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Kosimova Dilnoza Sayotovna

Postpartum period in women complicated by preeclampsia

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Kosimova, Dilnoza Sayotovna.

Postpartum period in women complicated by preeclampsia.

Creators:

Kosimova Dilnoza Sayotovna - Bukhara State Medical Institute, PhD, Acting Associate Professor, Department of Obstetrics and Gynecology in Family Medicine

Reviewers:

Solieva Nozima Karimovna – PhD., acting associate dosent, Department of Obstetrics and Gynecology in Family Medicine , Bukhara State Medical Institute .

Akhmedjanova Gulnoza Murodovna – Dsc.,dosent of the 2 and Department of Obstetrics and Gynecology of the Andijan State Medical Institute

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Annatation.

Preeclampsia is one of the serious complications of the postpartum period, which poses the same threat to the life of the mother and the child. Preeclampsia disrupts the functioning of vital organs such as the kidneys, brain, liver, and lungs. According to BJSST, 28% of pregnant women have hypertensive preeclampsia. Consequences after experiencing preeclampsia not only timely from birth next during the period, in the later period of his life, especially brain dysfunction may appear.

Currently, the diagnosis of preeclampsia in the early postpartum period is based on clinical manifestations and laboratory tests. In women who have experienced preeclampsia, central and cerebral hemodynamic parameters determined by integral rheography and rheoencephalographic examination of cerebral blood flow can be used to predict the development of late postpartum complications.

Аннатация.

Преэклампсия одно из серьёзных осложнений послеродового периода, представляющее одинаковую угрозу для жизни матери и ребёнка. Преэклампсия нарушает работу жизненно важных органов, таких как почки, головной мозг, печень и лёгкие. По данным BJSST, гипертоническая преэклампсия встречается у 28% беременных женщин. Последствия преэклампсии не только своевременный с рождения следующий в этот период, в более поздний период его жизни, могут проявиться, в частности, нарушения функций головного мозга.

В настоящее время диагностика преэклампсии в раннем послеродовом периоде основывается на клинических проявлениях и лабораторных исследованиях. У женщин, перенесших преэклампсию, показатели центральной и церебральной гемодинамики, определяемые с помощью интегральной реографии и реоэнцефалографического исследования мозгового кровотока, могут быть использованы для прогнозирования развития поздних послеродовых осложнений.

Annatasiya.

Preeklampsiya tug‘ruqdan keyingi davrning og‘ir asoratlaridan biri bo‘lib, ona va

bola hayotiga bir xil xavf tug‘diradi. Preeklampsiya buyrak, miya, jigar, o‘pka kabi hayotiy muhim a’zolar faoliyatini buzadi. BJSST ma’lumotlariga ko‘ra, homilador ayollarning 28 foizi gipertenziv preeklampsiya bilan kasallangan. Preeklampsiyani boshdan kechirgandan keyingi asoratlar nafaqat tug‘ilishdan keyingi davrda, balki hayotning keyingi davrida, ayniqsa miya disfunksiyasida paydo bo‘lishi mumkin. Hozirgi vaqtda tug‘ruqdan keyingi erta davrda preeklampsiya tashxisi klinik ko‘rinishlar va laboratoriya tekshiruvlariga asoslanadi. Preeklampsiyani boshdan kechirgan ayollarda tug‘ruqdan keyingi kechki asoratlarning rivojlanishini bashorat qilish uchun integral reografiya va miya qon oqimining reoensefalografik tekshiruvi orqali aniqlangan markaziy va miya gemodinamikasi parametrlaridan foydalanish mumkin.

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ABBREVIATION WORDS LIST

AG	- arterial hypertension
AKB	- arterial blood pressure
BKA	-head brain blood rotation
BMKA	- head in the brain blood rotation
BMQAU	- head in the brain blood rotation change
GB	- hemodynamic assessment
DBP	- diastolic blood pressure
ITT	- infusion-transfusion therapy
YS	- companion system
KAH	- blood rotation size
KP	- Blood plasma
KPH	- in the blood plasma size.
KEF	- in the blood erythrocytes size
MQB	- central blood pressure
MH	- maximum volume
NZHPVO	- normal located placenta from time to time
C	before relocation
PTI	- prothrombin index
RI	- rheographic index
REG	- rheoencephalography
SYY	- chronic companion shortage
TC	- tone coefficient
TTA	- iron shortage anemia
Ultrasoun	- ultra sound inspection
d	
UPTC	- general peripheral vein resistance
Central	- menstruation cycle disorder

Bank

HROQ - fetus development behind to stay

HRN - fetus development defect

LEFT - baby his condition assessment

EEG - electroencephalography

South - in the heart arterial blood pressure

Asian

Bank

UIC - heart ischemic illness

UK - heart failure

DAY - heart hit tattoo

YUCH - Heart hit frequency

INTRODUCTION

Preeclampsia mother and fetus main causes of death is modern medicine remains one of the urgent problems. The high incidence of hypertension in women in various regions of our republic 15-25% organization

Despite the fact that preeclampsia is studied by scientists, its pathogenetic mechanisms, clinical complications, preventive measures, diagnosis, and the production of modern methods, the mortality rate of mothers and children is preeclampsia. with complicated pregnant women between taking the leading place [8,9,11.].

PE is an important interdisciplinary problem, leading among the pathologies that lead to complications during pregnancy. The relevance of studying PE is explained by the widespread prevalence of this complication, its adverse effect on the course of pregnancy, as well as its role as a risk factor for the subsequent development of arterial hypertension, chronic kidney disease, endocrine disorders, and fatal cardiovascular complications in the mother.

Preeclampsia is the leader of pregnancy It is considered a pathology and is accompanied by the development of multiple organ failure (MOF), which leads to high maternal mortality, perinatal morbidity, and mortality [21,24,30

This is evidenced by modern indicators: the share of preeclampsia in the structure of complicated pregnancies ranges from 10.1 to 20%, it accounts for 21.3% of maternal deaths, and 12.1 and 56% of perinatal morbidity and mortality. In Russia, the mortality rate among women complicated by preeclampsia is 27%, in Colombia it is 34%, and in Africa it is 25%. In the Republic of Turkmenistan, this figure is 15-26%. Preeclampsia occurs mainly in regions considered arid zones, where extragenital diseases are very common, which, against the background of these diseases, cause the development of preeclampsia [18,19,24].

Published in several countries, an analysis of 800,000 pregnant women showed a twofold increase in the risk of death in patients with preeclampsia, especially in premature births. Norwegian researchers national registry data present In particular, 4,350 women died from complications of preeclampsia over a 25-year period, and the difference between them and those who underwent PE and gave birth at term was proportion 6.6/1000 organization did if, In premature births, this indicator was equal to 15.5/1000.

These figures have remained high for the past 30 years.

According to data from our country and foreign authors, currently, due to severe forms of preeclampsia accompanied by the development of POE, an increase in the incidence of this complication is observed, and this indicator ranges from 13.8% to 20.7% of cases [39,41,47.]

Preeclampsia increases the risk of adverse pregnancy outcomes not only for the mother but also for the fetus. According to data, perinatal mortality is 7.01% in uncomplicated pregnancies and 28.9% in pregnancies complicated by preeclampsia.

According to research, complications of preeclampsia during pregnancy perinatal illness and death

It reaches 50.7% and 67%, and neurological complications in the elderly make up 15% . M.V. Sitarkaya (2019) shows that one in three pregnancies with a history of preeclampsia has antenatal developmental disorders.

Antenatal hypoxia in children born to women with preeclampsia can result in neuropsychiatric and intellectual developmental delays [51,55].

Preeclampsia to the surface on arrival dangerous from factors one of this complicationsevere forms in previous pregnancies. In this case, the type of preeclampsia combined with extragenital diseases is more likely to be confirmed. The last in years of preeclampsia joint growth of forms being observed and he/she In the 80s of preeclampsia in all cases , it amounted to 7.2-38.8 % , in recent years 75-100% what organization is doing

This increase, while reflecting improved diagnostic quality, also reflects a deterioration in women's health. Some researchers have reported an increase in the proportion of preeclampsia in maternal mortality, attributing this to the increase in therapeutic morbidity in women [42,48].

Preeclampsia In 50-70% of cases, it occurs against the background of various somatic diseases: obesity, hypertension, chronic pyelonephritis, glomerulonephritis. Many women suffer from post-resuscitation illness, asthenovegetative syndrome suffer and they have residual signs of blood circulation in the brain [56,58.].

Preeclampsia is more common in young women under 19 years of age and in older pregnant women over 35 years of age.

Many studies show that preeclampsia is more likely to develop against the background of pyelonephritis and glomerulonephritis. In this case, the symptoms of kidney diseases prevail in the clinic.

According to the information provided by other authors, preeclampsia often develops in hypertension, obesity, and rarely kidney disease.

Preeclampsia is 2-3 times more common in women with anemia than in women with normal hemoglobin and red blood cell counts.

GM Savelyeva's studies clearly demonstrate the importance of background pathology in the development of preeclampsia. First of all, this is alimentary-constitutional obesity, in which preeclampsia occurs in 85% of cases. Preeclampsia develops in 85% of pregnant women with hypertension, in 74% of cases with kidney disease, and in 85% of cases with endocrine disorders.

It should be borne in mind that preeclampsia can progress to hypertension or glomerulonephritis, which, in turn, can create unfavorable conditions for subsequent pregnancies and cause this dangerous complication.

How pregnancy causes or exacerbates the development of hypertension is still a matter of debate. Despite intensive research in obstetric practice, hypertension in pregnancy is still a disorders remain an important unsolved problem [63,66.]

Currently, it has been proven that in women who have had eclampsia in a previous pregnancy, subsequent pregnancy and childbirth are complicated in 50-60% of cases, ranging from mild preeclampsia to fatal eclampsia. Recurrence of eclampsia occurs in 1.5-3% of cases and is fatal . Women who have had preeclampsia and eclampsia before 32 weeks of pregnancy are at risk for early recurrence of preeclampsia and eclampsia in subsequent pregnancies .

Interesting information is provided by PY Robillard et al. The authors state:

"Preeclampsia is only seen in first-time pregnant women. It is a disease of women who

"And in very rare cases, it is a complication in multiple births," said a resident.

concept denial They do. Modern in the circumstances

Despite the fact that the incidence of preeclampsia is higher in first-time pregnancies, the authors consider this disease to be a couple (sexual partner) disease. Since the risk of developing preeclampsia among repeat pregnancies in women who have changed sexual partners and have not previously had preeclampsia is the same as in women who are pregnant for the first time. They agree with this view. A group of Israeli scientists: "preeclampsia in a mother causes arterial hypertension in her daughter they came to the conclusion [56,58.]

Scientists studied the deviation of arterial blood pressure in 145 girls and 383 boys aged 17 years, born to mothers who had preeclampsia. Scientists almost differ in their weight, height and thinking In the absence of a causal relationship, maternal preeclampsia was found to be a risk factor for the development of hypertension in 6.9% of boys and 11% of girls. Preeclampsia in teenage mothers (10.6%) and associated gestational complications They are small for this period of gestation Birth of overweight babies (30%), premature pregnancy (20.1%), perinatal death (16.4%) was recorded. in eclampsia in studies perinatal mortality is 11.8%, and the majority Tragic consequences are associated with premature placental abruption and profound fetal immaturity. Similar results have been reported by.

From research, mild and severe preeclampsia and multiple pregnancies without this pathology were observed was in women groups between A comparative study was conducted. There is a high probability of recurrence of preeclampsia in subsequent pregnancies 2500 patients in a year at Sydney Hospital In an analysis of 140 pregnancies complicated by preeclampsia in reproductive history, hypertension bringing that he/she has taken out, and this

Recurrence of the pathology in the studied pregnancy was confirmed .
The authors found that recurrence of the complication occurred in 47% of pregnant women, and hypertension with proteinuria complicated subsequent pregnancies in 4.5% of cases (compared to 14% in the previous pregnancy). Scientists have found that low birth weight increases the risk of preeclampsia in subsequent pregnancies. Scientists have shown in their studies that latent hypertension develops after repeated preeclampsia.

CHAPTER I. LITERATURE REVIEW. PREECLAMATION DIAGNOSIS AND NEW PERSPECTIVES IN TREATMENT

1.1.Preeclampsia to meet frequency, mothers and child mortality rates.Preeclampsia development etiology and pathogenic mechanisms

Despite the fact that preeclampsia is actively studied, its etiology is not as mysterious as before. Preeclampsia is a multifactorial disease. In its development, it carries out its activities on the basis of genetic predisposition external environmental factors play an important role [45,47.]

According to many researchers, endothelial dysfunction is the main factor in the development of preeclampsia.

It is known that endothelial dysfunction in pregnant women complicated by preeclampsia persists in the vessels of the macrocirculation for up to 3 years after delivery.

The mechanism of the development of endothelial dysfunction has not been studied in detail, but it has been shown that the placental factor plays a key role in its development. Trophoblast of cells mother belly with true - true

connection, as well as its transformation into the form of endothelial cells, is considered an important feature of human placentation. Endothelial transformation of initially non-endothelial cells is genetically programmed and required for successful trophoblast engraftment into the uterine vasculature.

Trophoblast formation leads to remodeling of the spiral arteries. This continues until the 22nd week of gestation. The most extensive changes in the spiral arteries are observed along the central part of the placenta. As a result of the introduction of trophoblast into the decidual capsule and the anterior myometrium, the muscle layer of these vessels is lost. The endothelium is completely replaced by cytotrophoblast.[71,78.]

Altered veins and zakonstrictors to the effect loses its permeability: The diameter of the vessels expands approximately 10 times, which ensures a 3-4 times increase in blood circulation between the hairs.

Impaired spiral artery remodeling can lead to fetal death, preeclampsia, and intrauterine growth restriction.

Severe preeclampsia is characterized by impaired placental blood supply and oxygen delivery as a result of endothelial dysfunction. The release of mediators from the compromised placental blood supply into the maternal bloodstream plays a key role in the development of endothelial dysfunction. A correlation between impaired endothelial function and elevated levels of FMS-like tyrosine kinase 1 (sFlt 1) has been identified. Normal angiogenesis is initially controlled by VEGF and its receptors, whose expression gradually decreases during pregnancy. In contrast, PLGF expression increases, which increases the length of existing capillaries. In the placenta PLGF from outside sFlt 1 work

sFlt 1 levels are significantly elevated in preeclampsia as a result of additional synthesis in circulating mononuclear cells.

