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FEATURES OF THE COURSE OF PREGNANCY IN WOMEN WITH FETOPLACENTAL INSUFFICIENCY

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ABSTRACT

Background. Fetoplacental insufficiency, a prevalent pregnancy complication, often results in fetal oxygen deprivation and stunted growth, ultimately contributing significantly to newborn health issues and fatalities.

Purpose. The aim of this study is to examine the characteristics of pregnancy progression, as well as the maternal and fetal outcomes associated with placental insufficiency during pregnancy.

Material and methods. A study was conducted involving 25 pregnant individuals diagnosed with placental insufficiency, focusing on a comprehensive analysis of their pregnancy progression.

Results. The study found a significant number of perinatal complications among this group of women. A close relationship was established between the extent of placental insufficiency and the level of fetal oxygen deprivation ($p < 0,05$), as well as a direct link between placental insufficiency and the worsening of fetal physical health issues ($p < 0,05$).

Conclusion. Women experiencing placental insufficiency are at an elevated risk of facing complications such as miscarriage, reduced fetal oxygen supply, impaired fetal growth, and adverse perinatal outcomes.

Keywords: pregnancy, placental insufficiency, perinatal complications.

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YO‘LDOSH YETISHMOVCHILIGI MAVJUD AYOLLARDA HOMILADORLIK KECHISHI XUSUSIYATLARI

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Kirish. Homiladorlikning eng keng tarqalgan asoratlaridan biri bo‘lgan, homila rivojlanishining kechikishi bilan gipoksiyaga olib keladigan yo‘ldosh yetishmovchiligi yangi tug‘ilgan chaqaloqlarda perinatal kasallik va perinatal o‘limning asosiy sababiga aylanishi mumkin.

Maqsad. Homilador ayollarda yo‘ldosh yetishmovchiligida homiladorlik kechishining xususiyatlarini, ona va homila uchun oqibatlarini aniqlash.

Material va metodlar. 25 nafar yo‘ldosh yetishmovchiligi mavjud bo‘lgan homilador ayollar ko‘rikdan o‘tkazilib, ularda homiladorlikning kechishi tahlil qilindi.

Natijalar. Tadqiqot natijasida yo‘ldosh yetishmovchiligi mavjud bo‘lgan homilador ayollarda perinatal asoratlarning yuqori chastotasi kuzatildi. Yo‘ldosh yetishmovchiligining og‘irlik darajalari va homila gipoksiyasi o‘rtasida kuchli yuqori darajadagi korrelyatsiya aniqlandi ($p < 0,05$). Shuningdek, somatik patologiyaning og‘irligining oshishi bilan bevosita yuqori darajadagi korrelyatsiya kuzatildi ($p < 0,05$).

Xulosa. Yo‘ldosh yetishmovchiligi mavjud bo‘lgan ayollar homiladorlik, homila gipoksiyasi, xomila o‘shidan ortda qolishi va perinatal yo‘qotishlarning rivojlanishi xavfi guruhiga kiritilishi zarur

Kalit so‘zlar: homiladorlik, yo‘ldosh yetishmovchiligi, perinatal asoratlar..

ТЕЧЕНИЕ БЕРЕМЕННОСТИ У ЖЕНЩИН С ФЕТОПЛАЦЕНТАРНОЙ НЕДОСТАТОЧНОСТЬЮ

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Ведение. Фетоплацентарная недостаточность, являясь одним из самых распространенных осложнений беременности, вызывающих гипоксию с задержкой развития плода, и может стать основной причиной перинатальной заболеваемости и смертности новорожденных.

Цель. Выявить особенности течения беременности, исходы для матери и плода при плацентарной недостаточности у беременных женщин.

Материалы и методы. Было обследовано 25 беременных женщин с плацентарной недостаточностью и анализирована течение гестации.

Результаты. В результате отмечались высокая частота перинатальных осложнений в данной категории женщин. Выявлена сильная корреляционная связь высокой степени между степенью тяжести плацентарной недостаточностью и степенью тяжести гипоксии плода ($p < 0,05$). А также в прямая корреляционная связь высокой степени с нарастанием тяжести соматической патологии ($p < 0,05$).

