogenetic subtype of stroke.
   To study the features of MRI tractography in patients with ischemic stroke in combination with myocardial infarction
   To establish the peculiarities of central and cerebral hemodynamics according to the data of ultrasound examination in patients with ischemic stroke in combination with myocardial infarction.
   Justify the criteria for identifying a high-risk group of developing a combination of ischemic stroke and myocardial infarction and develop a differentiated approach to the examination of patients in acute

Object of study. Male and female patients with IS and MI in the acute period, who were treated in hospitals of the Republic of Uzbekistan.

Research methods. General clinical, laboratory and instrumental research methods were used to achieve the research goal and solve the assigned tasks.

4. SCIENTIFIC NOVELTY OF THE RESEARCH.

   The role of various risk factors in the occurrence of these pathologies will be revealed;
   The most significant risk factors will be identified, which together contribute to the combined
development of ischemic stroke and myocardial infarction; The prevalence of cardio embolic stroke will be established in combination with myocardial infarction, proceeding with the maximum severity, ending lethal in more than 3/4 of patients; The frequency of deformities of the carotid and vertebral arteries in patients with the simultaneous development of ischemic stroke and myocardial infarction will be shown, and the contribution of the hemodynamic factor to the development of stroke in myocardial infarction will be established; The frequency of ischemic foci in the brain in patients with ischemic stroke and myocardial infarction will be established. Differentiated approaches to patient examination will be established, taking into account the risk of ischemic stroke in combination with myocardial infarction. Clinical and functional predictors of the development of acute ischemic stroke in patients with acute myocardial infarction will be identified and proven. The practical significance of the work. The prognostic significance of clinical and anamnestic risk factors for the development of ischemic stroke in combination with myocardial infarction will be determined. Prognostic tables will be created to identify patients at high risk of combined development of stroke and myocardial infarction in order to early prevention of this pathology, taking into account gender differences. A complex of clinical signs of a combination of ischemic stroke and myocardial infarction in the acute period of diseases will be identified in a gender aspect and taking into account the sequence of stroke and myocardial infarction. Additions to the program of examination of patients with ischemic stroke in combination with myocardial infarction in the acute period will be developed, providing for enhanced cardiac monitoring and a longer stay of patients in the intensive care unit.