It is known that the introduction of sFlt 1 into rodents causes signs of preeclampsia, with clinical manifestations of edema, proteinuria, and hypertension. Currently, this model is widely used in the study of hypertensive disease. This Thus, excessive sFlt 1 expression plays an important role in the development of preeclampsia and reduces the binding of VEGF to its receptor, which in turn reduces the phosphorylation of endothelial NO synthase.

Selective depletion of soluble FMS-like tyrosine kinase by extracorporeal adsorption techniques has been shown to reduce proteinuria, normalize blood pressure, and prolong pregnancy in women with preeclampsia. This observation supports the theory that this form of tyrosine kinase plays a key role in the development of preeclampsia [73,75].

Another important trigger that plays a key role in the development of preeclampsia is relaxin. Relaxin is a peptide hormone produced by the corpus luteum and circulating in the blood of pregnant women.

Administration of relaxin to nonpregnant rats has been shown to induce vasodilator effects similar to those seen during pregnancy. In addition, the loss of relaxin from the blood during pregnancy prevents systemic co-adrenal vasodilatation in the mother's body. This increases the total peripheral resistance.

According to recent data, relaxin The vasodilating effect is due to its main receptor, insulin-like relaxin peptide 1 (ILP1). His existence more smooth muscles

Jeyabalan appears in the veins The same author demonstrated a correlation between low blood concentrations of relaxin during the first trimester of pregnancy and an increased risk of developing preeclampsia.

In the initial period of pregnancy The presence of low levels of relaxin leads to impaired trophoblast decidualization and invasion, thereby predisposing to the development of preeclampsia.

However, despite the significant increase in relaxin levels in late pregnancy, its effect on blood pressure, renal blood flow, and glomerular filtration rate has not been proven, either during physiological pregnancy or during pregnancy complicated by preeclampsia.

Current at the time renin- angiotensin- aldosterone The role of the AT system in the development of preeclampsia is being actively studied. Angiotensin I (AT I) receptors are localized in the villous and extravillous trophoblast and bind to angiotensin II. In pregnancy not complicated by preeclampsia, angiotensin, renin, and aldosterone levels are elevated. However, in patients complicated by preeclampsia, a decrease in angiotensin II levels has been noted, despite the significantly increased sensitivity of the vessels of patients with AT to angiotensin.

Patients with preeclampsia have been shown to have significantly higher expression of AT I receptors than healthy pregnant women. This leads to activation of the renin-angiotensin system. In addition, AT I is associated with around walker presence of autoantibodies Further activation of AT I receptors can also lead to the development of preeclampsia.

The role of genetic factors in the development of preeclampsia is shown separately. The risk of preeclampsia in close relatives increases 2-4 times.

There is much evidence indicating the importance of the maternal immune response (resistance) in the pathogenesis of preeclampsia [79,63].

The reasons why primiparous women are more prone to developing preeclampsia are still a hot topic. It is assumed that differences in the immunity of sexual partners, which lead to activation of maternal immunity during pregnancy, play an important role. Immune inflammation caused by cytokines can lead to endothelial damage. This, in turn, is considered a major pathogenic mechanism for the development of preeclampsia. Immune mechanisms have been shown to be more pronounced in the first pregnancy and less pronounced in subsequent pregnancies. The degree of influence of placental tissue on the mother's body depends on the gestational age . In the first half of pregnancy, the first contact between maternal immune cells and invasive trophoblasts, which express HLA antigens, occurs. In the second half of pregnancy, the syncytiotrophoblast, which is considered HLA-negative, comes into contact with maternal blood. Thus, in women who are homozygous for HLA-B, antibodies are formed against HLA antigens. This leads to the development of immune resistance between the mother and the fetus .

The complement system, which consists of more than 30 proteins that protect the human body from the entry of foreign agents, can cause inflammation and tissue damage. Complement activation leads to hematotoxicity of inflamed cells and releases proteolytic enzymes that enhance phagocytosis by neutrophils and monocytes.

According to modern views, preeclampsia is a multifactorial disease. Its development is associated with impaired blood supply , oxygen deprivation,

Preeclampsia with complicated in women central hemodynamic status after childbirth.

Central nervous system of women with severe preeclampsia hemodynamics condition determine pregnancy, In the postpartum period, it is important to clarify some questions related to the pathogenesis, course of the disease, and determine the method of treatment. The use of conventional methods of hemodynamic examination, such as calculating the ICP and measuring arterial pressure, is not always sufficient to obtain an adequate picture of pathological changes in the circulatory system [55].
Hemodynamic processes in the general functional system of the mother-stereo-fetus are considered to be one of the primary factors that ensure the normal course of pregnancy and childbirth, as well as the growth and development of the fetus [72, 73, 76].
The results of a series of investigations have shown that OTsK increases rapidly from the 6th to the 8th week of pregnancy and reaches its maximum level by the 30th week of pregnancy. The increase in OTsK averages around 25% to 48% [75,82].
According to A.I. Strijakov, as a result of the central hemodynamic complex examination of the blood circulation in the brain, uterus-placenta-fetus, as well as for the analysis of the results of pregnancy, childbirth and postpartum periods, 4 pathogenic variants of systemic maternal hemodynamics were identified in the case of preeclampsia[63,59,65].
Hyperkinetic or eukinetic form of decreased central hemodynamics with OPSS. Circulatory failure in the renal, uterine, spiral arteries, and umbilical arteries. disruption not observed or clearly to character owner

This hemodynamic pattern is characterized by late onset of preeclampsia, with onset after 37 weeks and a mild course [59,71].

The normal form of OPSS is eukinetic or hypokinetic. Circulatory disorders in the renal, uterine, and spiral arteries are noted in 35% of cases. In this case, mild to moderate preeclampsia is observed [60,72].

Eukinetic or hypokinetic form with increased OPSS. Circulatory disorders in the arteries of the carotid system occur in 50% of cases, and in the renal, uterine and spiral arteries in 50% of cases. 84% in cases observed. In this form preeclampsia begins in the 26-30th week of pregnancy, its clinical manifestations are not obvious, and later severe forms develop [51,49].

Severe cerebral circulation disorders. This form is observed with the onset (1-3 days) and acceleration of the development of clinically apparent preeclampsia, and in 100% of cases ends with the development of severe preeclampsia and eclampsia [31,35,37].

V.V. Abramchenko believes that the form of hemodynamics depends on which part of the autonomic nervous system has the strongest influence. He says that when the sympathetic part of the autonomic nervous system is affected, the activity of the cardiovascular system is hyperdynamic (hyperkinetic), and when the parasympathetic part is affected, it is hypodynamic (hypokinetic) [36,39].

E.I. Anisimova and her co-authors also identified a transition from both hyperkinetic and eukinetic forms of blood circulation to hypokinetic forms in 62.1% of cases during the period of rapid exacerbation of preeclampsia. In severe preeclampsia, the authors observed only hypokinetic and eukinetic forms of hemodynamics, while the rate of hemodynamic recurrence was rapidly decreasing. [48,57].

According to N.M. Mazurskaya and her co-authors, hemodynamic parameters in the postpartum period are similar to those after the birth of the child. later belly space inside pressure fall,

Blood concentration in abdominal cavity organs also changes based on certain laws that occur on the basis of lost blood volume and hormonal re-formation [59,62,64].
Currently, hypertension in pregnant women, accompanied by seizures and coma, is being treated. is evaluated as eclampsia, and the approach to the idea about the mechanism of development of eclampsia has changed a little [44, 45].
According to the data obtained as a result of investigations, eclampsia can be a manifestation of the last stage of severe preeclampsia, and at the same time, it is noted that an attack of eclampsia can develop without any dangerous symptoms, regardless of the number of weeks of pregnancy [33, 24].
Currently, there are no known ways to predict the onset of eclampsia. It is possible that the onset of the attack depends on individual changes in the brain of each patient. Therefore, questions about the onset of eclampsia remain unanswered, and it is natural for scientists to study the state of the brain in order to predict the onset of an attack [69,72].
Preeclampsia with complicated in women the passage of the postpartum period.

Even the physiologically late postpartum period is rich in immune and hormonal recovery and hemodynamic fluctuations. [63, 68, 69]. During childbirth, sharp hemodynamic fluctuations occur. With each contraction of the uterus, the volume of blood coming to the heart increases by 300-500 ml, that is, "high pressure" (pregnancy volume) is formed. The hemodynamic parameters of the postpartum period are based on the decrease in intra-abdominal pressure after the birth of the child, the accumulation of blood in the abdominal organs, as well as the lost blood volume and hormonal remodeling. changes based on certain laws. [55,57]. Healthy women's blood rotation in the system clearly changes

It is also observed in the early postpartum period [8, 13, 14]. Cardiac output increases by 20-30%. This is explained by the “autotransfusion” of blood after uterine relaxation and contraction and increased compression of the inferior genital vein. Later, in the postpartum period, hemodynamic changes gradually disappear. On the 1st day of the postpartum period, cardiac output is similar to that at the end of pregnancy. On the 2nd-3rd day, it increases slightly and returns to normal only by the end of the 2nd week of the postpartum period. [40, 64].

Physiological hypercoagulation in women during labor is also noteworthy. Hypercoagulation reaches high levels before delivery. This indicates that the hemostatic system is ready to stop bleeding during the separation of the placenta from the uterus in the third stage of labor. Rapid blood clotting persists for 7-10 days after delivery, and blood clotting does not return to normal with time. The cardiovascular system, which has been subjected to high stress during pregnancy and especially during labor, must adapt to the changed conditions in the postpartum period by activating compensatory mechanisms. Therefore, assessment of the functional state of the circulatory system is of great importance in the postpartum period, especially in pregnant women with extragenital pathologies and complicated by preeclampsia [72, 67].

The postpartum period of women with preeclampsia is accompanied by clinical manifestations of organ and system damage. Cerebral dysfunction as a result of preeclampsia is especially dangerous [12,47]. It should be noted that the complications of preeclampsia 96.8% of maternal deaths occur in women who die after childbirth. In developing countries, this figure is 12.9%, and in the United States, it is 27.9%. % what, In Uzbekistan and 15-18 % what organization comes [9, 10, 11,
45].

According to a number of authors [33, 52] preeclampsia with complicated a lot in women one row

In some cases, the risk persists after delivery: 70% of women experience recurrence (relapse) of preeclampsia; 80% a few from the moon followed by changes in the central nervous system; hypertension in 20%, renal pathology in 15%, and visual impairment in 25%. These data indicate that these women are particularly in need of monitoring and rehabilitation in the postpartum period. [23,33].

In women with varying degrees of preeclampsia, edema has been observed to resolve within 2-5 days. In women with eclampsia, tissue edema persists for 6-8 days. With similar forms of preeclampsia complicated childbirth moderate in women hypertension and proteinuria persists for several weeks. Many women with severe preeclampsia have severe proteinuria, reaching 5.5-6.6 g/l, during labor and the first day of the postpartum period, 2- 4- by this day indicator 2.2-3.5 g/l falls to and at a much later stage, it rises and corresponds to isohyposthenuria.[18,52].

So during pregnancy relatively from birth next during proteinuria level quite a bit more Functional and morphological changes in the kidneys can be considered among the most common complications of preeclampsia . Circulatory hypoxia disrupts detoxification, protein synthesis, glycogen synthesis, and other of activities to decrease take comes. Hepatocyte degeneration, erythrocyte hemolysis and evidence of a decrease in albumin concentration giving Increased LDH and ALT and AST concentrations have been reported [65,71]. Severe preeclampsia and eclampsia Hepostpartum period, women who have experienced this experience experience significant dysfunctions in the functioning of vital organs and systems . In many cases, the coma is aggravated by the use of this drug . many reception to be done with deepening possible
[12,24].

Conscious patients complain of headaches, visual disturbances . Hypertonic dehydration

signs, hyperreflexia and increased susceptibility to satiation are observed. Acute respiratory failure (ARF) often develops in the postpartum period. As a result, patients are placed on prolonged artificial pulmonary ventilation (APV). In the absence of artificial pulmonary ventilation, tachypnea is observed. Tachycardia persists (heart rate 140-160 beats per minute). High arterial pressure is maintained in a certain dynamics. On the 2-3rd day after delivery, the arterial blood pressure of most patients decreases slightly (systolic arterial pressure of 150 mm Hg was noted in only 18-30% of patients, diastolic arterial pressure of 100 mm Hg and above was noted in 20-28% of patients). From the 4th day of the postpartum period, systolic arterial blood pressure is again expected (150 mm Hg in more than 40-60% of patients), when a tendency to decrease in diastolic arterial blood pressure is felt [20, 21].

According to the authors [61, 65, 67], arterial blood pressure increases as a result of the cessation of blood circulation in the uteroplacental system and the increase in peripheral resistance caused by blood autotransfusion in the uterus.

Thus, in patients who have experienced preeclampsia and eclampsia in the postpartum period, pathological symptoms persist for a long time. Some of them become more pronounced. This may be associated with the stresses of childbirth.

Mother's hemodynamics breakdowns correlation with adverse pregnancy outcomes

The perinatal period in PE is characterized by frequent recurrences of fetoplacental insufficiency, fetal arrest, premature termination of pregnancy, and premature birth (Najmutdinova D.K., 2003)[80]. In this pathology, every fourth child lags behind in physical and neuropsychological development.

At the modern stage of studying PE, the main focus is gestation early during the times woman in the body to the clinic

is to identify systemic changes. A comprehensive examination is important in determining the consequences of pregnancy in PE role plays. The comprehensive examination includes the use of UTT doppler methods, which allow a new assessment of the quality of blood circulation in the placenta, fetus and mother [3, 11, 57, 168, 171, 172].

The identification of central hemodynamic parameters in the mother, including cardiac geometry, is an urgent problem in obstetrics. These parameters are not only a risk factor for the development of PE, but also a predictor of adverse perinatal outcomes [152, 154, 163, 166,].

According to a number of authors, Hauth JC, et al. 2000; Sibai BM, 2003 [209, 293] Mild gestational hypertension or mild preeclampsia developing during labor has perinatal consequences similar to those in women whose pregnancies are not hypertensive.

Most authors believe that significant proteinuria and severe hypertension are predisposing factors for the high incidence of adverse perinatal outcomes [142,145,148,150,154].

Unpleasant consequences for the mother and the fetus occur not only in patients without proteinuria, but also in patients with severe gestational hypertension.

