severe clinical manifestations, such as paresis, paralysis, impaired consciousness, and epilepsy. Conclusions: During acute period of pediatric ischemic stroke, elevated serum levels of VEGF were found, suggesting the active involvement of this biomarker in increasing of oxygen supply to brain tissues and the trend to generation of new blood vessels ensuring the collateral perfusion in the affected tissues.

Key words: stroke, ischemic, pediatric, VEGF.

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AMINO ACIDS SPECTRUM FEATURES DURING ATRIAL FIBRILLATION PAROXISM IN PATIENTS WITH CORONARY ARTERY DISEASE

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Atrial fibrillation (AF) is the most common arrhythmia in the world. AF presence is linked with higher coronary artery disease (CAD) severity [1]. Amino acids are one of the important groups of myocardial metabolites. Today metabolomic analysis has become an essential tool for understanding the pathophysiology of cardiovascular disorders [2].

Materials and Methods: 64 patients with stable CAD (SCAD) with (38 patients) or without (26 patients) paroxysmal AF and 15 normal controls were observed. Statistically all groups were compatible by the main clinical features (age, sex, concomitant disorders, etc.). Blood samples for metabolomics were collected in the early morning after fasting for 8 hours at the first day after hospitalization. For normal controls and patients with SCAD without arrhythmia, blood samples for metabolomics analysis were collected at enrollment. Plasma was analyzed by metabolomics workflow. Amino acid spectrum was studied by ion exchange liquid column gas chromatography.

Results: During AF paroxysm in SCAD patients decreasing plasma ornithine by 17.79% and alanine by 11.31% respectively were obtained comparable with SCAD patients without arrhythmia (p<0.05). There were no discovered significant changes between SCAD and control groups results of these acids (p>0.05). Also during AF paroxysm in SCAD patients increasing threonine and valine plasma content was checked comparable with SCAD patients without arrhythmia (20.89% for threonine; 17.93% for valine; p<0.05) and also with control group (30.17% for threonine; 27.96% for valine; p<0.05). Moreover in SCAD patients during AF paroxysm increased total content of sulfur containing by 16.14% was observed, decreased neutral by 14.98% and non-essential by 9.91% respectively plasma amino acids comparable with SCAD group without AF paroxysm (p<0.05).

Conclusion: We obtained reliable changes in essential (ornithine and alanine) and non-essential (threonine and valine) plasma amino acid concentration in SCAD patients with AF paroxysm comparing with SCAD patients without arrhythmia. Reliable changes in total content of sulfur containing were studied, neutral and non-essential amino acids presence in this group also.

Prospects for further research: Metabolomic analysis has contributed to the discovery of previously unappreciated metabolites or metabolic pathways involved in the CAD and AF pathogenesis. Deeper investigation of amino acid spectrum in CAD patients can help to find metabolites that may be candidate biomarkers for predicting AF paroxysm occurrence. There is no doubt that further cardiac metabolism investigation may lead to breakthroughs in next-generation therapies for this disorders.
THE STUDY OF SOME ANTIMICROBIAL PEPTIDES IN PREGNANT WOMEN WITH TORCH INFECTION

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The problem of miscarriage is an urgent issue both for medicine and for the future society. Recently, one of the main reasons for spontaneous abortion is considered TORCH infection. Viral infections lead to the development of inflammatory processes affecting intercellular interactions, and alter the synthesis of regulatory antimicrobial proteins (AMPs), including cytokines, by cells of the immune system. The aim of the study was to determine the level of certain antimicrobial peptides (lactoferrin, endotoxin, hepcidin, defensin and BPI) in 69 pregnant women. 40 of them with TORCH infection were divided into 2 subgroups: 33 women without miscarriage and 7 women who already had a miscarriage. 29 pregnant women without TORCH infection were included in the comparison group. All patients were examined in the first trimester of pregnancy. The study revealed a significant increase in the content of AMP in the group of pregnant women with miscarriages. They have a content of lactoferrin, endotoxin, hepsidin, defensin and BPI, respectively, by 54.7% (p <0.001); 3.0 times (p <0.001); 2.6 times; 4.1 times (p <0.001) and 2.8 times (p <0.001) were higher than the values in the group of pregnant women without TORCH infection. A comparative analysis showed that in this subgroup the levels of lactoferrin, endotoxin, hepcidin, defensin and BPI are respectively 17.7%; 2.7 times (p <0.001); 71.3% (p <0.001); 36.7% and 2 times (p <0.001) exceeded the level of relevant indicators in pregnant women with TORCH infection without miscarriage. The results of our studies show that an increase in the level of antimicrobial peptides in the blood serum of pregnant women can be a sensitive marker in predicting miscarriage.

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COEFFICIENT OF THE RATIO OF INTERLEUKIN 6 TO INTERLEUKIN 8 — PROGNOSTIC CRITERION FOR INTRAUTERINE INFECTION

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The aim of this study was to investigate the attitude between maternal serum levels of interleukin 6 (IL-6) and interleukin 8 (IL-8) in venous blood and cord blood in 50 Belorussian Caucasian women with preterm labor (PL) and 50 women with term labor as controls.

**Materials and Methods:** The case group consisted of patients with a diagnosis of spontaneous preterm birth (before 37 weeks gestation). The control group comprised healthy women with the term labor (≥37 weeks).

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