

## HEAVY PREECLAMPATION: PECULIARITIES OF ANGIOGENIC STATUS

Negmatshayev H.N.

Andijan State Medical Institute

✓ *Resume,*

*Preeclampsia (PE) according to foreign authors complicates the course of 2 to 8% of all pregnancies, with a severe form developing in every tenth case. Annually 8.5 million cases of PE are registered in the world. In different countries in the structure of maternal mortality, PE and its complications take the II-IV place each year.*

*Keywords: preeclampsia, extragenital pathology, pregnancy, angiogenic status.*

## ОЁИР ПРЕЭКЛАМПСИЯ: АНГИОГЕН ҲОЛАТ ХУСУСИЯТЛАРИ

Негматшаева Х.Н.

Андижон давлат тиббиёт институти

✓ *Резюме,*

*Презклампсия (ПЭ) чет эл олимлари эътирофича, ҳамма ҳомиладор аёлларнинг 2- 8% да учрайди. Бунда оғир ҳолатлар ҳар ўнта ҳомиладор аёлдан бирига тўғри келади. Ҳар йили бутун дунё бўйича презклампсия ҳолати 8,5 млн ҳолатларда рўйхатланади. Турли мамлакатларда презклампсиядан ўлим ҳолатлари ва асоратлари бошқа касалликлар II-IV ўринларни эгаллаб келмоқда.*

*Калит сўзлар: презклампсия, экстрагенитал патология, ҳомиладорлик, ангиогенҳолатлар.*

## ТЯЖЕЛАЯ ПРЕЭКЛАМПСИЯ: ОСОБЕННОСТИ АНГИОГЕННОГО СТАТУСА

Негматшаева Х.Н.

Андижанский государственный медицинский институт

✓ *Резюме,*

*Презклампсия (ПЭ) по данным зарубежных авторов осложняет течение от 2 до 8% всех беременностей, при этом тяжелая форма развивается в каждом десятом случае. Ежегодно в мире регистрируется 8,5 миллионов случаев ПЭ. В разных странах в структуре материнской смертности ПЭ и ее осложнения ежегодно занимают II-IV место.*

*Ключевые слова: презклампсия, экстрагенитальная патология, беременность, ангиогенный статус.*

### Relevance

**P**reeclampsia (PE) according to foreign authors complicates the course of 2 to 8% of all pregnancies [3,8], with a severe form developing in every tenth case [1,6]. Annually 8.5 million cases of PE are registered in the world [5,7]. In different countries in the structure of maternal mortality, PE and its complications take the II-IV place every year [5]. It is established that over the past decade the maternal lethality in the world under PE has decreased almost twofold: from 110 thousand in 1999 to 60 thousand in 2014, it is known that the PE every year is the cause of death of 500 thousand newborns [4,6]. At the same time, there is a clear tendency in Russia to increase the occurrence of severe forms of this complication of pregnancy: severe PE in 2011 was registered in 27.14 cases per 1000 deliveries, in 2012 - at 30.28 per 1000 births [6]. PE remains one of the main causes of neonatal morbidity (640-780 ‰) and perinatal mortality (18-30‰) [6]. Thus, PE still represents one of the most serious and, unfortunately, unsolved problems in modern obstetrics.

Modern clinical, laboratory and experimental methods of research are aimed at studying the mechanisms of the onset and development of this obstetric complication. A lot of theories have been proposed, but today we have to agree with Jeffcoate TN and Baksheev N.S., who named PE 50 years and 40 years ago as a "disease of theories" and "a disease of riddles and

assumptions", as in the 30s of the last century, articles devoted to the study of PE begins with the statement that completely the causes of the development of this disease are unknown [1,3,4]. Diagnostic criteria are still based on nonspecific clinical and laboratory signs and timely accurate recognition of the development of PE is an important task of modern researchers [5].

Numerous studies have shown that endothelial dysfunction occurring in PE and leading to complications at the level of the placental vessels changes the activity of the factors synthesized by the endothelium, or are its elements. In addition, increased attention is paid to the factors involved in trophoblast invasion at the turn of the I-II trimesters of pregnancy.

There are many reports of a change in PE level of pro and anti-angiogenic factors, which play a central role in the process of implantation, cell proliferation, angiogenesis. However, in the vast majority of works, attention is paid to individual factors without taking into account the content of other compounds involved in the pathogenesis of the pregnancy complication discussed.

As a result of the study of the scientific literature, we found no information on the relationship between these factors among themselves, on the correlation with the main manifestations of PE after its manifestation. The dependence of the concentration in the blood on their expression by placental tissue, according to the literature,

is also fragmented and, importantly, without reference to individual cell types of the placenta.

In accordance with the above, the purpose of this study is to improve methods for assessing severe preeclampsia by determining the indicators of angiogenic status of a pregnant woman.

The second stage consisted of a survey of 34 pregnant women who were the main group. Pregnant women were chosen from among the patients with the so-called "clean" PE (58 people) by randomization, by generating random numbers in the Excel 2013 package (serial number 00201-10123-54512-AA875). Before isolating the main group, we analyzed the data of pregnant women with early ( $n = 19$ ) and late ( $n = 15$ ) PE. As a result, significant differences in the indices were not found and further considered both variants of severe PE in one group.

The aim of the study was to study the clinical features of pre-eclampsia and to develop methods for joint treatment.