According to [170], these patients should be carefully examined in the prenatal period.

[166] the concentric geometry of ChQ not only a risk factor of gestational hypertension, but also a complication considered as a predictor of pregnancy exit necessary They show. This with one during eccentric hypertrophy and unpleasant pregnancy and childbirth consequences between correlation absence The data on this are of interest , and the authors attempt to explain this with various hemodynamic descriptions. they do. Current in time preeclampsia development danger forming a group , diagnosing the disease in the pre -clinical period and its heavy forms to meet level

reduction issues the most current is considered.

Thus, the analysis of data from the literature shows that the use of Doppler methods in clinical practice, due to the high level of information and the ability to quickly obtain results in the II-III trimesters of pregnancy, allows for the timely diagnosis of pregnancy complications, corrective treatment, and prevention of adverse consequences of pregnancy and childbirth.

In preeclampsia central of hemodynamics to oneself characteristics

Controversies in the etiology and pathogenesis of PE, the non-uniformity and contradictions of the risk factors for its development, the development of this complication in the early stages of pregnancy, the use of an anamnesis approach to distinguish risk groups, and the need for a deep analysis of this problem.
Body to take it is necessary, alone and added PE pregnant Women differ in the discreteness and heterogeneity of data on central and regional hemodynamics, metabolic markers of PE, structural and functional characteristics of the heart, especially diastolic myocardial function [134,135,136,148].
it is extremely important to monitor the mother's cardiac function in order to detect early signs of heart failure and prevent further development of the pathological process [34,59,64,74,161,172,].
A number of foreign studies have reported on the ability to predict adverse perinatal outcomes associated with preeclampsia. The level of uric acid, microalbuminuria, the nature of the diastolic function of the left ventricle, the type of its geometry, and central and regional hemodynamic parameters may be predictive factors, but the information on this is contradictory and does not allow for a definite conclusion[134].

The lack of unified views among obstetricians and cardiologists regarding the classification and terminology of hypertensive conditions during pregnancy makes it somewhat difficult to use the diagnostic capabilities of modern medicine (report of the working group of the All-Russian Scientific Society of Cardiologists (KUIJ) on high arterial pressure during pregnancy, [39,132]

There is a need to study markers (metabolic and hemodynamic) of various forms of PE. These markers will not only allow early diagnosis of this complication of pregnancy, but also prevent its milder clinical manifestations, milder forms, and the development of severe preeclampsia [116].

During pregnancy, significant changes occur in hemodynamics and cardiac function due to the increased load on the cardiovascular system, but these are physiologically reversible changes [239].

The results of a series of examinations show a progressive increase in the circulating blood volume (AQH) at 6-8 months of pregnancy. begins at week 30 and reaches maximum values by week 30. The increase in AQH varies from 25 to 48% on average [90].

According to most researchers, the maximum peak of physiological hypervolemia at 26-32 weeks of pregnancy , a gradual decrease in the load on ChQ, and in the last months, before delivery, pregnant women not to women relatively indicators 10% increases. [116].

Increased load to meet the needs of the fetus They are associated with increased metabolic rate, increased circulating blood volume, the appearance of an additional circulatory system, and the constant increase in the pregnant woman's weight [146].

The difficulties in assessing the nature of true hemodynamic disturbances in complicated pregnancy are explained by conflicting views on the delimitation of compensatory changes in its physiological course [158,167,171,172].

Many researchers have identified changes in volemia parameters in pregnant women before the development of clinical signs of PE, including hypertension. The authors suggest that due to the lack of increased circulating plasma volume, the normal course of pregnancy is characterized by revolving blood increase in size noticeable who determined that it will be left behind [5,21,65,67,137].

It is believed that ADH deficiency causes tissue hypoperfusion, which subsequently leads to the development of hypertension, hemodynamic and metabolic changes [10,28,94,98].

According to a number of studies [150], almost all doctors found a 30-40% decrease in AQH compared to uncomplicated pregnancy indicators in eclampsia.

In severe PE, changes in the nature of hemodynamic disturbances are determined by the severity of clinical manifestations and are accompanied by a decrease in left ventricular function and cardiac index [14,26,61,76].

During pregnancy, there is reversible physiologic left ventricular hypertrophy associated with volume overload, a short-term decline in systolic function, and significant changes in diastolic function [79, 86, 132, 161].

An increase in the number and weight of the functioning structures of the myocardium can only compensate for the increasing demands on the heart for a certain period of time, but if the weight of the myocardium exceeds the capabilities of other systems supporting the heart's function, then the adaptation mechanism becomes a factor leading to the development of the disease [83,91,131,133,154,164,167,168].

According to modern concepts, any "aggression" against the myocardium to in response, heart muscle structure - functional

The condition responds with changes in pump function, which can be defined as myocardial remodeling.

There are opinions that pathological changes associated with any decrease in the functional activity of myocardial cells occur in the myocardium and left ventricle as a whole, at the level of all cells and interstitial tissue [20,37,41,60,83,122,171].

It is emphasized that due to the absence of stable structural and functional changes in the myocardium, cardiac gestational changes resemble those observed in professional athletes associated with regular aerobic exercise.

Based on the above evidence, there remains conflicting understanding of what constitutes a compensatory-adaptive response to high hemodynamic load and what constitutes changes associated with hypertension that occur before or during pregnancy.

According to their data, the geometric structure of the left ventricle remains unchanged in almost 80% of pregnant women, while myocardial remodeling with the development of eccentric or concentric hypertrophy is observed in only 20% of cases.

The term "remodeling of the heart" has been used in literature for the last century Introduced by N. Sharp in the late 1970s to describe structural and geometric changes in the heart after acute myocardial infarction. Remodulation of the LV is the basis of long-term compensation.

This phenomenon leads to a redistribution of the load across the remaining viable myocardium, which is aimed at preserving the heart's ability to pump blood and ensuring peripheral blood circulation.

Numerous studies have shown that left ventricular myocardial hypertrophy (LVMH), a heart muscle change (remodulation) of its geometry is common and early compensator of mechanisms high volume to the tension

or in response to resistance It is the first systemic morphofunctional adaptive reaction of the cardiovascular system.

Disturbances in myocardial metabolism, humoral control, blood supply, oxygen demand, and cardiac hemodynamics that occur during the development of ventricular hypertrophy not only reduce the effectiveness of compensatory reactions, but also become a risk factor for cardiac function.

Remodeling is the process of changing an existing structure, rebuilding it, or adding something to it.

According to some authors, the occurrence of concentric formation of the geometry of the left ventricle is a consequence of the eccentric model of hypertrophy. There is also evidence that eccentric hypertrophy over time leads to early deterioration of diastolic function of the heart, and then to its systolic dysfunction [14,15,19,20,83,169,164,168,166].

Remodulation of the heart is under the influence of a pathological factor to the surface coming and its physiological, anatomical The main geometric types of LV remodeling are associated with the conditions in which they are formed. Stress (aortic valve stenosis, arterial hypertension) leads to an increase in the number of sarcomeres and cardiomyocytes, ventricular thickness, and the formation of a concentric type of LV geometry.

Volume overload (valve regurgitation) leads to an increase in cardiomyocyte length, a decrease in wall thickness, an increase in volume, and the formation of an eccentric type of LV geometry.

The morphological substrate of cardiac remodeling is the processes occurring at all levels of the heart structure. This is the activation of certain parts of the genome It is the clinical manifestation of changes in the size, shape, and functional capabilities of the heart, resulting from molecular, cellular, and interstitial changes in response to the effects of a pathological factor.

Hemodynamic conditions, neurohormonal activation and currently active in the process of cardiac remodeling other studied factors influence [30,37,41,131,149,152,156,161]. Eccentric hypertrophy of wall thickness dilation of chambers with proportional changes with is described. The Central Asian Republic back wall Eccentric hypertrophy of the left ventricle, characterized by a decrease in the ratio of its thickness to its end-diastolic size, is a consequence of the increased circulating blood volume in uncomplicated pregnancy. adaptation reaction as like looking thoughts have been around for the past three decades.

According to their data, eccentric hypertrophy is diagnosed when the left ventricular myocardial mass index is greater than 110 g/m ^{2}.[55] According to their data, gestational changes in cardiac geometry are accompanied by an increase in the ratio between the anterior-posterior dimension, radius, and wall thickness of the left ventricle (from 2.7±0.5 to 3.5±0.6 cm).

Some studies have shown that in PE and gestational hypertension, despite the short-term gestational hemodynamic remodeling, the structure and function of ChQ are altered [153, 176, 132, 133, 145, 158, 111, 112].

Concentric LV hypertrophy is accompanied by changes such as hemodynamic strain on the left ventricle due to pressure, interventricular septum, and LV free wall thickening in parallel with slight dilation of the cardiac chambers [108,109,111,112,131,114,128]. According to recent studies, the left ventricle hypertrophy hypertensive heart development

is not the only option. In hypertension, the anatomical location of the left ventricle Changes do not always occur with an increase in myocardial mass. In most cases, changes in left ventricular geometry, in particular a decrease in the size of its chambers, occur with normal myocardial mass [161,118,103,104,106,120,146,152].

In the AG left abdomen remodeling types of the most The most common classification is that of A. Ganau in 1992, which is based on the determination of the left ventricular myocardial mass index (LVMI) and the relative thickness (RT) of the wall of this ventricle [132,148,149,157,104,105].

Depending on the level of ChQMVI and DNQ, four types of geometric adjustment of the left ventricle in relation to hypertension are distinguished:

Concentric hypertrophy of the left ventricle (ChQMMI and DNQ≥0.45);

Eccentric hypertrophy (increased ChQMVI in normal indicators of DNQ<0.45);

Concentric remodulation (increase of DNQ≥0.45 in the normative indicators of ChQMMI);

Left of the abdomen normative geometry (ChKMMI) within the norm, DNQ<0.45).

The risk of cardiovascular complications in hypertension depends on the type of left ventricular remodeling. The concentric type of LVH is considered the most severe in terms of outcome. Most authors attribute this to an increase in left ventricular mass in concentric left ventricular hypertrophy, which is associated with an increase in left ventricular myocardial mass. Typically, concentric LV hypertrophy is associated with high blood pressure, while eccentric LV hypertrophy is associated with obesity and increased circulating blood volume [149,156,157,166,168].

In concentric hypertrophy of the left ventricle, the increase in blood pressure is mainly due to an increase in total peripheral vascular resistance (TPVR) with a slightly increased or normal cardiac output .

Concentric hypertrophy of the left ventricle at the beginning of the left ventricle to the wall increase going stress reduction

It develops as an adaptation process for the purpose of increasing the afterload. The increase in afterload leads to an increase in cardiomyocytes and sarcomeres, and an increase in the wall and mass of the left ventricular myocardium.

Hypertension and eccentric hypertrophy of the left ventricle in pregnant women Minimum of UPTQ increase or in moderation to be The heart's pumping function increases with. The increase in preload increases the diastolic tension of the LV wall, the sarcomere rows of cardiomyocytes are elongated, and the LV the cavity expands and its shape changes.

In patients with concentric remodeling of the coronary artery, relatively mild hypertension is observed with high systolic blood pressure and decreased cardiac output. In the normocardial artery geometry type of hypertension, pregnant women are characterized by low BP values, and slightly increased diastolic blood pressure and/or cardiac output [32,35,76,135,136,137,104,106].

KYLain et al., in their study, compared left ventricular structure and function in pregnant women with hypertension and demonstrated a significant decrease in left ventricular diastolic function, especially in patients with concentric and eccentric left ventricular hypertrophy .

H. M. Krumholz and the like to the information According to the study, the highest myocardial mass was found in patients with concentric left ventricular hypertrophy. A number of other researchers note that the highest myocardial mass is observed in patients with eccentric hypertrophy.

Eccentric of hypertrophy formation trend Structural and geometric abnormalities of the left ventricle were observed, as well as severe disorders of its diastolic function, with false-normative and restrictive types of diastolic dysfunction being quickly identified [161,154,104,130,152,159].

A number of authors have suggested that heart failure in PE may not be a structural or metabolic pathology of the heart, but rather a consequence of simple mechanical overload of its contractile apparatus [160, 161, 112, 104].

As it can be seen from the given data, there is a lot of discussion and There are some contradictions, the main of which are the possibility of limiting compensatory-adaptive responses to increased hemodynamic load and LV myocardial mass. Along with the opinion that the traditional LV criteria are not sufficiently important in identifying high-risk patients, there is an alternative proposal to assess the proportionality of LV myocardial mass [166,170].

The advantage of this is the emergence of the concept of "disproportionately high ChQMM" (non-compensatory), this concept was introduced in 1998. was introduced by Italian researchers and is mostly used in cardiology practice [107,109,112,114]

According to numerous cardiological studies, increased systolic blood pressure is the most significant predictor of cardiovascular complications and death, compared to BP and other risk factors (except age).

However, conflicting opinions are expressed in the literature regarding analogous changes in pregnancy [131,131,139,144,162].

At the same time, disproportionately high values of the non-ECG-related LVEF are predictive of pregnancy outcomes in women at high risk of left ventricular geometry abnormalities and diastolic dysfunction [154,164,166].

According to the data, in an uncomplicated pregnancy, the myocardial mass index of ChQ is higher than 110 g/m ^{2},

According to their data, these parameters vary between 66±6 and 96±9 g/m ^{2}.

In their work, an increase in the size of the left ventricle at 12, 21 and 33 weeks of pregnancy (33.8±1.9 mm, 38.1±1.8 cm, 39.3±2.1 mm; R<0.001) was shown. Left ventricular mass increased (132±18 g, 162±16 g, 174±27 g, R<0.001).

It is explained by a slightly lower increase of ChQMM, which corresponds to the change of the body weight index during pregnancy and indicates the occurrence of hypertrophy. It is noted that during pregnancy ChQMM increases by 15-20%.

As a result of ongoing studies on the assessment of left ventricular function during physiological pregnancy, it was found that LVEF increased by 52%, end-diastolic size and end-systolic size by 12 and 20%, respectively, and LVEF during diastole and systole by 22 and 13%, respectively.

At 24 weeks, the systolic and diastolic volumes of the ventricular system reach their maximum, and the systolic pressure decreases. After delivery, all parameters gradually approach the initial values, but before pregnancy and 1 year after delivery, these parameters remain different in both primiparous and multiparous women.

According to the authors, during repeated pregnancies cardiovascular adaptation later cardiovascular In patients with hypertension, the increase in VSD, on the contrary, is accompanied by a strong morphofunctional restructuring.

