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Матеріали 101 – ї підсумкової наукової конференції професорсько-викладацького персоналу вищого державного навчального закладу України «Буковинський державний медичний університет» (м. Чернівці, 10, 12, 17 лютого 2020 р.) – Чернівці: Медуніверситет, 2020. – 488 с. іл.

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У збірнику представлені матеріали 101 – ї підсумкової наукової конференції професорсько-викладацького персоналу вищого державного навчального закладу України «Буковинський державний медичний університет» (м.Чернівці, 10, 12, 17 лютого 2020 р.) із стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

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THE EFFECT OF MINERAL METABOLISM AND 25-HYDROXYVITAMIN D ON THE RISK OF ESSENTIAL HYPERTENSION

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Hypertension is a major risk factor for a cardiovascular disease with established complications of stroke, myocardial infarction and heart failure. Despite the high worldwide prevalence of essential hypertension (EH) and known clinical consequences, the underlying causes of EH are not fully elucidated. Identifying novel risk factors for EH is important for understanding the etiology and pathogenesis of it, as well as for suggesting new possible preventive targets in order to reduce the high burden of morbidity and mortality.

The aim of the research was to establish the influence of mineral metabolism and 25-hydroxyvitamin D (25(OH)D) on the risk of essential hypertension.

The study involved 48 healthy individuals in the control group and 72 patients with EH in the main group. The mean age in the healthy group was 43 ± 7.7 years, in the group of patients it was 58 ± 7.2 years. In terms of gender distribution, there were 30 females and 18 males in the control group, 51 and 21 ones in the main group, respectively.

The serum levels of parathormone (PTH) and ionized calcium were measured to assess the mineral metabolism. The serum concentration of ionized calcium was determined by potentiometry, «SINNOWA». To determine the concentration of 25(OH)D and PTH the method of competitive immunofluorescence assay, «MAGLUMI» test was applied. Descriptive statistics was used to study arithmetic mean and standard deviation. To compare the mean in two independent samples the Student's t-test was used. Pearson's chi-squared test was applied to compare frequency of the data values. The difference was considered as statistically significant at the p value less than 0,05 ($p<0.05$).

The results of the analysis showed that the average level of PTH in the main group was significantly higher, compared to the control group, specifically 60.8 pg/mL versus 54.8 pg/mL ($p<0.05$). However, the mean of the parameter did not go beyond the reference values in both groups. The study of 25-hydroxyvitamin D levels in the sample examined showed a statistically significantly lower level of it in the group of patients with EH, that was 21.3 ng/ml, compared to the group of healthy individuals, which was 24.4 ng/ml ($p<0.05$). The data obtained point to the vitamin D deficiency in patients in the main group.

Reduction of ionized calcium (below the lower quartile of normal) increases the risk of essential hypertension by 1,12 times [OR=1,12; 95%CI:0,54-2,32; p>0,05]. With the growth of content PTH risk of EH in the population was significantly lower [OR=0,48; 95%CI:0,21-0,97, $\chi2$=3,31; p=0,049]. Reduction of 25(OH)D concentration (below the lower quartile of normal) increases the risk of hypertension in the examine by almost 3 times [OR=2.83; 95%CI:1.07-8.59, $\chi2$=3.84; p=0.049].

Consequently, the reduction of 25-hydroxyvitamin D concentration increases the risk of essential hypertension in the population by almost 3 times, the increase in parathormone content played a protective role in the examined persons, the decrease of the ionized calcium content had no effect on the risk of EH in the population.

Slyvka N.O.

SYSTEMIC INFLAMMATORY RESPONSE AS A PART OF HEPATORENAL SYNDROME

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Hepatorenal syndrome is a unique type of acute renal failure that develops in patients with decompensated cirrhosis and considered to be a very serious complication of the disease in its

terminal stage. A large number of researches have shown that circulatory dysfunction plays a key role in the pathophysiology of hepatorenal syndrome. In recent years it has become increasingly apparent that cirrhosis is a condition with a pronounced systemic inflammatory response, which increases with progression of the disease and strongly influences the patient's prognosis. Some clinical studies have evaluated inflammation in cirrhosis by measuring leukocyte counts or C-reactive protein levels; however, these methods are not accurate enough to evaluate the inflammation. In addition, studies on experimental animals have also demonstrated the presence of systemic inflammatory response syndrome, which is more noticeable in animals with ascites in comparison with others. Therefore, it has been hypothesized that cirrhosis is a disease that is accompanied by significant and progressive inflammation, which plays an important role in the development of complications. However, for the present, there is insufficient evidence regarding the presence, extent, and significance of inflammation in patients with hepatorenal syndrome, but such information may be relevant not only for pathogenesis but also for identifying potential therapy targets to prevent disease progression.

The objective of this research was to assess the level of markers of the systemic inflammatory response syndrome in patients with hepatorenal syndrome against a background of alcoholic liver cirrhosis, depending on the type of hepatorenal syndrome and presence or absence of infectious complications.

To achieve this goal, 165 patients with decompensated alcoholic liver cirrhosis were examined and divided into three groups according to the renal function: group 1 - alcoholic liver cirrhosis without hepatorenal syndrome (n=44), group 2 - alcoholic liver cirrhosis with hepatorenal syndrome type 2 (n=63), group 3 - alcoholic liver cirrhosis with hepatorenal syndrome type 1 (n=58).

Systemic inflammatory response syndrome prevalence, leukocyte counts, and C-reactive protein levels were higher in patients with hepatorenal syndrome type 1 compared to the other two groups. In the hepatorenal syndrome type 1 group, the cytokine profile had significantly higher levels of MCP-1 in urine and serum IL-6, TNF-α, VCAM-1, IL-8, and lower levels of MIP1-α and fractalkine. Of the 5 cytokines that were significantly elevated in patients with hepatorenal syndrome type 1, only plasma IL-6 was significantly higher in patients with hepatorenal syndrome type 1 associated with infections compared with patients without infections - 59,26±13,41 vs 23,15±11,34 pg/ml, respectively ($p<0,05$), which testifies to the hypothesis of hepatorenal syndrome as the cause of the development of systemic inflammatory response syndrome in this case.

It has been found that in patients with alcoholic liver cirrhosis complicated with hepatorenal syndrome, the levels of systemic inflammatory markers and cytokines are higher than in patients without such complications, that is evidence of a significant role of the inflammatory response in its pathogenesis. Increased levels of MIP1-α, MCP-1, IL-8 plasma, and uMCP-1 (pg/ml) urine can be used as a differential sign of hepatorenal syndrome type 1, being important in the choice of therapeutic tactics.

Sobko D.I.

BLOOD PRESSURE CHANGES AS A RESULT OF TAKING NONSTEROIDAL ANTI-INFLAMMATORY DRUGS AMONG THE PATIENTS WHO SUFFER FROM OSTEOARTHRITIS WITH CONCOMITANT HYPERTENSION

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An integral part in the treatment of patients with osteoarthritis (OA) is taking nonsteroidal anti-inflammatory drugs (NSAIDs). In many cases, NSAIDs as symptomatic drugs do not affect the fundamental pathogenic mechanisms underlying these processes. Due to the anti-inflammatory and pain relieving effects, they can be taken for a long time, but even short-term intake of NSAIDs at low doses can lead to the development of side effects, which on the whole are detected in about