Thus, the lack of energy production in neurons with mitochondrial dysfunctions leads to depolarization of their membranes, the opening of the channels of glutamate receptors, the Ca^{2+} ions in an excessive amount enter the cell and activate caspases and other enzymes that initiate autolysis and apoptosis. Currently, caspase activation is considered as a possible mechanism for neuronal death in neurodegenerative diseases and AIDS-dementia. It has been founded that huntingtin, a product of the Huntington's chorea gene, and presenilins (PS-1 and PS-2) in Alzheimer's disease are a target for caspase-3.

Conclusions. Disturbance of the mtDNA structure and the processes of mitochondrial movement inside the neuron, as well as the processes of their conjugation and separation, lead to disorder of the energy processes inside the nervous cells and the development of a some neurodegenerative diseases and mitochondrial encephalopathies. The study of the mitochondrial metabolic activity provides information that allows not only to understand the pathogenesis of the disease, but also to find out which drugs will be effective for their treatment.

RISK FACTORS OF THE DEVELOPMENT OF NEWBORN'S CONJUGMENT JAUNDICE

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Introduction. Jaundice – the appearance of jaundice on the skin and mucous membranes. According to literary data in the early neonatal period, it appears in 50-60% of full-term and 70-90% of premature babies. The main cause of this condition is hyperbilirubinemia, the clinical significance of which lies in the development of deep metabolic disorders, changes in the functional state of the liver and neurological damage.

Despite numerous studies conducted in different years to study the causes of this state of the neonatal period, the relevance of this problem does not decrease. During this period, metabolic disorders are most often associated with an increase in serum bilirubin levels.

A certain part of these states is transient for the child and does not require special correction. However, in recent years, most neonatal jaundice occurs with a high level of bilirubin in the blood serum and takes a protracted course, resulting in a high risk of complications due to the neurotoxicity of indirect bilirubin, which in turn necessitates early diagnosis and adequate treatment of this condition. In the literature there is no sufficient data on the risk factors for the formation of conjugation hyperbilirubinemia in children. Along with this, there is a shortage of drugs that contribute to the rapid and effective relief of hyperbilirubinemia. The underestimation of the dynamics of the development of the pathological process with severe hyperbilirubinemia, delayed therapeutic intervention can lead to death or severe disability. On the other hand, jaundice in the neonatal period is the most common cause of unreasonable and prolonged treatment with the use of invasive methods and a large number of drugs that are harmful to the body of the newborn.

Aim. The aim of the study is to identify risk factors associated with the formation of conjugation hyperbilirubinemia in newborns, the development of prevention methods and the consideration of the possibility of creating new dosage forms for the treatment of this pathological condition.

Materials and methods. This retrospective study was conducted to study the clinical and biochemical parameters of newborns with manifestations of hyperbilirubinemia using neonatal development cards "KCH RT №2, filia «HC»", stock partnership «Ukrzaliznytsya». Biomedical risk factors for conjugated jaundice have been studied for many years.

The main group (MG) consisted (18) of children with signs of conjugative hyperbilirubinemia. The control group (CG) (15) of children was selected by the method of “random control” 1 of practically healthy newborns without manifestations of physiological jaundice. The main and control groups were compared in absolute terms (maternal age, gestational age, baby weight at birth, etc.) were comparable. Risk factors were divided into 2 groups: 1. Premorbid factors (state of health and age of parents, bad habits (smoking, alcohol, drugs); 2. Perinatal factors (viral infections, transferred during pregnancy; the

presence of toxicosis; duration of pregnancy, at birth , premature rupture of amniotic fluid, use of invasive studies for caesarean section of the mother, drug stimulation of labor, signs of asphyxiation during labor, food patterns in the maternity hospital.

Results. The analysis showed statistically significant significant differences between groups for a number of indicators. Therefore, fetal hypoxia was observed more often in the main group. Abortions in mothers with an OG were recorded significantly more often as compared with CG – in 83% compared with 37% ($p < 0.05$). The threat of miscarriage was noted in 91% of cases compared with 38% of mothers in the CG. Hypochromic anemia was found in 95% of pregnant women compared to 57% of chronic hepatitis ($p < 0.05$). Chronic fetal hypoxia 98.3% versus 56.7% ($p < 0.05$). Those. The risk factors for antenatal fetal hypoxia were statistically significantly higher in the MG compared with the CG. Also violations of the labor regime were reported in the FG. For example, drug stimulation was performed in 65.8% compared with 30.5% ($p < 0.05$); premature rupture of amniotic fluid in 90.3% compared with 51.6% ($p < 0.05$). Asphyxia was observed in 80% of cases of EG and in 45% of cases of chronic hepatitis ($p < 0.05$). The neonatal OS in 100% of cases received treatment for intrauterine hypoxia / asphyxia and hyperbilirubinemia compared with 45.4% CG ($p < 0.05$).

Caesarean section was performed in 24% of MG compared with 11.4% CG ($p < 0.05$). The age of the mother is less than 18 years and more than 36 years with 10.8% OG compared with 3.5% CG ($p < 0.05$). Artificial feeding of children from birth was registered in 23.2% compared with 12.8% of CG ($p < 0.05$). Thus, the perinatal history was aggravated in newborns with conjugative jaundice in accordance with factors of perinatal hypoxia.

Findings. Thus, such factors as the threat of termination of pregnancy, anomia of the material state and the development of chronic hypoxia and fetal development and complications during childbirth, indicate the presence of amniotic fluid, drug stimulation and cesarean section. They are factors leading to hypoxic damage to various organs and systems. As a result, the occurrence of the glucuronyltransferase system and the dissociation of the bilirubin-albumin complex is delayed, which leads to the development of conjugated jaundice. Clinical manifestations will depend on the severity of hypoxia. As a result, the development of new drugs to combat the manifestations of intrauterine hypoxia is the next stage of typical research.

STUDY OF FETOPROTECTIVE EFFECTS OF CHOPHYTOL ON THE MODEL OF CHRONIC PLATCENTAL DYSFUNCTION IN RATS

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Introduction. Placental dysfunction (PD) is one of the most common complications of pregnancy, and it leads to the development of intrauterine growth retardation. Gravidoprotectors with fetoprotective action are used for prophylaxis and treatment of PD. This group of medications normalize fetogenesis and create conducive conditions for the development of fetus.

The **purpose** of the study: to study fetoprotective effect of chophytol on the model of chronic placental dysfunction in rats.

Materials and methods of research. Chronic PD in females of rats has been caused by the introduction of an oily solution of tetrachloromethane from the 12^{th} to the 19^{th} day of gestation. The toxin was administered in the morning before food intake intragastrically at a dose of 2 ml / kg. Chophytol was used intravenously at a dose of 24 mg / kg from the 11^{th} to the 19^{th} day of gestation in the therapeutic prophylactic regimen. The efficacy of drugs was evaluated according to biometric parameters (post-implantation fetal death rate (PIFD), fetal and placental mass, cranio-caudal size of the fetus (CCS).

The obtained **results** indicate that in the group of animals with control disease the number of fetuses decreased slightly by 3.8%, but the PIFD increased in 2 times. The indicators of the general development of the fetuses indicate that the weight of the fetuses reliably decreased by 23%, while the