According to the information from other sources, in the case of hypertension caused by pregnancy and in the presence of AG before pregnancy, the possibility of recovery of the CQMM to the initial numbers raises doubts, and the presence of the concentric geometry of the CQ is the basis for conducting a serious cardiological examination in the postpartum period.

According to the authors, there is a high risk of developing preeclampsia in the presence of ChQ hypertrophy. Also, left abdomen of remodulation This type is accompanied by chronic brain damage before clinical onset (without symptoms) [164, 158, 163, 118, 106, 120].

Other authors have reported that left ventricular dysfunction in women with hypertension concentric geometry pregnancy on time mother

and/or has been shown to be a predictor of a high risk of developing fetal complications. Enlargement of the anterior-posterior dimensions of the left ventricle indicated a high cardiovascular risk. Left ventricular hypertrophy during antihypertensive therapy It has been shown that a reduction in signs of ventricular geometry abnormalities is associated with a significant reduction in the risk of cardiovascular complications and death.
Due to the lack of data and the conflicting nature of the literature, questions remain as to what the actual changes in indicators are in different variants of preeclampsia and whether there is a possibility of recovery of the eclampsia after delivery. The resolution of these questions is of great importance. Early diagnosis, prevention, and targeted treatment of complications that develop from the disease are extremely important.

From birth next during again recovery and treatment methods.

Recently, the recovery of women who have experienced severe preeclampsia has been studied in detail. The problems of recovery of women complicated by preeclampsia include medical, psychological, social and economic aspects. According to modern views, recovery measures should be initiated as early as possible and have a preventive nature. This requires the need for staged recovery measures [33,57].
Boskich measures are carried out in the hospital after delivery and continue for up to 3 weeks. This The function of the stage is preeclampsia and elimination of residual complications of eclampsia. These are: restoring the functional state of the central nervous system, the ICU, protein, and water-electrolyte balance to normal levels. The most important thing at this stage is the selection of the optimal method of contraception .

Stage measures are carried out throughout the year in polyclinics and specialized medical institutions. If there is a history of preeclampsia or eclampsia, it is necessary to recover after childbirth and undergo health measures before the next pregnancy. The interval between births should not be less than 3-5 years.

In women with various forms of preeclampsia, moderate hypertension and proteinuria persist for a longer period, for several weeks. Renal dysfunction occurs in patients with chronic kidney disease, especially in pyelonephritis. Given the heterogeneity of clinical, functional, biochemical and neurological changes in severe preeclampsia, it is necessary to abandon the timely treatment of such patients. Women with severe preeclampsia are strongly recommended to undergo general treatment in a hospital setting immediately after delivery, for at least two weeks. Treatment should be carried out taking into account the clinical and physiological characteristics of the course of preeclampsia .

In order to normalize neurodynamic processes, it is recommended to administer neuroleptoanalgesia (promedol, droperidol), magnesium sulfate, and antispasmodic ganglioblocking drugs [40, 53, 56, 59, 60]. Correction of metabolic acidosis

PE therapy should be carried out under the control of : CVD (7-10 cm H2O), diuresis (not less than 35 ml/h), hemoglobin (not less than 70 g/l, hematocrit (not less than 27 and not more than 35%), platelets (not less than 100 thousand in 10 g/l), total protein (not less than 60 g/l), blood osmolarity (273 □ □1.7 mosmol (kg H_2O). For competent implementation of complex therapy, it is necessary to target hemodynamic indicators.

Vitamin and trace element complex, if necessary - iron preparations are recommended from medicines. Hypotensive drugs only DAB>100 mm sim.ust. is used in cases where

In order to quickly eliminate the increasing indicators of BP, Ca^{2+} channel inhibitors, including nifedipine appointment possible. Nifedipine The half-life is short, with an effective reduction in BP within 5 to 10 minutes after administration, and the duration of the hypotensive effect is up to 6 hours. It should be noted that one of the most common side effects of nifedipine is headache, which should not be confused with the headache that occurs in severe PE.[41,47]

The transition to the management algorithm for pregnant women with severe PE is carried out with the appearance of an increase in diastolic blood pressure >100 mm Hg (regardless of treatment) or the appearance of any of the following clinical symptoms (headache, visual impairment, pain in the epigastric region or under the right rib, signs of liver failure, oliguria (<25 ml/h); thrombocytopenia (<100 · 10 d/l); increased transaminase activity; appearance of signs of DVT syndrome), or even one of them.

Treatments that lead to the development of PE should be aimed at eliminating the main pathophysiological changes, namely:

Hypovolemia and he/she with related hemodynamics changes, including peripheral arteriolospasm;

kidney, liver of functions disruption;

diffuse insufficiency of the placenta and disorders in the state of the fetus;

of microcirculation and rheological properties of blood ;

such cases, treatment measures should include :

treatment order;

Hypotensive therapy;

Magnesium therapy, necessity at birth diazepam sending;

Blood hydrostatic and colloid-osmotic pressure, Infusion therapy aimed at correction of AQX;

of microcirculation, uterine-placental and renal hemodynamics.

Taking into account the type of hemodynamics, hypotensive therapy is optimal. In the hyperkinetic type of hemodynamics, which is characterized by a slight increase in the UPR and an increase in the cardiac output, the use of labetalol and nifedipine is appropriate.

In the hypokinetic type, with decreased cardiac output and increased UPR, it is recommended to take clonidine in combination with nifedipine against the background of recovery of ABP. In the eukinetic type of hemodynamics (a sharp increase in UPR against the background of normal cardiac output), the appointment of methyldopa and nifedipine is effective [61,64].

The second mainstay of treatment for severe PE is magnesium therapy. Based on the existing clinical protocol for the treatment of PE, magnesium therapy is recommended for DAB≥120 mm sim.ust. starts in cases where

The beginning of magnesium sulfate dose – 4 g dry substance (16 ml of 25% solution) is dissolved in physiological solution and injected slowly into a vein for 15 minutes. The maintenance dose of magnesium sulfate is 1 g of dry matter per hour (4 ml of 25% solution). The rate and volume of drug administration are determined by the hourly diuresis and serum magnesium concentration .

The dose of magnesium administered depends on the woman's weight and blood pressure. Magnesium is administered at a rate of 0.02 g/kg/h for women weighing up to 90 kg, and at a rate of 0.04 g/kg/h for women weighing more than 90 kg. The maximum daily dose of magnesium should not exceed 80-100 ml (20-25 g dry matter). [68,72]

The third direction of treatment of severe PE is adequate infusion therapy. To replenish the AH, it is optimal to use a 6 or 10% solution of hydroxyethyl starch (HES) with the addition of crystalloids in a 2:1 ratio. It is advisable to add fresh frozen donor plasma to infusion-transfusion therapy to eliminate hypoproteinemia (plasma protein levels <55 g/l), normalize the anticoagulant/procoagulant ratio, which is necessary during labor and postpartum It is a prophylaxis of bleeding during period[69,70].

Infusion therapy in progress all actions critic

clinical physiology of the condition, especially hemodynamics should be based on in-depth knowledge. Approaches to treating women with PE should be individualized, and treatment methods should be vital member and It is necessary to take into account cardiac, central and regional hemodynamic parameters, which are markers of system dysfunctions. [51,56,58]

PE, especially, his/her heavy forms treatment associated with premature birth.

Instructions for premature birth :

7-10 day during treatment fruit unobserved mild PE.

Severe forms of PE , ineffective intensive therapy carried out for 2-3 hours .

related to the severity of PE , the presence of VZRP , and fetal growth retardation on the background of treatment.

- Eclampsia and his/her complications.

In the treatment of severe forms of PE, especially at 28-32 weeks, intensive therapy is effective, and in order to prevent RDS in the future, a waiting strategy can be used, with the introduction of glucocorticoids and prolongation of pregnancy by 2 days to 2 weeks. 21st century: the opinion of leading experts in the world: "The most correct option is surgical delivery by cesarean section under endotracheal anesthesia, which provides reliable neurovegetative protection in patients with artificial ventilation of the lungs ." [69,67,68].

Resume

is known from the literature that pre-clinical diagnosis of this dangerous complication of pregnancy and early detection of its development are important in the early diagnosis of preeclampsia.

Among the numerous methods for early diagnosis of preeclampsia, the study of central and renal hemodynamic parameters, which are determined starting from the second trimester of pregnancy, is of great importance.

In PE blood rotation in the system to changes by researchers of interest to increase regardless, present in pathology

Many data on the state of the cardiovascular system are contradictory. The available data on the role of changes in diastolic heart function in the development of hemodynamic disorders in the mother's body are contradictory.
It is advisable to study in the future the correlation characteristics of central hemodynamics, cardiac geometry, and renal blood flow, as well as their hemodynamic and biochemical predictors of PE as diagnostic markers for this dangerous pathology. Currently, the possibility of identifying diagnostic markers with significant consequences is controversial, which demonstrates that the capabilities of modern medical technologies are not being fully utilized. In this regard, it is necessary to strengthen research in this area in order to diagnose mild forms of preeclampsia early and prevent its development into severe forms.

Preeclampsia has been and remains one of the most difficult problems of modern obstetrics. Preeclampsia (PE) and eclampsia are complications of pregnancy that manifest themselves during pregnancy or childbirth, leading to various degrees of complications or death. One of the most serious manifestations and complications of PE is arterial hypertension, from the heart strong organic changes and leads to acute brain dysfunction.
Arterial hypertension is one of the early manifestations of PE. In PE, the immediate consequence of arterial hypertension is left ventricular hypertrophy, as the heart works to overcome the high total vascular resistance that provides arterial hypertension.
Mild hypertrophy of the left ventricle is characteristic of normal pregnancy and is explained by an increase in LVEF starting from the second trimester of pregnancy. Such hypertrophy of the left ventricle can be considered functional, since it regresses in the postpartum period due to the normalization of LVEF.
That's it it should be noted that if left primary to ventricular hypertrophy attention directed, he/she chronic arterial hypertensive

Although well studied in patients, there are very few studies devoted to this problem in pregnant women in general and pregnant women with PE in particular. In our opinion, this is a very urgent problem, since changes in cardiohemodynamics, together with central and regional hemodynamic parameters , can predict the course of pregnancy, the course of treatment (hypotension, basis the effectiveness of magnesium). assessment and allows to solve the issue of choosing obstetrical tactics .

The second mainstay of treatment for severe PE is magnesium therapy. Based on the existing clinical protocol for the treatment of PE, magnesium therapy is recommended for DAB≥120 mm sim.ust. starts in cases where

The beginning of magnesium sulfate dose – 4 g dry substance (16 ml of 25% solution) is dissolved in physiological solution and injected slowly into a vein for 15 minutes. The maintenance dose of magnesium sulfate is 1 g of dry matter per hour (4 ml of 25% solution). The rate and volume of drug administration are determined by the hourly diuresis and serum magnesium concentration .

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The third direction of treatment of severe PE is adequate infusion therapy. To replenish the AH, it is optimal to use a 6 or 10% solution of hydroxyethyl starch (HES) with the addition of crystalloids in a 2:1 ratio. It is advisable to add fresh frozen donor plasma to infusion-transfusion therapy to eliminate hypoproteinemia (plasma protein levels <55 g/l), normalize the anticoagulant/procoagulant ratio, which is necessary during labor and postpartum It is a prophylaxis of bleeding during period[69,70].


Гипертензия
Белок в моче
Увеличение
веса
Отеки
Эклампсия (припадок)

II Study of research properties

A research program was developed in accordance with the set goals and objectives:

Clinical and statistical analysis;

Clinical research methods (complete blood count, urine analysis, Ht, platelets, HIV);

Daily dynamics of hemodynamic indicators of a woman in the postpartum period control.(AKB.Puls);

Biochemical examination methods (total protein, urea, creatinine, blood coagulation system);

Hemodynamic assessment of the condition of infants (Anthropometry, observation of reflexes);

Uterus involution UTT inspection;

Electroencephalography in the manner head in the brain blood learning to cycle ;

Of the sick clinical description

A comprehensive study of labor and its consequences for the mother and fetus (study of cerebral blood circulation using electroencephalography) was conducted in 95 pregnant women (main group) with preeclampsia hospitalized in the city maternity complex of Bukhara.

In the group, 40 women and babies were delivered vaginally with severe preeclampsia,

a) 20 person induction road;

b) Hemodynamics of 20 women who gave birth without induction ;

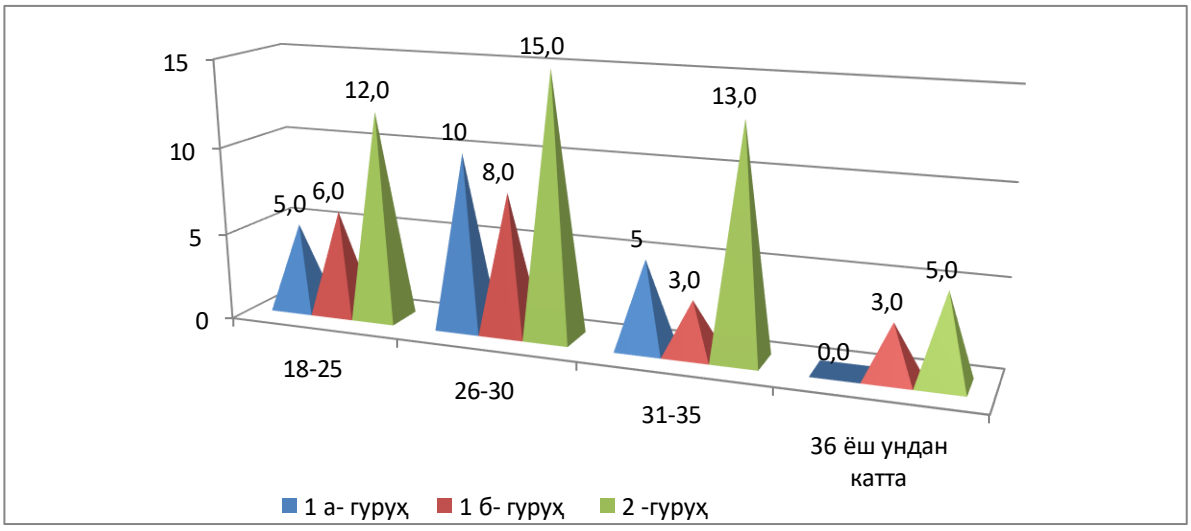
The hemodynamics of 45 women and infants who underwent surgical delivery in the postpartum period with severe preeclampsia will be studied in the group.

