



development. Hemodynamic disturbances in the mother-placenta-fetus system are of utmost importance in the formation of placental dysfunction and are characterized by an increase in peripheral vascular resistance in all its elements.

**Aim.** To determine the main diagnostic criteria of hemodynamic disorders in the fetus in preeclampsia.

**Materials and methods.** Comprehensive clinical and laboratory examination made it possible to form the main group which involved 60 pregnant women with preeclampsia of different severity. The control group included 40 pregnant women with physiological pregnancy. Gestation term comprised 28-40 weeks. All pregnant women underwent Doppler investigation using US scanner Medison 6000 CMT (South Korea) with the use of 3-7 MHz sensor, frequency 100 Hz filter and 2 mm volume. The study allowed to assess the state of the arterial blood supply to the fetus with the determination of pulse index, resistance index, systolo-diastole ratio, systolic, diastolic and medium blood flow velocity in uterine arteries, artery of the umbilical cord, thoracic aorta, middle cerebral artery.

**Results.** Doppler examination of the pregnant women of the control group did not detect hemodynamic disorders of the fetus. The following results were observed in the pregnant of the main group: - uterine artery – persistent early diastolic notch in the phase of early diastole, a decrease in diastolic blood flow; - umbilical artery – persistent zero and retrograde diastolic blood flow; - middle cerebral artery – an increase in vascular resistance index; - thoracic aorta – a reduction of blood flow velocity in the phase of late diastole to zero and negative values.

**Conclusions.** Doppler investigation in obstetric practice is of great diagnostic value in preclinical diagnosis of preeclampsia, providing quick and non-invasive assessment of the extent of placental circulation and fetal hemodynamics impairment.

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**RELATIONSHIP BETWEEN  $\Omega$ 3-UNSATURATED FATTY ACIDS INTAKE  
AND ENDOTELIN EXPRESSION IN PLACENTA**

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**Introduction.** The role of changes in cardiovascular system (CVS) which should provide all necessary supply for advancing pregnancy is well-known. Maternal organism should acquire additional blood amount through general vasodilatation due to new hormonal balance which shift ratio of prostacyclin/tromboxan production by endothelium in favour of former. CVS diseases (CVD) either overt or occult may prevent from these natural changes and lead to hypovolemia which is the underlying cause of hypertensive disorders induced by pregnancy (HIP) and retardation of fetus growth (FGR).  $\Omega$ 3-unsaturated fatty acids (UFA) play important role in functional capacity of endothelium and metabolism of prostacyclins. This study assessed warrant for supplementary intake UFA by women of high risk of pregnancy complications before planning pregnancy and throughout the first trimester that aimed at prevention from these complications.

**Materials and methods.** There were 39 women of high risk of pregnancy complications (CVD, age, HIP and FGR in past medical history) enrolled in the study and divided into two groups respective of supplementary intake only folic acid versus complex folic acid and UFA which had started before planning pregnancy and continued throughout



first trimester. The targets for evaluation were clinical signs, Doppler and ultrasound assessment of fetus well-being and placenta, pregnancy outcomes. Furthermore, the samples of placenta obtained after delivery underwent immunohistochemical investigation of endotelin expression by means of MCA.

**Conclusions.** The study elicited distinctive significant trend towards reduction of HIP and FGR, better value of Doppler investigation of fetoplacental complex, improved pregnancy outcomes, less extent of endotelin expression in placenta among women who had been administered UFA.

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**LAPAROSCOPY AS A METHOD FOR DIAGNOSIS AND TREATMENT OF  
GYNECOLOGIC ABNORMALITIES**

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**Introduction.** The experience which has been gained over the last 10 years is indicative of the efficiency and safety of laparoscopic surgery in general practice of gynecologists. Laparoscopic treatment in acute gynecological urgent cases is more preferable in comparison with open laparotomy (S. V. Shtyryov, 2006). At present laparoscopy is employed in diagnosis and treatment of ectopic pregnancies, in rupture and torsion of various ovarian cysts. Laparoscopy is frequently performed in cases when diagnosis is not fully determined. Laparoscopy is an operation of choice for young women who want to preserve their reproductive performance.

**Material and methods.** In 2013 specialists of gynecological department of Kharkiv State Maternity Hospital No.1 carried out 212 gynecological operations. Of them 107 patients underwent laparoscopic operations, which comprises 50,5% from the total number of gynecological operations, performed in this maternity hospital. Laparoscopic operations were carried out in 28 cases of ectopic pregnancy, 45 cases of adnexa disorders, 5 cases of conservative myomectomy, 29 cases of infertility. Average age of the patients comprised  $31 \pm 0,5$  years (from 18 to 42 years). Every other woman had inflammatory diseases in her past history. All the women underwent ultrasound examination of pelvic organs with the employment of transvaginal sensory device (4,0-9,0 MHz) of Medison 6000 CMT unit (Southern Korea). The patients with suspected ectopic pregnancy underwent HCG test. Diagnostic culdocentesis was carried out in 41 patients. While performing laparoscopic intervention following the abdominal organs examination the doctors assessed the presence, location and character of exudate, proceeded to a detailed examination of appendix and after acute surgical disorder exclusion explored internal reproductive organs. To provide proper examination the woman assumed Trendelenburg position. Then two troacar for manipulators, coagulator and aspirator were inserted, abdominal cavity was drained giving the onset to the main stage of intervention. Small pelvis drainage was carried out for the main indications.

**Results.** The employment of minimally invasive methods helps to perform a more detailed examination in the beginning of the operation, carry out more thorough decontamination of the abdominal organs without causing major injuries in comparison with laparotomic operations. This results in a reduction of hospital stay duration from 7 to 3



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