one of the links in the pathogenesis of violations of the functional state of the cardiovascular system (CVS) in perinatal pathology.

182 children were examined. Group I consisted of full-term newborns with a general state of moderate severity (65); Group II - newborns with a serious condition (57). The control (III group) included 60 relatively healthy newborns.

The results obtained showed that with an increase in the severity of the condition in newborns of groups I and II of the study, an increase in the activity of FRO processes occurred, as evidenced by an increased content of malonic aldehyde (MA) in erythrocytes and a high level of oxidative modification of proteins (OMP) in the blood plasma. Namely, the MA level in children of group I increased to 25.14 ± 1.31 μmol / l, in children of group II - up to 34.97 ± 1.83 μmol / l, which had probable differences in comparison with children of group III – 15.10 ± 0.77, $p<0.05$. The level of OMP during physiological adaptation in newborns of the III group was 1.39 ± 0.07 o.o. g / ml, the increase in the severity of the condition in children of the I and II observation groups was accompanied by an increase in the indicator to 1.81 ± 0.09 and 2, 66 ± 0.14 p.u. g / ml, respectively, $p<0.05$.

Along with the activation of the FRO system in newborns, a certain insufficiency of the ADS mechanisms was observed, which was confirmed by significant differences in a number of indicators of serum and blood erythrocytes. So, if the level of ceruloplasmin in the blood serum of children of group I increased to 455.74 ± 224.65 mg / l, in children of group II there was a significant decrease in the level of the indicator - to 162.70 ± 8.74 mg / l, with its normal value in group III - 253.83 ± 13.65 mg / l, $p<0.05$. Catalase activity during physiological adaptation in children of group III was 11.66 ± 0.61 μmol / min, in children of experimental groups I and II, the indicator probably increased - in accordance with 32.53 ± 1.73 and 43.46 ± 2, 19 μmol / min. The activity of the enzyme glutathione-6-phosphate dehydrogenase (Gl-6-PD) significantly increased in newborns of group I - up to 11.57 ± 0.60 μmol / min and decreased in children of group II - to 5.16 ± 0.26 μmol / min, with control values in children of III groups - 6.16 ± 0.33 μmol / min·HB, $p<0.05$. The level of HS-groups in newborns tended to decrease in line with the increase in the severity of the pathology. So, if in children of group III it was 0.78 ± 0.04 μmol / l, in newborns of group I - 0.46 ± 0.02 μmol / l, then in children of group II it decreased to 0.32 ± 0, 0.1 μmol / L, $p<0.05$. The γ-glutamyltransferase (GGT) activity in the newborns of the observation groups had a tendency to increase, taking into account the deepening of the severity of the condition - 87.70 ± 4.43, 90.21 ± 4.57 and 94.80 ± 4.83 units / l, respectively, in the III, I and II groups, 0.05.

The results of the study indicate that the imbalance in the parameters of the FRO and ADS system leads to the accumulation of peroxides and damage to the integrity of the cell membranes of cardiomyocytes, which is one of the defining links in the development of cardiovascular disorders in perinatal pathology.

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DEPENDENCE OF LIPID PEROXIDE OXIDATION AND ANTIOXIDANT PROTECTION IN PATIENTS WITH HYPERTENSION FROM THE FASTING INSULIN LEVEL

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The aim of the study was to examine the features of lipid peroxidation (LPO) and antioxidant protection (AOP) in patients with hypertension (AG) depending on the level of fasting insulinemia.

44 patients with AG of I-II stages were examined. The obtained results were compared with the data of 24 practically healthy individuals, representative by age and sex, who formed the control group.