### Materials and methods

From 2009 to 2013, 24961 pregnant women were delivered to AOPC. During this period, the diagnosis of "severe preeclampsia" was delivered to 244 women, which is 0.98% of all deliveries in the hospital. All patients were included in the main group of the first stage of the study.

### Results of the study

Obviously, the majority of the subjects are women aged 19 to 34 (80%), the patients of the late reproductive period (35 years and older) were 16% (39 people).

All pregnant women lived in satisfactory social conditions. Most of the patients had an average (94 people, 38.52%) and specialized secondary education (67 people, 27.46%) and were rural residents (140 people, 57.36%).

In the structure of extragenital diseases in pregnant women with severe PE, the major share was made by diseases of the cardiovascular system (51.08%), among which hypertension predominated. Attention is drawn to a large number of patients with obesity (87 people;

46.77%), up to its morbid forms. Generation of obesity was not always possible to clarify and the patient's data were not included in the group of endocrinopathies in isolation on this basis. In third place among the diseases associated with PE, is the pathology of the kidneys (32,26%), mainly chronic pyelonephritis (52 observations). In addition, there were pregnant women with thyroid gland diseases, diabetes mellitus (type I and gestational), and 16 people (8.6%) with chronic cholecystitis.

In the majority of subjects, the menstrual cycle was a regular normoponitor, a violation of the OC type occurred in 3 (1.48%) cases, dysmenorrhea was observed in 5 (2.46%) observations.

Analyzing the gynecological history, it should be noted that 124 (61.08%) of patients with severe PE had a history of gynecological diseases, in 24 (11.82%) of them the history was burdened by infertility (duration from 2 to 17 years).

In a quarter of the subjects with the forthcoming repeated childbirth, the previous pregnancy ended with the operation of a cesarean section, the indication to which

11 people had a severe PE. In total, this complication of pregnancy was observed in 20 patients and developed repeatedly in this pregnancy, in 3 of them severe PE led to antenatal fetal death in past pregnancies.

In our study, we observed several clinical variants of PE: the classical triad of Tsangemeister was observed in 58.2% (142 women) of cases, the edematous proteinuric form occurred in 14.75% (36 cases) of observations, on the basis of isolated high AG, the diagnosis of severe PE was delivered in 16.8% of cases (the clinic was joined and other criteria for severe PE).

### Conclusions

In the majority of pregnant women in the Stavropol Territory with severe PE 1. (58.2%), there is a classic symptomatic of PE with the presence of the Tsangemeister triad. Severe PE significantly affects the duration and method of delivery (abdominally 70.5% were given birth, early delivery took place in 61.07% of cases). A low mass of newborns from mothers with severe PE is typical (2240.92 gr., SD 836.66), the greater part (65.7%) is estimated by Apgar in 5-7 points, nursing of children requires a long stay in the hospital with transfer to the second stage of nursing (67.35%) and the use of modern resuscitation measures (IVL, surfactant preparations).

In pregnant women with severe PE in the blood serum concentration of 2.

the anti-angiogenic factor is significantly higher in comparison with sFlt-1 pregnant women without hypertensive disorders ( $4362 \pm 570.12$  and  $1080 \pm 435$  pg / ml, respectively,  $p0.05$ ), the value of the ratio sFlt-1 / VEGF is almost 6 times significantly higher in patients with heavy PE ( $503 \pm 67$  and  $86.22 \pm 11.81$ , respectively,  $p0.01$ ).

In severe PE, the serum level of adhesion molecules is 3.

( $r = 0.74$ ,  $p0.0001$ ), a significant difference occurs in the treatment of sVCAM-1 ( $1391 \pm 308.33$  and  $966.2 \pm 165.22$  ng / ml, respectively ;  $p0.05$ ).

### BIBLIOGRAPHY:

1. Tsatsaris, V. Pathophysiology of preeclampsia / V. Tsatsaris, T.Fournier, N. Winer, J. //J. Gynecol. Obstet. Reprod. Biol. - 2008. - N 1. - P. 16-23.
2. Tumor cells secrete a vascular permeability factor that promotes accumulation of ascites fluid / D.R. Senger [et al.] //Science. - 1983. - Vol. 219, No. 4587. - P. 983-985.
3. Uterine artery Doppler and sFlt-1 / PlGF ratio: prognostic value in earlyonset pre-eclampsia / P.I. Gmez-Arriaga [et al.] // Ultrasound Obstet. Gynecol. 2014. Vol. 43, No. 5. - P. 525-532.
4. Uterine natural killer cells initiate spiral artery remodeling in human pregnancy / A. Robson [et al.] / FASEB J. - 2012. - Vol. 26, No. 12.-P. 4876-4885.
5. Verlohren, S. Angiogenic growth factors in the diagnosis and prediction of pre-eclampsia / S. Verlohren, H. Stepan, R. Dechend // Clinical Science. - 2012. - Vol. 122, N 2. - P. 43-52.
6. Wang, A. Preeclampsia: the role of angiogenic factors in its pathogenesis / A. Wang, S. Rana, S.A. Karumanchi // Physiology. - 2009. - Vol.24. - P. 147-158.
7. WHO Recommendations for the prevention and treatment of preeclampsia and eclampsia /Abalos E. [et al.] - Geneva: WHO Department of Maternal and Child Health, 2011. - 38 p.Williams Obstetrics, 24th ed. / F. Cunningham [et al.]. - NY: McGrawHill, 2014. - 1376 p.
8. Wortelboer, E.J. First-trimester

Оступила 10.03. 2018