In all cases, preeclampsia was developed from the background of extragenital gynecological diseases.

All patients under observation underwent a complete clinical examination in the above mentioned treatment facilities. PE was diagnosed based on subjective feelings, anamnesis, clinical and additional examination methods.

The age of all women under observation was around 18-35 years (mean 22.4 □□1.2). The distribution of patients by age is presented in Figure 2.1 .

Figure 2.1



As can be seen from the figure, most of the women who gave birth were of childbearing age (18-35 years). The risk of preeclampsia in the groups being compared was The level is significantly higher (58.9%) in the group of women aged 18 to 35. Women of this reproductive age, as noted in the first section, are more prone to complications from somatic diseases of pregnancy, which is one of the important etiopathogenetic factors of preeclampsia.

It should also be noted that women under the age of 20 have a high percentage of preeclampsia. This is due to the inappropriate age of childbirth, that is, low adaptability to pregnancy.

Table 2.1 presents data on the employment status of the women who gave birth.

Table 2.1 Table 2.1 by work activity of women who have given birth **distribution**

Work activities wiring	Group 1a (n=20)		Group 1b (n=20)		Group 2 (n=45)		All (n=95)	
	n	M±m, %		M±m, %	n	M±m, %	n	M±m,%
Worker women	4	4.2±0.5		2.1±0.3	6	6.3±1.2	14	14.7±1.2
Students	2	10±0.3		5±1.5	9	24.4±2.4	12	12.6±2.5
Servants	3	15±1.2		30±2.2	12	26.6±1.2	21	22.1±3.1
House their wives	11	55±2.3		45±2.3	18	40±2.3	48	50.5±4.2

The table shows that preeclampsia is more common in non-working women (50.5%), due to late referral to medical institutions and lack of regular medical examinations. The incidence of preeclampsia in women of student age (24.4%) and female employees (26.6%) is due to the influence of socio-life factors.

Table 2.2 .

Verified in women pregnancies number

Parity	Group 1a (n=20)		Group 1b (n=20)		Group 2 (n=45)		All (n=95)	
	n	M±m, %	n	M±m, %	n	M±m, %	n	M±m, %

The first born from this; First pregnancy	15	75±11.2	13	65±12.2	32	71.1±8.2	60	63.1±8.6
Second pregnancy	11	55±6.1	13	65±12.2	18	40±4.1	42	44.2±4.2
	4	20±5.1	-		14	31.1±4.1	18	18.9±4.4
Reproducers	3	15±5.1	5	25±4.1	7	15.5±6.1	15	15.7±4.2
Many give birth	2	10±6.1	2	10±6.1	6	13.3±3.1	10	10.5±2.4

The data presented in Table 2.2 show that preeclampsia is more common in first-time mothers (55% in the first pregnancy, 20% in the second pregnancy) than in the first-time mothers. In repeat breeders and multiple breeders this figure is 15% and 10%. Everyone gave birth The following were revealed when women were studied for their somatic and past illnesses. The indicators of these illnesses are presented in Table 2.3.

Table 2.3

Somatic diseases structure

Disease names	Group 1a (n=20)		Group 1b (n=20)		Group 2 (n=45)		All (n=95)	
		M±m, %	n	M±m, %	n	M±m, %	n	M±m,%
Sharp respiratory diseases		60±8.4	8	40±2.4	20	44.4±6.2	40	42.1±12.2
Hepatitis		10±2.1	6	30±4.1	6	13.3±5.2	14	14.7±6.2
Tonsillectomy		15±1.1	2	10±2.1	8	17.7±2.2	13	13.6±5.3
Appendectomy		10±2.1	4	20±3.2	9	20±3.4	15	15.7±4.2
measles		5±0.5	-	-	3	6.6±2.2	4	4.2±3.1

Born women's from the anamnesis this exactly it happened, All three groups showed a high incidence of acute respiratory diseases (42.1%). Surgical interventions were tonsillectomy and appendectomy, 13.6% and 15.7%, respectively. During the examination and questioning of pregnant women admitted to the hospital, the following comorbidities were identified.

Table 2.4

Pregnancy during companion diseases

structure

Disease names	Group 1a (n=20)		Group 1b (n=20)		Group 2 (n=45)		All (n=95)	
		M±m,%		M±m,%	n	M±m,%	n	M±m,%
Anemia		75±8.2		40±4.1	32	71.1±8.2	55	57.8±8.2
Chronic kidney disease diseases		25±2.1		15±1.1	10	22.2±6.1	18	18.9±7.2
Thyroid gland diseases		75±3.2		30±4.2	35	77.7±12.2	56	58.9±11.2
Chronic cholecystitis		5±2.1		-	2	4.4±2.2	3	3.1±2.1
Chronic gastritis		5±2.1		-	3	6.6±3.2	4	4.2±3.1
Obesity		-		10±2.1	10	22.2±8.2	12	12.6±6.2
Anxiety disorders		5±2.1		5±2.1	15	33.3±10.1	17	17.8±5.2

As can be seen from table 2.4, anemia was observed in 15 women in the first group, and in 32 women in the second group, and this indicator was 71.1% against (75%) among the groups.

Thyroid diseases were equally common in both groups and averaged 58.9%.

Urinary tract diseases affect 25% of women in the first group. in the second group,

22.2% had anamnesis. Obesity Group 2 22.2%, first "b" of the group 10 % in women was determined.

The structure of gynecological diseases is presented in table 2.5 .

Table 2.5 Gynecological diseases in examined women

structure

Gynecological disease	Group 1a (n=20)		Group 1b (n=20)		Group 2 (n=45)		All (n=95)	
	n	M±m, %		M±m, %	n	M±m, %	n	M±m,%
Barrenness	-	-		15±3.2	6	13.3±6.2	9	9.4±5.2
Chronic adnexitis	2	10±2.3		5±2.1	7	15.5±3.2	10	10.5±4.1
Medical abortions: 1 2 and from it more	2 11	10±3.1 5±1.1 5±2.1		30±2.1 10±0.5 20±1.5	9 6 3	20±3.2 13.3±2.1 6.6±1.1	17 9 8	17.8±3.2 9.4±2.2 17.7±6.2
Miscarriage	7	35±8.2		10±2.2	3	6.6±1.1	10	22.2±4.2
From the womb except pregnancy	-	-		5±2.1	2	4.4±0.5	3	6.6±0.5
The fetus does not develop to stay	6	30±1.2		15±2.1	9	20±7.1	18	40±10.3
Ovarian cysts	2	10±2.2		25±3.2	2	4.4±1.2	9	9.4±2.2

	Uterus and uterus neck cancer prediseases	-	-		40±6.2	7	15.5±3.2	15	33.3±9.3

It should be noted that women in the first group had 2-3 times more inflammatory diseases of the genitals than women in the second group, which is a statistically significant indicator (10% versus 15.5%, respectively) ($P<0.05$). Non-malignant diseases of the uterus and cervix in the anamnesis of women in group 1- "b" more happened (40.0%), 2- in the group and present

the indicator is equal to 15.5%. As can be seen from the table, medical abortions - 17.8%, infertility - 9.4%, ectopic pregnancy - 6.6%, ovarian cysts - 9.4% did. Obstetric complications during pregnancy of the examined women are presented in Table 2.6 below.

Table 2.6 obstetric complications during pregnancy

No.	Complications during pregnancy	Group 1a (n=20)		Group 1b (n=20)		Group 2 (n=45)		All (n=95)	
		n	M±m,%	n	M±m,%	n	M±m,%	n	M±m,%
1.	Early toxicosis	12	60±3.2	15	75±4.1	26	57.7±6.0	53	55.7±4.8
2.	Miscarriage danger	5	25±2.1	8	40±3.2	12	26.6±4.7	25	26.3±4.2
3.	Low wateriness	1	5±0.5	3	15±2.0	6	13.3±4.4	10	10.5±1.8
4.	Many wateriness	-	-	4	20±3.0	2	4.4±1.2	6	6.3±1.0
5.	From time to time previous birth danger	8	40±3.2	7	35±1.2	4	8.8±2.1	19	20±5.5

It can be determined from the above table that the percentage of early toxicosis during pregnancy is high (55.7%), hypohydration - 10.5%, hyperhydration - 6.3%, risk of premature birth - 20%.

The outcome of childbirth for the women examined is presented in Table 2.7.

Table 2.7 Postpartum outcomes of women who have given birth

No.	Delay in childbirth	Group 1a (n=20)		Group 1b (n=20)		Group 2 (n=45)		All (n=95)	
		n	M±m, %	n	M±m, %	n	M±m, %	n	M±m, %
1.	Childbirth at term	18	90±8.8	19	95±8.2	36	80±8.2	73	76.8±8.1
2.	Before its time childbirth	2	10±6.1	1	5±2.3	9	20±4.1	12	12.6±4.1
3.	Cesarean section	-	-	-	-	45	100±1.0	45	47.3±2.1
4.	NJYVK	-	-	-	-	6	13.3±4.6	6	6.3±3.2
5.	Unsatisfactory labor	-	-	20	100±1.0	3	6.6±3.3	23	24.2±6.2
6.	Scar farming	-	-	-	-	2	4.4±2.2	2	2.1±3.1
7.	Traumatism	5	25±5.8	8	40±6.2	1	2.2±0.5	14	14.7±5.8
8.	Ahead of time amniotic fluid to leave	9	45±6.2	12	60±6.5	12	26.6±6.2	33	34.7±6.2
9.	BİQT	3	15±3.5	6	30±5.6	-	-	9	9.4±3.3
10	Atonic bleeding	2	10±2.8	5	25±6.6	2	4.4±2.0	9	9.4±3.3

.									
11.	Large fetus	-	-	2	10±4.5	8	17.7±6.6	10	10.5±5.5
12.	Obstetric clamps	-	-	-	-	-	-	-	-

Overall, 76.8% of women had a full-term birth, and 12.6% had a single-term birth. The deliveries were performed by natural birth and cesarean section. Of these, 6.3% normal located satellite from time to time before to move,

24.2% are due to unsatisfactory labor activity, 2.1% to scar insufficiency, 14.7% to obstetric trauma, 34.7% to premature rupture of membranes, 9.4% to manual uterine cleaning, and 9.4% to atonic bleeding.

A total of 95 live births occurred with 2 intranatal deaths. The average weight of live and stillborn babies was 3350±350.0 grams. One infant died in the early neonatal period.

Thus, the results of the study showed that the incidence of preeclampsia was highest in the age group of 18 to 30 years. Preeclampsia was more common in young pregnant women and housewives, which is due to the fact that they do not regularly attend medical examinations.

Laboratory inspection methods

All patients underwent a clinical and laboratory examination, including a complete blood and urine analysis, fibrinogen, Sukharev's CRP, blood protein determination, and 24-hour urine protein determination, at all follow-up periods. In addition to the above examinations, we determined the levels of creatinine, total protein, and urea in blood and urine in all pregnant women in both groups.

The parameters examined by the biochemical method were determined by the enzymatic-colorimetric method.

Instrumental inspection methods

Electroencephalography in the manner cerebral determination of blood circulation indicators.

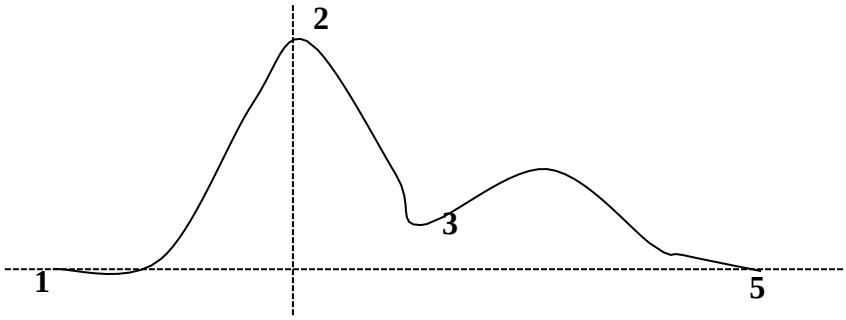
Cerebral blood circulation parameters were studied using electroencephalography. This method is technically convenient and is suitable for women. for We found it preferable to other testing methods because it was safe and allowed us to review blood circulation in the brain over a long period of time.

Polzer and Schuhfried introduced the study of blood circulation in the brain into science, but the cerebral circulatory system began to be studied using the rheograph method.

Junker at the suggestion therefore in the brain blood to rotate writing The rheogram method is rheoencephalography (EEG). The studies began to be conducted using the rheograph 4-RG-2 M, in which the woman was in a semi-sitting or lying position. EEG registration is made of a circular electrode made of aluminum soft metal with a diameter of 1-1.5 cm and a thickness of 3-4 mm. When recording EEG (in the vascularized zone of the carotid artery), one electrode is attached to the nasal septum, 1-1.5 cm inward from the midline, and the second electrode is placed in the fronto-mastoid area (FM). Before the start of the examination, small-caliber signals are recorded, the amplitude of which is 0.1-0.05 ohms.

First of all, we need to pay attention to the shape of the rheographic wave.

A rheographic wave is separated, the beginning, peak, and end of the wave are differentiated.



Rheographic wave wowing elements:

wave beginning 4) Dicrotic index

wave bottom 5) wave end

Incisura

Rheographic index (RI) is the ratio of wave amplitude to wave pulse. Normally, this

indicator is 1-1.5 ohms in a healthy woman.

The ascending part of a rheographic wave (alpha) is the time from when the wave appears and rises to its peak. It will be equal 0.1-0.01 seconds

The descending part of the rheographic wave (betta) is the period from the rise of the wave to its end.

The wave ascending part of, descending to the part -

a:(a+b) or a/T is an additional index showing the elastic state of the vascular wall.

Asymmetry coefficient (KA)

$$KA = \frac{Ab - Am}{Am} \cdot 100\%$$

Ab –rheogram amplitude, when big RI:

Am - the amplitude of the rheogram when small RI: Normally 10% (5 to 20%).

It should be remembered that every rheographic test applies the students of the school apply their norms in practice.

Rheographic indicators in our country Z.R. Ibadullaeva, M.M. Asadullaeva's indicators are used.

Taken of information statistician performance

Statistical processing of data was carried out in 2 stages :

statistician to analysis preparation;

personal statistician analysis.

Preparation for statistical analysis includes the study of the types of characters to be analyzed , the type of distribution of each character and the expression of the task.

