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**Andrushchak A. V.**

**FORMATION OF VOLUME AND OSMOREGULATORY FUNCTION OF THE KIDNEYS  
IN PATIENTS WITH COMPENSATED SEPSIS-INDUCED HYPOTENSION**

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Current views on intensive infusion therapy for sepsis clinical course are focused on recommendations concerning priorities of crystalloid drugs use. Taking into account sepsis pathogenesis polymorphism, polyorganism and mutual burdensomeness, it should be considered that such arsenal of intensive care does not always satisfy the pathogenetic substantiation of the basic constituent of the intensive care program. In this connection, attention was paid to the properties and action spectrum of the derivatives of polyatomic alcohols, namely sorbitol, on the volume- and osmoregulatory function of the kidneys in patients with sepsis-induced hypotension.

Objective - to investigate the response of volume- and osmoregulatory function of the kidneys to Reosorbilact action in dopamine-dependent compensation of sepsis-induced hypotension.

Inclusion criteria - patients with purulent-septic complications with dopamine-dependent compensation of sepsis-induced hypotension (5-10 µg/kg min) and appropriate infusion therapy according to the starting indices: AAP>70 mmHg, APS>95 mmHg, CVP>4 mmHg, diuresis>30ml/h. Control studies - patients with systemic inflammatory response syndrome (SIRS: IDC-10: SIRS, ICD-10: R-65.2). Patients are divided into 4 groups: gr.I and gr.II - control studies (SIRS, n = 25); gr. and IV gr. - sepsis-induced hypotension (n = 28). Patients of II gr. and IV gr.

additionally received Reosorbilact infusion load in the amount of 7-8 ml/kg at a rate of 18-20 ml/min

The results of the studies of Reosorbilact effect on the volume- and osmoregulatory function of the kidneys in patients with sepsis-induced hypotension are characterized by activation of diuresis ( $224 \pm 58.9\%$ ; ,  $P < 0.05$ ), increased sodium clearance ( $317 \pm 52.5\%$ ; ,  $< 0.05$ ) and clearance of osmotically active substances ( $240 \pm 68.6\%$  , 0,05). At the same time, the glomerular filtration rate increases  $54 \pm 11.7\%$  ( ,  $P < 0.05$ ). The processes, inhibiting the reabsorbed sodium fraction  $1.58 \pm 0.29\%$  ( ,  $P < 0.05$ ) and the reabsorbed fraction of osmotically active substances  $4.2 \pm 1.40\%$  ( ,  $P < 0.05$ ), are in the base of Reosorbilact activating effect.

It has been registered that depression of the volumetric-and osmoregulatory function of the kidneys in dopamine-dependent compensation of sepsis-induced hypotension in terms of clearance characteristics, are observed. Reosorbilact infusion load in patients with compensated sepsis-induced hypotension promotes homeostatic adaptation of compensatory volume-dependent reactions, volume-and osmoregulatory function of the kidneys.

**Apakitsa V.V.**

## **FEATURES OF CEREBRAL STROKE COURSE IN PATIENTS WITH DIABETES MELLITUS**

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According to official statistics, in Ukraine cerebrovascular diseases are the cause of death 2 (100,000-110,000 deaths, about 14% of all deaths). There are 100,000–110,000 strokes each year (more than a third of them are in people of working age), 30–40% of stroke patients die within the first 30 days and up to 50% within a year of the onset of the disease; 20–40% of surviving patients become dependent on outside care (12.5% of primary disability) and only about 10% return to full life. The presence of diabetes increases the risk of stroke by 1.8-6 times. Mortality from stroke is much higher in patients with diabetes than in those without it, and is, according to various data, 40-59%. The numerous researches of the effects of hyperglycemia on cerebral circulation found that a sharp rise in glucose in the blood plasma of animals is accompanied by a decrease in regional cerebral blood flow.

To study the clinical features of acute stroke in patients with diabetes mellitus. An analysis of medical histories of patients who suffered from acute stroke (AS) was performed. 109 case histories of patients who were treated in the intensive care unit (ICU) were analyzed. Patients were divided into 2 groups: I - patients with established type 2 diabetes (37 patients), and II - patients without diabetes (72 patients). Age of patients - from 32 to 89 years. General and anthropometric indicators, as well as comorbidities in patients did not differ significantly.

During the research it was established that the first group dominated by Ischemic stroke (35 out of 37, or 94.6%), respectively, Hemorrhagic stroke - 1 out of 37, or 2.7%, and subarachnoid haemorrhage - 1 out of 37, or 2.7%. Patients without diabetes were also dominated by ischemic stroke (49 out of 72, or 68%), but had a slightly higher percentage of haemorrhagic strokes (18 out of 72, or 25%"; subarachnoid haemorrhage - 5 out of 72, or 7%). In both groups there was approximately the same percentage of speech disorders, however, in stroke associated with diabetes, a higher percentage of movement disorders (31 out of 37, or 75.7%), while in the second group - 49 out of 72, or 68.1%. Impairment of consciousness was also more common in group I (31 out of 37, or 83.8%), and slightly less in group II (58 out of 72, or 80.6%). It should be also noted that during the research in the group of patients without diabetes, a number of patients with transient hyperglycemia ( $> 6.1$  mmol/L) were identified, which was corrected a few days after treatment.

Diabetes mellitus lead to a significant deterioration of the general condition in patients with acute stroke. Consequently, in patients with stroke it is very significant timely detection and diagnosis of diabetes mellitus and latent forms of carbohydrate metabolism, adequate treatment of