Заключение. Женщин с плацентарной недостаточностью следует относить к группе риска по развитию невынашивания беременности, гипоксии плода, задержки развития плода и перинатальным потерям.

Ключевые слова: беременность, плацентарная недостаточность, перинатальные осложнения.

INTRODUCTION.

Fetoplacental insufficiency poses a major challenge in the fields of obstetrics and perinatology [3, 6]. Estimates of its occurrence during pregnancy range from 22% to 45% across different studies [1], with a notable rise when combined with other health issues unrelated to pregnancy.

Fetoplacental insufficiency arises primarily from disruptions in the blood flow between the uterus, placenta, and fetus, stemming from abnormal structural and functional alterations within the vascular system and its constituent parts [6]. Placental malfunction disrupts the harmonious operation of the "mother-placenta-fetus" unit, resulting in substantial alterations to key metabolic processes within this system [2, 9]. Consequently, the fetus's defenses and adaptability are compromised, increasing its susceptibility to hypoxia. When a fetus experiences low oxygen levels, its blood flow adapts to prioritize vital organs, a response that unfortunately can harm the tiny blood vessels in various tissues and systems [1, 8]. This vascular damage often results in organ dysfunction, stunted growth, and developmental delays [4, 5]. These children face a heightened likelihood of developing chronic health problems later in life [2, 10], and their cognitive and emotional development may progress at a slower pace [4].

The occurrence of fetoplacental insufficiency directly results in hindered fetal growth and impaired nerve development [7], potentially leading to cell death in the fetal brain in severe instances [10]. Consequently, fetoplacental insufficiency is undeniably a major factor contributing to elevated rates of perinatal complications, death, and lasting disabilities in children [9, 10]. The severity of fetoplacental insufficiency cannot be overstated, as its consequences for both mother and fetus often prove resistant to conventional drug treatments, regardless of whether administered in an outpatient or inpatient setting [4, 8]. Consequently, understanding pregnancy progression and swiftly recognizing any disruptions within the fetoplacental unit is a crucial challenge facing contemporary medical practice.

MATERIALS AND METHODS.

Researchers carried out a clinical trial enlisting 25 pregnant participants. This group was compared to a control group of 20 healthy pregnant individuals. The research took place within the 7th obstetric complex of Tashkent. All participants willingly joined the study after receiving comprehensive information and providing their consent, ensuring adherence to the World Health Organization's ethical standards for human research. Placental insufficiency was determined through a comprehensive clinical evaluation. The well-being of the expectant mother, fetus, and newborn was evaluated using standard clinical and laboratory procedures throughout the pregnancy. Statistical analysis of the collected data, employing variation statistics techniques, was conducted utilizing Microsoft Excel and SPSS 21 software.

RESULTS.

Women participating in the study were between 16 and 35 years old, with an average age of $24,8 \pm 4,3$ years for the primary group and $25,6 \pm 4,8$ years for the control group, demonstrating no substantial age disparity between the two ($p > 0,05$). Regarding educational attainment, both groups exhibited a similar proportion of women holding higher education degrees, with no statistically significant difference observed. Moreover, social standing was evenly distributed across both groups ($p > 0,05$). Our study participants were similar in terms of age, education, and socioeconomic background. The majority of women in the primary group had histories of somatic and obstetric-gynecological conditions. Analysis of the participants' medical histories revealed that the study group was largely composed of primiparous women. Notably, the frequency of placental insufficiency in primiparous women during subsequent pregnancies was significantly reduced compared to those experiencing placental insufficiency in their initial pregnancies and those with generally healthy pregnancies. The rate of abortions was consistent

across all participant groups in both the observation and comparison sets, with no statistically significant differences observed ($p>0,01$).