In the second stage, an accurate statistical method was developed according to the three principles studied in the first stage:

analysis to be done to account recipient sign type;

analysis to be done of signs division description;

being studied of choices number and like (depending on or independent). Analysis of the distribution type of the sign Microsoft Excel

carried out using the program . The following indicators were the criteria for the normal distribution:

average value, of the sign fashion and median approximately equal;

approximately 68% of the value of the symbol is located in the M □□s interval , 95% - in the M □□2s interval, and 99% - in the M □□3s interval.

The normal distribution of a symbol is symmetric about its value .

Due to the fact that more than 80% of analyzed quantitative signs are normally distributed, statistical analysis is based on parametric statistics methods.

The data obtained as a result of the study were statistically processed using the Microsoft Office Excel-2012 software package on a Pentium-IV personal computer. The average value of the studied indicator arithmetic (M), average quadratic Deviation (□□), standard error of the mean (m), and relative measures (frequency, %) were calculated using variational parametric and nonparametric statistical methods . The statistical value of the obtained measures was determined by examining the normality of the distribution and the equality of the main variances (F - Fisher's test) according to the kurtosis criterion, and by calculating the probability of error (P) using the Student (t) test. A confidence level of P<0.05 was accepted as statistically significant changes. Qualitative measures were calculated using the χ^2 test (chi-square) and z-test (Glantz, 1998) according to the following formula :

$$z \square (p_1 \square p_2) \sqrt{\frac{n_1 \cdot n_2}{p(1-p)\cdot(n_1+n_2)}}$$

where $p_1=\mu_1/n_1$ and $p_2=\mu_2/n_2$ are the experimental frequencies to be compared, and $p=(\mu_1+\mu_2)/(n_1+n_2)$ is the average recurrence rate of the formation of signs for both groups.

ПРЕЭКЛАМПСИЯ

III CHAPTER. WITH PREECLAMPSIA COMPLICATED PREGNANT IN WOMEN CIRCULATORY SYSTEM AND HOMEOSTASIS INDICATORS

Control group pregnant in women postpartum circulatory system and some indicators of homeostasis

Preeclampsia is the leader of pregnancy pathology, leading to the development of multiple organ failure (MOF), which leads to a high incidence of maternal mortality, perinatal morbidity, and mortality It will pass.

The parameters of the peripheral circulatory system in the examined pregnant women are presented in the table below.

Table 3.1

Control group pregnant in women peripheral circulatory system parameters, (n=30)

Indicators	Average value	Differences border
SAB, mm sim.ust	110.1 □□0.55	101 – 113
DAB, mm wire size	70.3 □□0.34	63 – 70
YKS, min.	80.6 □□0.39	76 – 85
Middle AB, mmsim.set.	79.6 □□0.32	76 – 84

In the table cited from the data apparently as all indicators of peripheral hemodynamics (both their average value and differences) did not exceed the limits of normal physiological indicators.

We studied the homeostasis indicators in 30 women with physiological pregnancy.

Table 3.2 Clinical blood and urine tests in women in the control group

inspections indicators, n=30

Indicators	Standard	Average value
Blood		
Hemoglobin, g/l	112 – 130	100.3±2.31
Erythrocytes, 10^{12}/l	3.7 - 4.7	3.1±0.12
Http, %	31.2 – 39.4	36.3±0.26
General protein, g/l	60 – 85	80.0±0.35
Urine		
Daily diuresis, ml	500 – 2000	1276.1±56.7
Relative density (1.010- 1.025)		
Maximum	1,025	1.0240±0.0086
Minimum	1,010	1.0104±0.0086
Protein, g/l	Abs	abs
Leukocytes	5	2- 8

The average Hb content in the blood of pregnant women in this group was 101.3 □□2.37. g/l what organization did and he/she from anemia evidence

The number of erythrocytes is on average 3.1 □□0.13 · 10^{12}/l. The hematocrit index ranges from 31.2 to 39.4%, with an average of 36.3±0.27 organization did and from hydremia evidence gave. The blood protein concentration in the blood of pregnant women in this group was 81.0±0.35 g/l.

Blood urea and creatinine concentrations were on average 4,432±1,012 mmol/l and 69,836±6,188 μmol/l, respectively .

In this group of pregnant women, only the urea clearance coefficient decreased .

Table 3.3

Pregnancy in moderation passerby

women your blood biochemical indicators, n=50

Indicators	Standard	Average value
Magnesium, mmol/l	1- 2	1.05 ± 0.02
Calcium, mmol/l	2.0 – 2.4	2.45±0.02
Urea, mmol/l	2.8 – 7.1	4.4±0.04
Creatinine, μmol/L	39.8 –72.8	69.8±2.10

The average daily diuresis was 1276.1±56.8 ml, the relative density of urine was 1.0240±0.0086, the amount of protein in urine was not detected.

Thus, the conducted studies have shown that in the control group of women with initial hypochromic anemia, the changes in renal hemodynamics are mainly related to anemia, not pregnancy. Some changes were noted. However, the absence of changes in blood electrolytes, their clearance and excretion by the kidneys, and indicators of nitrogen forms in the blood in women in the control group indicates the absence of disorders in the osmoregulation and nitrogen-excreting functions of the kidneys.

In pregnant women complicated by severe preeclampsia (induction way and (without induction) postpartum

blood rotation system and homeostasis indicators

We studied the postpartum condition of women whose pregnancies were complicated by preeclampsia. The following parameters of the peripheral circulatory system and hemostasis were determined: gave.

Table 3.4 in control group and group 2 pregnant women

peripheral blood rotation of the system comparative indicators, n=150

indicators	Control group, n=30	2 group,n=40	P
SAB, mmsim.ust.	110.1 □□0.55	155.2±3.1	<0.001
DAB, mmsim.ust.	70.3 □□0.34	105.2±3.6	<0.001
YKS, min.	80.6 □□0.39	88.2 □□0.39	<0.001
Average AB, mmsim.set.	79.6 □□0.32	121.9±2.1	<0.001

Tracehoh: Group 2 in parentheses belongs to pregnant women indicators differences given

The presented data show that in pregnant women of group 2, changes occurred in the studied parameters of peripheral blood circulation, which were significantly different from the analogous parameters of the control group. For example, in the studied group, SAB was 48.1% lower than in the control group, DAB was 39% lower, Tachycardia was 7.6%, and mean BP was 42.3%. All parameters obtained in this group corresponded to the indicators of pregnant women complicated by preeclampsia.

Table 3.5 Blood and urine tests in women with severe preeclampsia

clinical inspection information, (n=70)

Indicators	Severe preeclampsia (n=40)	Control group (n=30)	P
Blood			
Hemoglobin, g/l	90.5±1.72	100.3±2.31	>0.05
Erythrocyte, 10^{12}/l	3.04±0.06	3.1±0.12	>0.05
Ht,%	32.0±0.18	36.3±0.26	>0.05
Total protein, g/l	65.3±2.14	80.0±0.35	<0.001
Urine			
Daily diuresis, ml	950.7±27.6	1276.1±56.7	<0.001
Relative density			
Maximum	1.0322±0.0055	1.0240±0.0084	>0.05
Minimum	1.0210±0.0044	1.0104±0.0084	>0.05
Protein, g/l	2.57±0.01	Abs	
Leukocytes	4- 10	2- 8	<0.001

Table 3.5 shows that the average Hb content in the blood of pregnant women in this group was 90.5±1.72g/l, and he/she from anemia evidence gives. Erythrocytes number average

$3.04\pm0.06 \cdot 10^{12}$/l. Hematocrit was 32.0±0.18 and indicated hydremia. The protein concentration in the blood of pregnant women in this group was 65.3±2.14 g/l, which is 14.5% lower than in women with physiological pregnancy.

Daily diuresis average 950.7±27.6 ml, the relative density of urine - 1.0322±0.0055, the amount of protein in urine was on average 2.57±0.01g/l, and proteinuria showed an increase of 38.9%.

In severe preeclampsia, a decrease in the filtration capacity of the kidneys is combined with a deterioration in their blood-concentrating function.

Table 3.6 below shows the nature of changes in blood electrolytes in pregnant women with severe PE (we present data from the control group for comparison).

Table 3.6 Biochemistry of blood in severe preeclampsia

indicators, (n=70)

Indicators	Severe preeclampsia (n=40)	Control group (n=30)	P
Magnesium, mmol/l	0.65±0.02	1.05 ± 0.02	<0.001
Calcium, mmol/l	1.0 ±0.034	2.45±0.02	<0.001
Urea, mmol/l	5.25±0.09	4.4±0.04	<0.001
Creatinine, μmol/l	95.3±1.81	69.8±2.10	<0.001

Note: In brackets are the differences in indicators for pregnant women of group 2.

Table 3.6 shows that in pregnant women with severe preeclampsia, the greatest changes in the composition of electrolytes after childbirth concern calcium, the amount of which is significantly lower than in healthy pregnant women.

As for magnesium, statistically, compared to control figures, its values are significantly lower than in women with physiologically occurring pregnancies.

Summarizing the results obtained, it should be noted that among the numerous disorders of various functions in the body of a pregnant woman complicated by severe preeclampsia after childbirth, we observed the development of hypovolemia associated with a significant decrease in plasma volume, and severe hypoproteinemia due to severe proteinuria.

Heavy preeclampsia in pregnant women with complications (operation way with) from birth next blood

rotation system and homeostasis indicators

Most women in this group had a complicated obstetric history (bleeding, placenta previa and displacement, fetal hypoxia in the womb, cesarean section).

Comparative indicators of the peripheral circulatory system in pregnant women of the control group and group 2, n=110

indicators	Control group, n=30	2 group,n=40	3 groups, n=45	P
SAB, mmsim.set.	107.1 □□0.55	155.2±3.1	163.2±2.9	<0.001
DAB, mmsim.set.	66.3 □□0.34	105.2±3.6	113.2±2.2	<0.001
YKS, min.	80.6 □□0.39	88.2 □□0.39	90±2.2	<0.001
Average AB, mmsim.set.	79.6 □□0.32	121.9±2.1	129.8±1.9	<0.001

Note : Group 2 in parentheses belongs to pregnant women indicators differences given

The presented data show that in pregnant women of group 3, changes occurred in the studied parameters of peripheral blood circulation, which were significantly different from the analogous parameters of the control group. For example, in the studied group, SAB control from the group 48.1%, 56.1% DAB 39%, 46.9% tachycardia 7.6%, 9.4% The average AB was 42.3%, 50.2% higher. According to all the obtained indicators, this group corresponded to the indicators of pregnant women with severe preeclampsia .

Pale skin, legs, abdominal wall and back in the field swelling to oneself attention attraction did. Table 3.8

This represents the clinical blood and urine test results for pregnant women in this group.

The table shows that this group of pregnant women is characterized by hypoproteinemia, proteinuria, and a decrease in daily diuresis by almost 44.3% compared to healthy women at the same stage of pregnancy.

Table 3.8 In severe preeclampsia (surgery by way of)
blood and urine clinical inspection indicators, (n=75)

Indicators	Severe preeclampsia (surgery way with) (n=45)	Control group (n=30)	P
Blood			
Hemoglobin, g/l	84.9±1.58	100.3±2.31	<0.001
Erythrocyte, 10^{12}/l	2.74±0.06	3.1±0.12	<0.01
Ht,%	25.0±0.52	36.3±0.26	<0.001
Total protein, g/l	60.2±1.90	80.0±0.35	<0.001
Urine			
Daily diuresis, ml	710.6±16.0	1276.1±56.8	<0.001
Relative density			
Maximum	1.0287±0.0060	1.0242±0.0086	>0.05
Minimum	1.0165±0.0053	1.0104±0.0086	>0.05
protein, g/l	3.45±0.02	abs	
Leukocytes	6- 25	2- 8	<0.001

Table 3.9 Blood transfusion in severe preeclampsia (by surgery) biochemical indicators, (n=75)

Indicators	Severe preeclampsia (n=45)	Control group (n=30)	P
Plasma magnesium, mmol/l	0.55±0.02	1.05 ± 0.02	<0.001
Calcium in plasma , mmol/l	2.1±0.04	2.45±0.02	<0.001
Urea, mmol/l	6.25±0.09	4.4±0.04	<0.001
Creatinine, μmol/l	98.3±1.81	69.8±2.10	<0.001

Table 3.9 above presents the nature of changes in blood electrolytes in severe PE (for comparison, we present the data of the control group).

Evaluating the obtained data, it should be noted that there is a tendency for hypermagnesemia in pregnant women in severe PE compared to mild PE. Changes in other electrolytes are not noticeable.

All this indicates that this contingent of pregnant women is very dangerous in terms of the occurrence of various complications during pregnancy, childbirth and the postpartum period. Such pregnant women reach the stage of childbirth, having used up almost all their reserves.

IV CHAPTER. HEAVY PREECLAMATION FORGIVING THE BEGINNING PREGNANT IN WOMEN HEAD THE BRAIN TO THE CIRCULATORY SYSTEM ITSELF CHARACTERISTICS AND BABIES HEMODYNAMIC ASSESSMENT

Control in the group gave birth women and heavy Cerebral hemorrhage in pregnant women complicated by preeclampsia

rotation of the system electroencephalography indicators and the condition of infants

Preeclampsia is one of the serious complications of the postpartum period, which poses the same threat to the life of the mother and the child. Preeclampsia disrupts the functioning of vital organs such as the kidneys, brain, liver, and lungs. According to BJSST, 28% of pregnant women have hypertensive preeclampsia. Consequences after experiencing preeclampsia not only timely from birth next during the period, in the later period of his life, especially brain dysfunction may appear.

Preeclampsia requires extreme caution and attention. Negmatullaeva M.N. and others, 96.8% of deaths caused by preeclampsia occur in the postpartum period.

Currently, the diagnosis of preeclampsia in the early postpartum period is based on clinical presentation and laboratory tests. In women who have experienced preeclampsia, central and cerebral hemodynamic parameters determined by integral rheography and electroencephalographic examination of cerebral blood flow can be used to predict the development of late postpartum complications.

