

THE HEMODYNAMIC PREGNANCY SUPPORTING IN EARLY AND LATE PREECLAMPSIA

Konkov DG, prof. Dept of Obstetrics and Gynaecology №1, National Pirogov Memorial Medical University, Vinnytsya, Ukraine.

Belkaniya GS, prof. Laboratory «Anthropos Systems Lab», Vinnytsya, Ukraine

Borzenko IB, Dept of Obstetrics and Gynaecology №2, National Medical University, Kharkiv, Ukraine.

Piskun Alina, Dept of Obstetrics and Gynaecology №1, National Pirogov Memorial Medical University, Vinnytsya, Ukraine.

Introduction: Hypertensive disorders in pregnancy are an important cause for maternal morbidity and mortality. In generally, incidence of hypertensive disorders of pregnancy is 5-10%. Preeclampsia is characterized by elevated blood pressure and proteinuria with associated organ involvement. Recently investigators have begun to classify preeclampsia based on the period of gestation at which first onset of disease occurred. Early preeclampsia (EP) was associated with impaired trophoblast invasion, incomplete transformation of the uterine spiral artery, immune maladaptation, and primary endothelial dysfunction. The late preeclampsia (LP) was associated with maternal morbidity (metabolic syndrome, impaired glucose tolerance, obesity, dyslipidemia, chronic hypertension), and secondary endothelial dysfunction. The two subtypes have similar clinical presentation but studies indicate that they are associated with different predisposing factors, heritability, biochemical markers and different maternal, fetal and neonatal outcome.

Objective: The purpose of this study was to investigate if women with early or late preeclampsia have different hemodynamic pregnancy supporting compared with normal pregnancies.

Methods: The regional ethical review board in the National Pirogov Memorial Medical University, Vinnytsya, Ukraine, approved the study and informed consent was obtained from each woman participating in the study. The study population included twenty eight women with preeclampsia (sixteen with early and twelve with

late preeclampsia) and seventeen women with normal pregnancy (NP). Early was defined as <34 weeks and late as - 34 weeks gestation. All women underwent the circulatory syndromes of the central and peripheral hemodynamics was conducted through the standard method of tetrapolar thoracic and regional rheography in the condition of active orthostatics (immediately in standing position) and clinical repose (15-20 min after translocation pregnant women in lying position). The hemodynamic supporting of pregnancy was carried out in the II, and III trimesters.

Results: In women with NP in the II and III trimesters were a trend in optimization of circulatory support of pregnancy (CSP) which was expressed in a decrease in the manifestation of circulatory syndromes of hemodynamic risk. According to our investigations the optimization of hemodynamical supporting in NP was mechanism of vasodilator "slippage" of arterial vessels from the systemic vasoconstriction as the hemodynamic equivalent of endothelial activity. Women with early preeclampsia and women with late preeclampsia had circulatory unbalanced states, compared to women with normal pregnancies at the corresponding gestational age. In II and III trimesters CSP in pregnant women with EP were significantly ($p < 0,01$), the conditions with a negative orientation were prevailed in the abdominal circulation. Women with EP was associated with a suboptimal and strained state of hemodynamics in the regime of antigravitational supply of blood circulation in the basic postural conditions of a person's life activity creature (standing and sitting) and pregnant with minimizing restorative capacities in a lying position. Pregnant women in standing and sitting positions with LP had expressive vasoconstriction of abdominal arterial vessels in II and especially in III trimesters, but the arterial hypercirculatory syndromes were significantly decreased. At that time, in a lying position we were founded decreasing of the hemodynamic pregnancy supporting also ($p = 0,02$).

Conclusion: Both early and late preeclampsia differ in hemodynamic pregnancy supporting from normal pregnant women. Observed differences are however in the opposite direction, suggesting differences in pathophysiology.

Hemodynamic pregnancy supporting decreases in EP more intensive in II trimester (in vertical position), in LP – in III trimester (vertical and horizontal positions).

PRETERM AS MEDICAL AND SOCIAL PROBLEM OF REPRODUCTIVE HEALTH OF WOMEN.

Kurbanova D.F.¹, Ali-zade S.F.¹, Buyukkayhan D.²

Scientific and Research Institute of Obstetrics and Gynecology¹,

University of Health Sciences, Department of Pediatrics division of neonatology²,

Baku, Azerbaijan¹,

Istanbul, Turkey².

Miscarriage of pregnancy continues to be an urgent health problem and has serious medical and social consequences among preterm infants born before 30 weeks of pregnancy due to high incidence, disability and mortality [Adamkin D.H., 2007; Angert R., Adam H.M., 2009; Beck S, Wojdyla D, Say L, et al. 2010; Ali-zade S.F., Huseynova S.A. 2012; European Consensus Guidelines on the Management of Neonatal Respiratory Distress Syndrome in preterm infants, 2013]. In structure of early neonatal mortality premature birth occupies 60-70% [Adamkin D.H., 2007; Ali-zade S.F., Huseynova S.A. 2012; European Consensus Guidelines on the Management of Neonatal Respiratory Distress Syndrome in preterm infants, 2013]. According to the WHO report published in november 2015, 15 million children are born prematurely each year, and this number tends to grow. Despite the fact that, in recent years, with the increase in modern intensive care technologies, the use of assisted reproductive technologies, extensive antenatal preventive use of corticosteroids, an increase in the number of cesarean sections (according to indications), the optimization of perinatal care, postnatal drug surfactant, improvement in the care of preterm infants born with very low (extremely low) body weight (VLBW), the incidence and disability of surviving children continue to be high and do not tend to decrease. The frequency of birth of children with extremely low body weight VLBW - less than 1000 g) - 0.3% [UNICEF, World Health