The presence of pre-existing health conditions in women significantly influences their pregnancy journey, delivery, and the well-being of both the fetus and newborn. Examination of medical histories revealed a stark difference, with 92% of women in the primary group diagnosed with somatic diseases, a frequency 16,3 times higher than the 15% observed in the control group. On average, each woman in the primary group had 1,8 distinct somatic diseases either prior to or during their current pregnancy. In pregnant women experiencing placental insufficiency, iron deficiency anemia, along with conditions affecting the heart, blood vessels, urinary system, and digestive system are most prevalent ($p<0,001$). A review of gynecological history in the primary group revealed chronic pelvic inflammatory diseases as the most common issue, occurring in $18,2\pm4,7$ per 25 participants, compared to $7,8\pm4,9$ in the control group, a difference that was not statistically significant ($p>0,05$). Chronic inflammation affecting the pelvic organs can disrupt placental development and function. Other gynecological conditions also play a significant role in placental insufficiency. Notably, our findings reveal a strong correlation between placental insufficiency and the presence of menstrual irregularities and underlying cervical health issues in pregnant women. Throughout the course of this pregnancy study, a concerning pattern emerged: a high incidence of pregnancy complications and worsening existing health conditions. Specifically, one in four women in the primary group experienced signs of potential miscarriage ($13,9\pm3,1$), while one in three women ($17,2\pm2,8$) exhibited worsening somatic issues. Diagnostic tools confirmed placental insufficiency in 25% of these cases, along with fetal hypoxia ($17,9\pm3,8$).

Analysis of the pregnancy outcomes within the study group indicated a significant link between the severity of placental insufficiency and both fetal hypoxia and the extent of fetal somatic pathology. A strong positive correlation was found between placental insufficiency and hypoxia ($r=0,44$, $p<0,01$), while a moderate positive correlation existed between placental insufficiency and the worsening of somatic problems ($r=0,33$, $p<0,05$).

Hospitalization rates were notably higher for pregnant women experiencing placental insufficiency, particularly severe cases ($p<0,01$). Examination of the reasons behind inpatient care for women in the observation group during prenatal stays showed a frequent occurrence of placental insufficiency even before hospitalization.

DISCUSSION

Fetoplacental insufficiency encompasses a range of issues affecting both the placenta's form and function, as well as the health of the growing fetus. This condition often leads to pregnancy complications and problems during childbirth. Our study involved a comparative examination of pregnancy outcomes in women experiencing fetoplacental insufficiency versus those without it. Pregnancy complications were found to be linked to the severity and existence of problems with blood flow between the uterus, placenta, and fetus. The study group, consisting of pregnant women with complications, showed a higher prevalence of overall health issues compared to the control group. This suggests a possible connection between the development of these complications and the presence and impact of pre-existing health conditions.

Ultrasound examinations revealed cases of placental insufficiency in pregnant patients. Hospitalization was implemented for expectant mothers exhibiting uteroplacental-fetal circulatory problems classified as grades 1B and 2. Treatment plans for these patients were tailored to established protocols for managing this specific patient population.

Researchers investigated the relationships between various pregnancy markers in a group of women. Notably, a significant link was found between the extent of placental insufficiency and the severity of fetal oxygen deprivation ($p<0,01$), with a similar strong association observed between placental insufficiency and fetal hypoxia ($p<0,05$).

Placental insufficiency, a complication arising in challenging pregnancies, necessitates both therapeutic and preventative strategies to mitigate obstetric issues. Due to the ongoing challenges in effectively treating placental insufficiency, interventions to address underlying disorders should ideally commence prior to conception, thereby minimizing the likelihood of pregnancy, fetal, and neonatal complications.

CONCLUSION.

Pregnancies affected by placental insufficiency often encounter a multitude of challenges, including a heightened risk of miscarriage, premature delivery, worsening of existing health conditions, fetal oxygen deprivation, impaired fetal growth, labor difficulties, and a greater likelihood of perinatal complications. Consequently, women experiencing placental insufficiency are classified as a high-risk population for adverse pregnancy outcomes such as miscarriage, fetal oxygen shortage, fetal growth issues, and perinatal deaths.

Consent for publication – The study is valid, and recognition by the organization is not required. The author agrees to open publication.

Availability on data and material – available.

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