Table 4.1

Pregnancy physiological past and heavy of pregnant women complicated by preeclampsia

electroencephalographic indicators

Heavy preeclampsia to begin forgiven In pregnant women, the cerebral circulation system is affected. characteristic

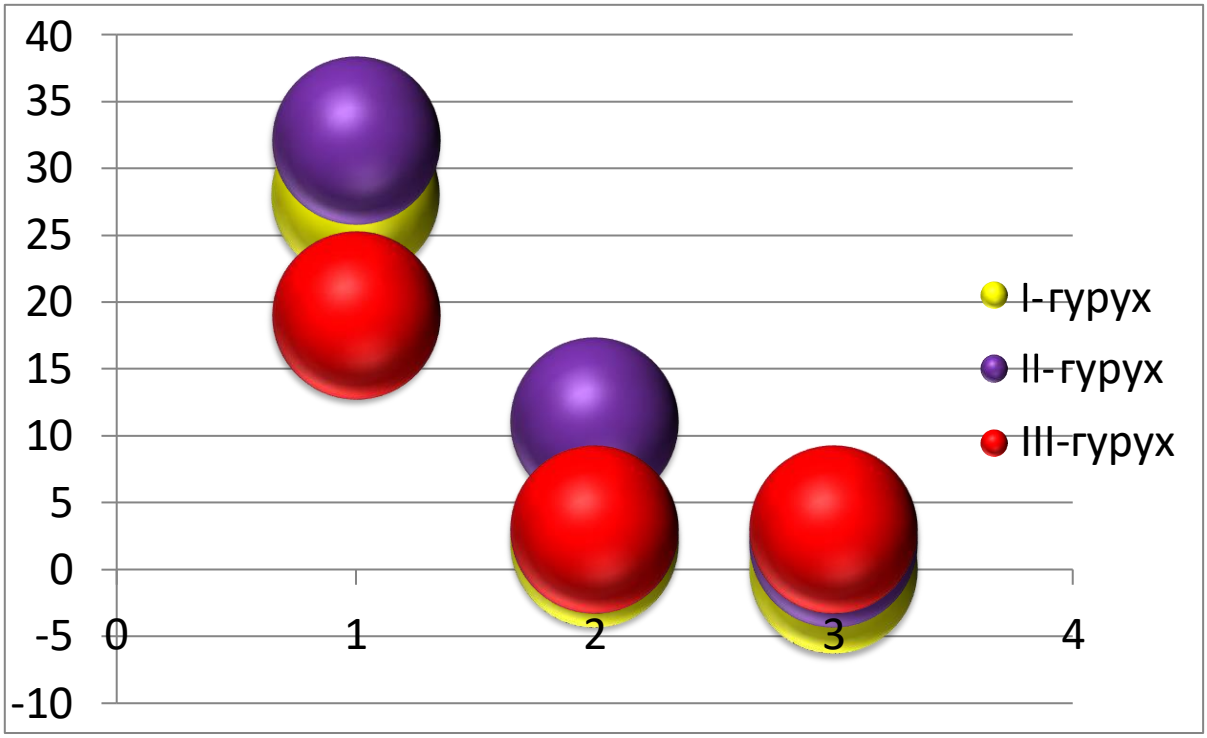
characteristics (Blood rotation capacity)

EEG indicators	Under study groups					
	Control group (n=30)		Group II (n=40)		Group III (n=45)	
	abs	%	abs	%	abs	%
Blood rotation capacity:						
Normal brain	28	93.3	36	80.0	20	80.0
Hypovolemia :						
- light degree:	2	6.7	7	15.6	2	8.0
- medium	0	0	2	4.4	3	12.0
- heavy	0	0	0	0	0	0
Blood vein elasticity:						
- within the norm	30	100.0	35	77.8	19	76.0
Blood vein rigidity:						

- mild degree:	0	0	8	17.8	3	12.0
- medium	0	0	2	4.4	3	12.0
- heavy	0	0	0	0	0	0
Blood vein tone:						
- within the norm	28	93.3	2	4.4	3	12.0
Vascular hypertensioni:	2	6.7	3	6.7	2	8.0
- light	0	0	16	35.6	4	16.0

degree:						
- medium	0	0	18	40.0	0	0
- heavy						
Vein hypotonic:						
- mild degree:	0	0	2	4.4	3	12.0
- medium	0	0	2	4.4	6	24.0
- heavy	0	0	2	4.4	7	28.0
Blood rotation pulse asymmetry coefficient.						
-mild degree:	28	93.3	32	71.1	19	76.0
- medium	2	6.7	11	24.4	3	12.

						0
- heavy	0	0	2	4.4	3	12.0



The tests showed that in both groups, namely in women whose pregnancies were complicated by preeclampsia, rheoencephalographic parameters were significantly altered. This indicates changes in elasticity parameters in the carotid and vertebrobasilar blood vessel basins.

Table 4.2 Pregnancy physiological past and heavy preeclampsia

Electroencephalographic studies of pregnant women with main indicators Within 1-3 days

indicators	Control group (n=30)	Group II (n=40)	Group III (n=45)	R 3- 2
RI, Ohm	0.14±0.013	0.12±0.010	0.10±0.01*	>0.05
α, minute	0.11±0.011	0.18±0.017**	0.19±0.021**	>0.05
α/T, %	15.2±1.1	18.8±0.9*	19.9±2.0*	>0.05
DKI, %	59.0±1.5	82.2±2.5***	78.8±3.5***	>0.05
DSI, %	66.6±2.1	72.2±3.1	73.4±4.5	>0.05

Note: * - differences compared to group 1 data significant(* - P<0.05; ** - P<0.01; *** - P<0.001)

The analysis of data presented in tables 4.1 and 4.2 shows that all parameters of groups 2 and 3 have changed significantly. Blood circulation capacity did not exceed the limits of difference in all three groups of subjects. Thus, in 90% of women with physiological pregnancies, blood vessels pulse pressure (PR =16.1±1.2 Ohm in FM standard lines, 0.14±0.013 Ohm), the same indicator in women of 2 groups (RI 15.9±1.1 FM and 0.12±0.01 Ohm) and in group 3 (RI 15.5±1.2 FM and 0.10±0.01 OM). although the difference in this indicator by groups is not reliable. In the studied groups, the IR indicator was 0.09-0.11 Ohm at the fronto-mastoid standard point, and 0.06-0.08 Ohm at the occipito-mastoid standard point. Thus Thus, the prevalence of mild hypovolemia in women in group 2 was significantly higher (P<0.05) than in women in groups 1 and 3.

Perinatal damage to the central nervous system is more common in infants born to pregnant women of group II. 30% of this against group III in babies born to pregnant women It amounted to 17.7%. If we evaluate the structure of perinatal diseases, fetal

growth retardation, umbilical cord entanglement, cerebral hemorrhage (convulsive syndrome), and group III pregnancies were the most common. In infants, the incidence was 26.6%, 35.5%, 13.3%, more than in the control and II groups. Infants born to women in the control group were discharged home in satisfactory condition together with their mothers, 5 (12.5%) out of 40 newborns born to women in group II were transferred to the neonatology department of the regional children's hospital for the 2nd stage of care, no infant deaths were observed. In group III, infants born to pregnant women 2(4.4%) on the table death condition observed,

In moderate hypovolemia (IR-0.08-0.06 Ω FM and 0.05-0.04 Ω OM), this indicator in group 3 was 3.6 times higher than in women in group 2 (P<0.01). This indicates that cerebral ischemia increases in women who have undergone cesarean delivery.
Blood vein elasticity checked in groups not much did not change either. In women of groups 2 and 3, the normal blood vessel elasticity was determined to be 77.7 and 76.0% The average α value in the 2nd group was 0.18±0.017 min in the FM standard line, and in the OM it was 0.11±0.011 min, the same values in the 3rd group corresponded to 0.19±0.02 s and 0.10±0.02 min. In them, the α/T values increased in parallel: in the 2nd group, the FM was 18.8±0.9; in the 3rd group, it was 19.9±2.0%. In a small number of examined women, especially in groups 2 and 3, a slight decrease in vascular elasticity was observed. Dyscrotic teeth were characterized by smoothing. Vascular rigidity was 4.44% in the 2nd group, and 12.0% in the 3rd group. a2- group 0.27±0.06 min., 3-group 0.28±0.07 min. these indicators correspond to the elasticity of the vascular wall of the second degree.

Preeclampsia with complicated pregnant The condition and perinatal diseases of babies born to women

A total of 115 babies were born, of which 100% of term babies were born in the control group, 35 (87.5%) term babies in the 2nd group, 5 (12.5%) premature babies, 30 (66.6%) term babies in the 3rd group, 15 (33.3%) premature babies.
Babies born in a satisfactory condition according to the Apgar scale, that is, 7-10 points, make up 80% of the control group. 50% and 40% in groups 2 and 3 .

Table 4.3. Evaluation of the condition of babies after birth

Under review babies in groups condition	Control group		Group II		Group III	
	(n=30)	%	**(n=40)**	%	**(n=45)**	%
Apgar score Average grade on 1 per minute 5 per minute	6.66 □□0.59 7.46 □□0.69		6.61 □□0.62 7.71 □□0.71		6.81 □□0.64 8.44 □□0.71	
5- 6	2	6.6 %	12	30 %	15	33.3 %
0- 4	0	0%	8	6.6	12	26.6 %

The table shows that the percentage of babies born in severe condition, with Apgar scores of 5-4, is lower in pregnant women with physiological pregnancies, compared to women in groups 2 and 3, and 30% and 33.3%, respectively, compared to women in the control group.

4.4.- table Perinatal diseases in the examined groups

structure

No.	indicators	Control group (n=30)		Group II (n=40)		Group III (n=45)		R 3-2
		abs	%	abs	%	abs	%	

1.	Central nervous system perinatal injury	2	6.6	12	30	8	17.7	0.01
2.	Fetus stunted growth	1	3.3	15	37.5	12	26.6	0.01
3.	Intrauterine infection	3	10	8	20	4	8.8	0.01
4.	Umbilical system	6	20	11	27.5	16	35.5	0.01
	fetal head wrap							
5.	Bleeding in the brain (convulsion syndrome)	0	0	2	5	6	13.3	0.05
6.	Fetal birth defects	1	3.3	3	7.5	4	8.8	0.01
7	Infant anemia	2	6.6	5	12.5	5	11.1	0.05
8.	Transient hyperbilirubinemia	3	10	4	10	8	17.7	0.01
9.	Lung atelectasis	0	0	1	2.5	2	4.4	0.01

Tr ac * - differences to the indicators of the control group relatively significant (* - P<0.05, ** - P<0.01)

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The table shows that the percentage of perinatal diseases of infants born to pregnant women of group III is higher. Perinatal damage to the central nervous system is more common in infants born to pregnant women of group II. 30% of this against group III in babies born to pregnant women It amounted to 17.7%. If we evaluate the structure of perinatal diseases, fetal growth retardation, umbilical cord entanglement, cerebral hemorrhage (convulsive syndrome), and group III pregnancies were the most common. In infants, the incidence was 26.6%, 35.5%, 13.3%, more than in the control and II groups. Infants born to women in the control group were discharged home in satisfactory condition together with their mothers, 5 (12.5%) out of 40 newborns born to women in group II were transferred to the neonatology department of the regional children's hospital for the 2nd stage of care, no infant deaths were observed. In group III, infants born to pregnant women 2(4.4%) on the table death condition observed, this

The babies were complicated by pulmonary atelectasis. Thus, it was noted that there was a high incidence of perinatal diseases among babies born to women whose pregnancies were complicated by preeclampsia.

CONCLUSION

Preeclampsia is one of the serious complications of the postpartum period, which poses the same threat to the life of the mother and the child. Preeclampsia disrupts the functioning of vital organs such as the kidneys, brain, liver, and lungs. According to BJSST, 28% of pregnant women have hypertensive preeclampsia. Consequences after experiencing preeclampsia not only timely from birth next during the period, in the later period of his life, especially brain dysfunction may appear

Clinical and statistical analysis;

Clinical research methods (general blood and urine analysis, Ht, platelets, HIV);

Daily dynamics of hemodynamic indicators of a woman in the postpartum period control.(AKB.Puls);

Biochemical test methods (general, urea, creatinine, circulatory system);

Hemodynamic assessment of the condition of infants (Anthropometry, observation of reflexes);

Uterus involution UTT inspection;

blood circulation in the brain by electroencephalography method ;

A comprehensive study of labor and its consequences for the mother and fetus (study of cerebral blood circulation using electroencephalography) was conducted on 95 pregnant women (the main group) with preeclampsia who were hospitalized in the city maternity complex of Bukhara.

In all cases, preeclampsia developed from the background of extragenital, gynecological diseases.

All patients under observation underwent a complete clinical examination in the above mentioned treatment facilities. PE was diagnosed based on subjective feelings, anamnesis, clinical and additional examination methods.

The age of all women under observation was around 18-35 years (mean 22.4 □□1.2). Most of the women who gave birth were of fertile age (18-35 years). In the groups being compared, the level of complications of preeclampsia was significantly higher in the group of women aged 18 to 35 years (58.9%). Women of this reproductive age, as noted in the first section, are more prone to complications with somatic diseases of pregnant women, which are one of the important etiopathogenetic factors of preeclampsia.

It should also be noted that women under the age of 20 have a high percentage of preeclampsia. This is due to the inappropriate age of childbirth, that is, low adaptability to pregnancy.

Preeclampsia is more common in sedentary women (50.5%), with late referral to medical institutions, and The high incidence of preeclampsia in women of student age (24.4%) and female employees (26.6%) is due to the influence of socio-economic factors.

The cited data show that preeclampsia is 75% in first births compared to repeat births (First pregnancy 55%, second pregnancy 20%) many

occurs. In repeat breeders and multiple breeders this figure is 15% and 10%.
Everyone gave birth When studying women's somatic and past illnesses, the following was revealed:
The anamnesis of the women who gave birth revealed that all three groups showed a high incidence of acute respiratory diseases (42.1%). Surgical interventions, including tonsillectomy and appendectomy, accounted for 13.6% and 15.7%, respectively.
To the hospital reception done pregnant women The following comorbidities were found during examination and inquiry. First in the group 15 yes in a woman anemia, second in the group
Anemia was observed in 32 women, and this rate was 71.1% versus (75%) between groups.
Thyroid gland diseases were common in both groups, and averaged 58.9%.
Urinary tract diseases affect 25% of women in the first group. in the second group, 22.2% had anamnesis. Obesity is 22.2% of the 2nd group, 10% of the first "b" group % in women was determined.
It should be noted that women in the first group had 2-3 times more inflammatory diseases of the genitals than women in the second group, which is a statistically significant indicator (15.5% versus 10%, respectively) ($P<0.05$). Benign diseases of the uterus and cervix were more common in the anamnesis of women in group 1- "b" (40.0%), while in group 2 this figure was 15.5%. It can be seen that medical abortions were 17.8%, infertility - 9.4%, ectopic pregnancy - 6.6%, ovarian cysts - 9.4%.
The percentage of early toxicosis during pregnancy is high (55.7%), hypohydration - 10.5%, hyperhydration - 6.3%, risk of premature birth - 20%.
Overall, 76.8% of women had a full-term birth, and 12.6% had a single-term birth. The deliveries were performed by vaginal delivery and cesarean section. Of these, 6.3% had a premature placental abruption, 24.2% had a unsatisfactory childbirth to the activity, 2.1% scar

Insufficiency, 14.7% Obstetric trauma, 34.7% Premature rupture of membranes, 9.4% Manual uterine cleaning, 9.4% corresponds to atonic bleeding.

