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Конференція внесена до Реєстру заходів безперервного професійного розвитку,
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Materials and methods. The examination of 148 preterm newborns was carried out. The first group consisted of 91 children, at a gestational age of 29 (0/7) - 36 (6/7) weeks with manifestations of severe neonatal pathology with signs of disorders of the functional state of the gastrointestinal tract, the second group - 57 conditionally healthy neonates, at a gestational age of 35 (0/7) - 36 (6/7) weeks.

Results. According to the research, in preterm infants of group I, compared with group II, an increase in the level of fecal calprotectin in the meconium (552.6±25.61 μg/g and 269.5±11.65 μg/g, p<0.0001) was found, which indicates acute neutrophilic inflammation of the intestine, which corresponds to increased migration of granulocytes through the mucous membrane, infiltration of neutrophils and leakage into the lumen due to increased permeability of the intestinal wall, immaturity of the immune system, which is especially severe in premature infants with perinatal pathology.

Conclusions. Fecal calprotectin is a biomarker that evaluates the intrauterine environment and acts as a marker of increased permeability of the intestinal mucosa due to inflammation.

Frunza A.V.

PROGNOSTIC VALUE OF PLASMA CYSTATIN C AS AN EARLY BIOMARKER OF SEVERE KIDNEY DYSFUNCTION IN CRITICALLY ILL PRETERM NEWBORNS

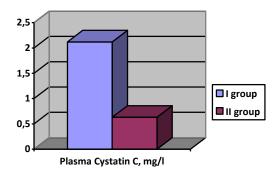*Department of Pediatrics, Neonatology and Perinatal Medicine*
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Introduction. Recent decades have been marked by significant progress in the development of technologies for raising babies born before the physiological term, in particular, in newborns with low and very low birth weight. However, the burden of disease among children of the above-mentioned groups has increased significantly, including due to the development of a significant number of complications against the background of combined perinatal pathology. Acute kidney injury (AKI) is one of the critical conditions of the early neonatal period, and, according to the literature, the incidence rates among premature patients in the departments of anesthesiology and neonatal intensive care are 18-56% (Askenazi D.J., 2020, Selewski D.T., 2015) . Thus, the main problem of modern neonatal nephrology will remain the study of highly specific and sensitive biomarkers of renal dysfunction, which would make it possible to form a risk group among patients at the preclinical stage.

The aim of the study. To determine the role of plasma cystatin C in predicting severe renal dysfunction in premature newborns with severe perinatal pathology at 25-36 weeks' gestation.

Materials and methods. 57 infants were included in this part of the study. Among them, 27 children with GA 25-31 weeks were treated in the neonatal intensive care unit of the CNPE "City Clinical Maternity Hospital №2" in Chernivtsi during the period 2018-2020 and formed the 1st group. The control group consisted of 30 conditionally healthy premature babies with gestational age of 34-36 weeks. The criteria for inclusion in the study were: birth weight of 500 g or more, but less than 2500 g, presence of informed consent for participation in the study signed by the child's parents, gestational age more than 25 weeks, but less than 37 weeks. Determination of the level of cystatin C in plasma was carried out by the turbidimetric method on the ACCENT-200 automatic analyzer. Statistical analysis was performed using Statistica software (unpaired Student's t-test for independent samples).

The results. Cystatin C is a low molecular weight protein (13 kD) from the group of cysteine protease inhibitors. Unlike plasma creatinine, this protein is secreted into the extracellular fluid, so elevation of its level occurs much faster when kidney function is impaired. Plasma cystatin C levels depend exclusively on GFR and remain unchanged even under conditions of infection and other non-infectious factors. Our results showed significantly significant differences between I snd II groups (T-value – 66.55, df – 55, p<0.05, p var. <0.05).

2,5
2
1,5
1
0,5
0

☐ I group
☐ II group

Plasma Cystatin C, mg/l

Conclusions. The results demonstrated that determination of the plasma cystatin C level can be used for the purpose of early diagnosis and prediction of severe renal dysfunction in critically ill premature children, which will improve the effectiveness of medical care in this pediatric cohort.

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INTESTINAL DYSBIOSIS IN PATIENTS WITH CHRONIC PURULENT MAXILLARY SYNUTIS
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Introduction. The aim of the work was to determine the species composition and population level of the microbiota of the colon cavity in patients with chronic purulent maxillary sinusitis (CPMS).

The aim of the study. The studied contingent consisted of 81 patients with CPMS in the exacerbation stage, aged from 15 to 68 years without concomitant pathology.

Materials and methods. Clinically, CPMS exacerbation was manifested by typical local and general symptoms in all patients. The diagnosis was based on X-ray examination data, but the main criterion for establishing the diagnosis was the diagnostic and therapeutic puncture of the maxillary sinus, which was performed on 81 patients. At the same time, the volume of the sinus, which was reduced in all examinees, and the nature of the pathological content in the lavage fluid were evaluated. Upon admission to the hospital, purulent exudate from the maxillary sinuses was collected from patients with CPMS in the acute stage, which was subjected to microbiological examination: the microorganisms persisting in the exudate were isolated and identified. In each pathological material, the species composition and population level of viable (colony-forming) microorganisms in 1 ml of exudate were determined.

Results. Of identifying the species composition of exudate microflora from the maxillary sinuses showed that the leading microorganisms released from exudate in patients with CPMS are str. pneumoniae, haemophilus influenzae, moraxella catarallis, st. aureus, pseudomonas aureginosa and s. pyogenes, and it was also established that associations of conditionally pathogenic microorganisms cause disease in some patients.

Taking into account the fact that a significant number of inflammatory processes occur against the background of reduced resistance of the body and dysbiotic changes in the intestine, all patients with an exacerbation of CPMS underwent a microbiological study of the cavity contents of the large intestine by determining the species composition and population level of autochthonous and allochthonous representatives of the fecal microflora, followed by establishing the degree dysbiotic changes.

The results of the microbiological study demonstrate characteristic changes in the species composition of the anaerobic and aerobic autochthonous, facultative and allochthonous microflora of the contents of the colon cavity, significantly different from the indicators of the species composition of the microflora of the colon cavity within the normal range.