Blood for biochemical examination was taken from the ulnar vein in the morning 12 hours after the last meal. The level of fasting immunoreactive insulin (IRI) in the blood was determined using standard kits from DRG International Inc (USA) by enzyme-linked immunosorbent assay. Normal fasting insulin concentrations were considered to be up to 25 μIU / ml for men and up to 23

μIU / ml for women. The content in the blood of LPO products - compounds with isolated double bonds, diene conjugates, ketodienes and conjugated trienes - was studied by the method of I.A.Volchegorsky et al., malonic aldehyde (MA) of plasma and erythrocytes by Y.A.Vladimirov and A.I.Archakov. The activity of reduced glutathione (GR) was investigated by the titration method according to O.V.Travina in the modification of I.F.Meschishen; glutathione peroxidase (GP) and glutathione-S-transferase (GT) by I.F.Meshchishen; catalase by M.A.Korolyuk et al.

Estimation of the difference of the sample sets was performed using Student's t-test. The difference between the samples was considered statistically significant at $p < 0.05$.

To assess the effect of insulin levels on the processes of LPO and AOP in patients with AG, they were divided into two subgroups: with normo- (19 people) and hyperinsulinemia (25 people). In patients with AG with elevated IRI levels compared to patients with basal normoinsulinemia, there was a probable increase in the level of MA in erythrocytes by 10.80%, a decrease in GR by 8.33%. The concentration of GP and GT in patients with AG was probably lower compared to the control group (by 14.74% and 8.70%, respectively) only in the presence of hyperinsulinemia.

Thus, an increase in IRI levels in patients with AG is accompanied by an increase in LPO with a decrease in AOP.

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COMPLEX TREATMENT WITH QUERCETIN INCLUSION IN CHRONIC NONVIRAL HEPATITIS PATIENTS

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Flavonoids have high antioxidant activity, which is most pronounced in quercetin, stimulate the synthesis of proteins, regulate the exchange of phospholipids and have membrane-stabilizing properties. Quercetin has pronounced anti-inflammatory properties due to a decrease in the activity of 5-lipoxygenase, which reduces the synthesis of leukotrienes from arachidonic acid.

The aim of the study was to investigate the effect of quercetin added to the basic treatment on the clinical course, biochemical parameters and indicators of the cytokine profile in chronic nonviral hepatitis (CH) patients. 55 patients with active nonviral CH were involved in the study, who according to the administered treatment were divided into two groups. The main group consisted of 25 patients with active CH who in addition to the standard treatment received pills of Quercetin in the dose of 40 mg three times daily 30 minutes before meals within 14-16 days. The comparison group consisted of 30 patients with active nonviral CH who received the standard basic treatment comparable to those of the main group by age and gender distribution. The control group consisted of 45 practically healthy individuals of the correlative age and gender. Written informed consents were obtained from all the participants. All of the observed patients and healthy individuals underwent comprehensive clinical, laboratory and instrumental diagnostic investigations. The range of indicators of biochemical blood analysis included: total bilirubin and its fractions, total protein and albumin, urea, creatinine, aspartateaminotransferase (AST), alanineaminotransferase (ALT), lactatedehydrogenase (LDG), gamma-glutamyltransferase (GGT), alkalinephosphatase (AP). The plasma levels of tumor necrosis factor-α (TNF-α), interleukin 10 (IL-10), atrial natriuretic propeptide(1-98) (proANP)were investigated both in the examined patients and healthy individuals. Faster improvement of general condition, more effective reduction of general weakness and sensation of heaviness in the right hypochondrium, decreased discomfort in the heart area and shortness of breath, increased tolerance to physical activity were seen in patients who in addition to basic treatment received quercetin. According to these data significant decrease in the total bilirubin plasma concentration during treatment was observed in patients of both groups: by 33,5% ($p= 0,008$) in the main group and by 26,6% ($p = 0,02$) in the comparison group as compared to the indicators before the treatment. ALT activity in patients of the main group decreased by 43,7% ($p = 0,02$), in patients of the comparison group – by 28,1% ($p = 0,03$) after the treatment. Significant decrease of AST activity was achieved only in patients of the main group – by 27,8% ($p = 0,03$). There was a significant decrease in LDG activity by 16,9% ($p = 0,02$), as