A total of 95 live births occurred with 2 intranatal deaths. The average weight of live and stillborn babies was 3350±350.0 grams. One infant died in the early neonatal period.

Thus, the results of the study showed that the incidence of preeclampsia was highest in the age group of 18 to 30 years. Preeclampsia was more common in young pregnant women and housewives, which is due to the fact that they do not regularly attend medical examinations.

All patients underwent a clinical and laboratory examination, including a complete blood and urine analysis, fibrinogen, Sukharev's CRP, blood protein determination, and 24-hour urine protein determination, at all follow-up periods. In addition to the above examinations, we determined the levels of creatinine, total protein, and urea in blood and urine in all pregnant women in both groups.

The parameters examined by the biochemical method were determined by the enzymatic-colorimetric method.

Cerebral blood circulation parameters were studied using electroencephalography. This method is technically convenient and is suitable for women. for We found it preferable to other testing methods because it was safe and allowed us to review blood circulation in the brain over a long period of time.

Polzer and Schuhfried introduced the study of cerebral blood circulation into science, but it was not until the 1950s that the cerebral circulatory system began to be studied using the rheograph method.

According to Jenker's proposal, a device that records blood circulation in the brain The rheogram method began to be called rheoencephalography (REG). Studies began to be conducted using the rheograph 4-RG-2 M, in which the woman was in a semi-sitting or lying position.

EEG's registration is accepted aluminum soft from metal made circle in shape electrode diameter 1-

1.5 cm, thickness3-4 mm. EEG recording (in the vascularization zone of the carotid artery) one electrode is attached to the nasal septum, 1-1.5 cm inward from the midline, and the second electrode is placed in the fronto-mastoid area (FM). Before the examination begins, small-caliber signals are recorded, their amplitude 0.1-0.05 ohms. First of all, we need to pay attention to the shape of the rheographic wave.

It should be remembered that every rheographic test applies the students of the school apply their norms in practice.

Rheographic indicators in our country

Statistical processing of data was carried out in 2 stages:

statistician readiness for analysis;

personal statistician analysis.

Preparation for statistical analysis includes factors such as learning the types of characteristics to be analyzed, the type of distribution of each characteristic, and the representation of the task.

In the second stage, an accurate statistical method was distinguished according to the three main factors studied in the first stage:

analysis to be done to account recipient sign type;

analysis to be done of signs division description;

The number and type of samples studied (dependent or independent). The analysis of the distribution type of the sign was carried out using the Microsoft Excel program. The following indicators were considered as criteria for normal distribution:

average value, of the sign fashion and median approximately equal;

of the sign almost 68% value M □□σ interval , 95% - M □□2σ interval, 99% - M □□3σ in the interval located.

The normal distribution of a symbol with respect to its value symmetrical.80% more analysis Quantitative signs being made standard distributed because of statistician analysis

on the basis of parametric statistics methods placed.

The data obtained as a result of the study were statistically processed using the Microsoft Office Excel-2012 software package on a Pentium-IV personal computer. The average value of the studied indicator arithmetic (M), average quadratic Variational parametric and nonparametric statistical methods were used to calculate the standard deviation (□□), the standard error of the mean (m), and the relative path lengths (frequency, %), and the statistical value of the obtained measurements was determined by the Student (t) test, examining the normality of the distribution and the equality of the main variances (F - Fisher test) according to the kurtosis criterion, and calculating the probability of error (P). The reliability level of $P<0.05$ was accepted as statistically significant changes .

Preeclampsia is the leader of pregnancy pathology, which is accompanied by the development of multiple organ failure (MOF), which leads to a high incidence of maternal mortality, perinatal morbidity and mortality. The data presented show that all indicators of peripheral hemodynamics (both their average values and differences) did not go beyond the limits of normal physiological indicators.

We studied the homeostasis indicators in 30 women with physiological pregnancy. The amount of Hb in the blood of pregnant women in this group average 101.3 □□2.37 g/l what organization did and he/she from anemia indicates. The average number of erythrocytes is 3.1 □□0.13 · 10^{12}/l equal to The hematocrit indicator ranges from 31.2 to 39.4%, with an average of 36.3±0.27 organization did and from hydremia evidence gave. The blood protein concentration in the blood of pregnant women in this group was 81.0±0.35 g/l.

Urea in the blood the concentration of creatinine is appropriate average was 4,432±1,012 mmol/l and 69,836±6,188 μmol/l.

In this group of pregnant women, only the urea clearance coefficient decreased .

The average daily diuresis was 1276.1±56.8 ml, the relative density of urine was 1.0240±0.0086, the amount of protein in urine was not detected.

Thus, the conducted studies have shown that in the control group of women with initial hypochromic anemia, the changes in renal hemodynamics are mainly related to anemia, not pregnancy. Some changes were noted. However, the absence of changes in blood electrolytes, their clearance and renal excretion, and blood nitrogen slags in women in the control group indicates the absence of disorders in the osmoregulation and nitrogen-excreting functions of the kidneys.

We studied the postpartum condition of women whose pregnancies were complicated by preeclampsia. The following parameters of the peripheral circulatory system and hemostasis were determined: gave.

The presented data show that in pregnant women of group 2, changes occurred in the studied parameters of peripheral blood circulation, which were significantly different from the analogous parameters of the control group. For example, in the studied group, SAB was 48.1% lower than in the control group, DAB was 39% lower, Tachycardia was 7.6%, and mean BP was 42.3%. All parameters obtained in this group corresponded to the indicators of pregnant women complicated by preeclampsia.

The average Hb content in the blood of pregnant women in this group was 90.5±1.72g/l. what organization did and he/she from anemia evidence gives.

Preeclampsia is the leader of pregnancy pathology, which is accompanied by the development of multiple organ failure (MOF), which leads to a high incidence of maternal mortality, perinatal morbidity and mortality. The data presented show that all indicators of peripheral hemodynamics (both their average values and differences) did not go beyond the limits of normal physiological indicators.

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The amount of Hb in the blood of pregnant women in this group average 101.3 □□2.37

g/l what organization did and he/she from anemia indicates.

The average number of erythrocytes was 3.04±0.06 · 10^{12} /l. The hematocrit was 32.0±0.18 and indicated hydremia. The concentration of protein in the blood of pregnant women in this group was 65.3±2.14g/l to equal it happened, this and 14.5% less than women with physiological pregnancies.

The average daily diuresis was 950.7±27.6ml, the relative density of urine was 1.0322±0.0055, the amount of protein in the urine was 2.57±0.01g/l on average, and proteinuria showed an increase of 38.9%.

In severe preeclampsia, a decrease in the filtration capacity of the kidneys is combined with a deterioration in their blood-concentrating function.

Table 3.6 below shows the nature of changes in blood electrolytes in pregnant women with severe PE (we present data from the control group for comparison).

It is evident that in pregnant women with severe preeclampsia, the greatest changes in electrolyte composition after delivery are related to calcium, the amount of which is significantly lower than in healthy pregnant women.

As for magnesium, statistically, compared to control figures, its values are significantly lower than in women with physiologically occurring pregnancies.

Summarizing the results obtained, it should be noted that among the numerous disorders of various functions in the body of a pregnant woman complicated by severe preeclampsia after childbirth, we observed a strong development of hypovolemia due to a significant decrease in plasma volume, and hypoproteinemia due to severe proteinuria. In this group majority in women aggravated obstetric anamnesis (blood to leave, satellite ahead location and

migration, hypoxia of the fetus in the mother's womb, cesarean section operation) were detected.

The presented data show that in pregnant women of group 3, changes occurred in the studied parameters of peripheral blood circulation, which were significantly different from the analogous parameters of the control group. For example, in the studied group, SAB control from the group 48.1%, 56.1% DAB 39%,
46.9% tachycardia 7.6%, 9.4% The average AB was 42.3%, 50.2% higher. According to all the obtained indicators, this group corresponded to the indicators of pregnant women with severe preeclampsia .
Pale skin, legs, abdominal wall and swelling in the lumbar region attracted attention.
Table 3.8 presents the clinical blood and urine test results in pregnant women in this group.
The table shows that this group of pregnant women is characterized by hypoproteinemia, proteinuria, and a decrease in daily diuresis by almost 44.3% compared to healthy women at the same stage of pregnancy.
Represents the nature of changes in blood electrolytes in severe PE (for comparison, we present the data of the control group).
Taken the information evaluate, that knock It should be noted that in severe PE, a tendency for hypermagnesemia is noted in pregnant women compared to mild PE, and changes in other electrolytes are not noticeable.
All this indicates that this contingent of pregnant women is very dangerous in terms of the occurrence of various complications during pregnancy, childbirth and the postpartum period. Such pregnant women reach the stage of childbirth, having used up almost all their reserves.

Preeclampsia is one of the serious complications of the postpartum period, which poses the same threat to the life of the mother and the child. Preeclampsia disrupts the functioning of vital organs such as the kidneys, brain, liver, and lungs. According to BJSST information, 28% of pregnant women have hypertensive preeclampsia . Consequences after experiencing preeclampsia not only timely from birth next during the period, in the later period of his life, especially brain dysfunction may appear. Preeclampsia requires extreme caution and attention. G.A. Ikhtiyarova et al. according to preeclampsia 96.8% of the deaths due to this fall in the postpartum period. Currently, the diagnosis of preeclampsia in the early postpartum period is based on clinical manifestations and laboratory tests. In women who have experienced preeclampsia, central and cerebral hemodynamic parameters determined by integral rheography and rheoencephalographic examination of cerebral blood flow can be used to predict the development of late postpartum complications.

The tests showed that in both groups, that is, in women whose pregnancy was complicated by preeclampsia, rheoencephalographic parameters significantly changed. This indicates that the elasticity parameters in the carotid and vertebrobasilar blood vessel basins changed. Analysis of the presented data shows that all parameters in groups 2 and 3 changed significantly. The circulatory capacity of all three groups of subjects did not go beyond the limits of difference. Thus, in 90% of women with physiological pregnancies, the pulse pressure of the blood vessels (RI = 16.1±1.2 Ohms at FM standard lines, 0.14±0.013 Ohms), the same indicator was observed in women of the 2 groups. (RI 15.9±1.1 FM and 0.12±0.01 Ohm) and 3- in a group (RI

15.5±1.2 FM and 0.10±0.01 OM), although the difference in this indicator between groups is not reliable. In the studied groups The IR value at the fronto-mastoid standard point was 0.09-0.11 Ohm, and at the occipito-mastoid standard point was 0.06-0.08 Ohm. Thus, the reliability of mild hypovolemia in women of groups 2 was significantly higher ($P<0.05$) than in groups 1 and 3. compared to women.

In moderate hypovolemia (from IR-0.08-0.06 Om FM and OM from 0.05-0.04 Ohm) in group 3 this indicator is 3.6 times higher than in women in group 2 ($P<0.01$). This indicates that cerebral ischemia increases in women who have given birth by cesarean section.

Blood vessel elasticity did not change significantly in the tested groups. Women in groups 2 and 3 had normal blood vessel elasticity, 77.7 and 76.0%, respectively. The average α value in the 2nd group was 0.18±0.017 min in the FM standard line, and in the OM it was 0.11±0.011 min, the same values in the 3rd group corresponded to 0.19±0.02 s and 0.10±0.02 min. In them, the α/T values increased in parallel: in the 2nd group, the FM was 18.8±0.9; in the 3rd group, it was 19.9±2.0%. In a small number of women examined, especially in groups 2 and 3, a slight decrease in vascular elasticity was observed. Dyscrotic teeth were characterized by smoothing. Vascular rigidity was 4.44% in the 2nd group, and 12.0% in the 3rd group. a 0.27±0.06 min in the 2nd group, 0.28±0.07 min in the 3rd group. These indicators correspond to the elasticity of the vascular wall of the second degree.

Babies born in satisfactory condition according to the Apgar scale, i.e. 7-10 points, make up 80% of the 1st group. 50% and 40% in groups 2 and 3.

It is seen that pregnant women with physiological pregnancies had a lower percentage of babies born with Apgar scores of 5-4, i.e., in severe condition, compared to women in groups 2 and 3, and women in group 1 had a lower percentage of babies born with Apgar scores of 5-4, i.e., in severe condition. against 30%, 33.3%.

We see a high percentage of perinatal diseases in infants born to pregnant women of group II. Perinatal damage to the central nervous system was 30% in infants born to pregnant women of group II, while it was 17.7% in infants born to pregnant women of group III. If we evaluate the structure of perinatal diseases, then the growth of the fetus is impaired. retention, umbilical cord entanglement, cerebral hemorrhage (convulsive syndrome), were noted in infants born to pregnant women of group III, 26.6%, 35.5%, 13.3%, more often than in groups I and II. Infants born to women in the control group were discharged home in satisfactory condition together with their mothers, 5 (12.5%) out of 40 newborns born to women in group II were transferred to the neonatology department of the regional children's hospital for the 2nd stage of care, no infant deaths were observed. 2 (4.4%) infants born to pregnant women of group III died, these infants were complicated by pulmonary atelectasis. Thus, a high incidence of perinatal diseases was noted among infants born to women whose pregnancy was complicated by preeclampsia.

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Preeclampsia requires extreme caution and attention. G.A. Ikhtiyarova et al. according to preeclampsia 96.8% of the deaths due to this fall in the postpartum period. Currently, the diagnosis of preeclampsia in the early postpartum period is based on clinical manifestations and laboratory tests. In women who have experienced preeclampsia, central and cerebral hemodynamic parameters determined by integral rheography and rheoencephalographic examination of cerebral blood flow can be used to predict the development of late postpartum complications.

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