

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 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 PLACENTAL DYSFUNCTION IN RATS**

Nedovesova Yu.R., Asadullaeva N.Ya.

Scientific supervisor: assoc. prof., Kudina O.V.

National University of Pharmacy, Kharkiv, Ukraine

Pavlenkova@gmail.com

**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<sup>th</sup> to the 19<sup>th</sup> 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<sup>th</sup> to the 19<sup>th</sup> 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

CCS of the fetuses remained unchanged comparing with the intact group of rats. The weight of the placenta decreased by 19%. The tendency to increase the number of fetuses by 10% compared with the control group was revealed after the introduction of chophytol. The decreasing of PIFD index in 5 times, a significant increase in the weight of the fetuses and placenta (by 21% and 12%), and reliable increase in the size of the fetuses by 9% compared to the group of control animals were observed.

**Conclusions.** Thus, chophytol advantaged the improvement of embryo and fetogenesis, accompanied by a marked tendency to decrease the PIFD index and normalization of other parameters. Even some parameters of the drug exceeded the markers of the development of the fetuses of the intact control group. The obtained results point at the expediency of further investigation of the mechanisms of chophytol gravidoprotective action.

## NEW APPROACHES TO CORRECTION OF RESISTANT EPILEPSY USING DRUGS FROM DIFFERENT PHARMACOLOGICAL GROUPS

Nemchenko D. B., Tsyvunin V. V.

Scientific supervisor: prof. Shtrygol' S. Yu.

National University of Pharmacy, Kharkiv, Ukraine

dashalera2@gmail.com

**Introduction.** Despite successes in the treatment of epilepsy almost 25% of patients can not achieve medical remission. Pharmacoresistance is the ineffectiveness of therapy in the application of at least two treatment schemes of various combinations of antiepileptic drugs in marginal daily doses, which can cause expressive side effects. One of the ways to overcome the resistant epilepsy is the use of drugs from other pharmacological groups, also called non-antiepileptic drugs.

**Aim.** Determination of drugs from various pharmacological groups that can be used in the adjuvant therapy of resistant epilepsy.

**Materials and methods.** Cochrane, Pubmed, ScienceDirect and Google Scholar resources were searched up to February 2019. The search terms were "resistant epilepsy", "non-antiepileptic drugs", "controversial drugs", "targets".

**Results and discussion.** It has been found that many non-antiepileptic drugs from different pharmacological groups show significant benefit in resistant epilepsy.

Almost all antiarrhythmic drugs – sodium channel blockers (lidocaine, propafenone), calcium channel blockers (nifedipine, amlodipine, cinnarizine, diltiazem, verapamil),  $\beta$ -blockers (propranolol, metoprolol, pindolol), amiodarone have shown anticonvulsant properties not only on various animal models, but also in double-blind, placebo-controlled trials (for example, nifedipine, lidocaine). This confirms the assumption that epilepsy and cardiac arrhythmia may have common molecular background. Anticonvulsant effect (apparently related to influence on neuronal  $\text{Na}^+/\text{K}^+$ -ATPase activity) is also verified for cardiac glycoside digoxin. Ivabradine, a hyperpolarization-activated cyclic nucleotide-gated channel blocker, and allopurinol, an inhibitor of xanthine oxidase, also possess anticonvulsant activity. Statins (atorvastatin, simvastatin and pravastatin) demonstrate promising anticonvulsant and beneficial effects in numerous seizure models. Both selective (rofecoxib, celecoxib, etoricoxib, nimesulide) and non-selective (indomethacin, acetylsalicylic acid) COX-2 inhibitors have shown a variety of beneficial responses in a various animal model of seizures. Anticonvulsant effect of acetaminophen also has been carried out. These examples can be an illustration of use medicines off label.

**Conclusions.** The experimental and clinical data reveal the new ways of adjuvant treatment of resistant epilepsy using various non-antiepileptic drugs from different pharmacological groups.