

RISK OF FETAL GROWTH RESTRICTION SYNDROME IN WOMEN WITH BLEEDING EARLY GESTATION

Shukurkhujeva D.N.

Associate Assistant of the Department of Obstetrics and Gynecology, Pediatric Gynecology
Tashkent Pediatric Medical Institute

<https://doi.org/10.5281/zenodo.11412358>

Abstract. *The article provides an overview of scientific research concerning the problem of the risks of low birth weight children, including those with fetal growth restriction syndrome. The reasons for the development of fetal growth restriction syndrome and the possibility of predicting it in women with bleeding in early pregnancy are considered to improve perinatal outcomes.*

Keywords: *pregnancy, vaginal bleeding, fetal growth restriction syndrome.*

The main directions of the maternal and child health service are creating optimal conditions for a woman to realize the function of motherhood, maintaining her health, and ensuring the birth of a healthy child. By the end of the 20th century, perinatal medicine became the basis for improving the health of future generations in all countries of the world. The transition has been completed from the desire to reduce perinatal mortality to the main goal of improving the health of the fetus and newborn [1]. In this context, one of the problems of practical obstetrics is bleeding in the first trimester of pregnancy. It is during this period that the formation of the fetoplacental system, the formation of fetal organs and tissues, and extraembryonic structures occur, which in most cases determines the further course of pregnancy. Despite the progress achieved in recent years in the prevention and treatment of pregnancy complications, the frequency of spontaneous miscarriages remains quite high. Vaginal bleeding of early gestation is a fairly common phenomenon with an incidence of 15 to 25% [2]. According to various authors, the frequency of spontaneous miscarriages ranges from 2 to 55%. In turn, as the number of spontaneous miscarriages increases, the risk of terminating subsequent pregnancies sharply increases [3]. The causes of bleeding in the first trimester of pregnancy are varied. Genetically determined disorders of embryo development, which can be hereditary in nature or occur under the influence of various factors (infections, hormonal disorders, chemicals, including some medications, etc.), are the most common cause of pregnancy bleeding in the first trimester [4].

An important role is played by unfavorable socio-biological factors, a burdened obstetric and gynecological history, infectious and inflammatory diseases, and the presence of extragenital pathology [5]. Also, the literature discusses the importance of immunological causes of spontaneous miscarriage, one of which is antiphospholipid syndrome (APS) [6]. In the etiology of spontaneous abortion, hormonal disorders in a woman's body play an important role. The most common conditions are hypofunction of the corpus luteum and increased production of androgens of various origins [7]. And according to V.M. Sidelnikova, in 25–57% of cases, the genesis of spontaneous miscarriage remains unknown [8]. Currently, despite a large number of studies proving the high effectiveness of preconception preparation for women with miscarriage, in reality, the doctor has to carry out examination and treatment during pregnancy, often in the later stages, which does not always make it possible to identify and eliminate existing disorders. For this reason, women with threatened miscarriage experience an unfavorable pregnancy outcome for

the fetus, which causes a high level of perinatal morbidity. Thus, one aspect of increasing fertility is to analyze the consequences of vaginal bleeding in early pregnancy. The results of some studies show that, due to multiple violations of the implantation processes in pregnant women with bleeding in the first trimester, the likelihood of developing premature births, the birth of low-birth-weight children, including those with a small body weight for a given gestational age, increases, and the duration of gestation, on the contrary, decreases [9].

Many publications have discussed aspects of birth outcomes for fetuses and have shown that the appearance of spotting in the first trimester of pregnancy increases the risk of birth of a fetus with an Apgar score below 7 points at 5 minutes, transfer of newborns to the NICU and the incidence of deaths among newborns [10]. Other authors indicate that this category of women has an increased risk of developing fetal growth restriction syndrome (FGR) and having low birth weight children [11]. The leading pathogenetic factor of ORP is placental insufficiency against the background of impaired uteroplacental circulation with the development of chronic fetal hypoxia and metabolic disorders [12]. ORP, in the light of modern concepts, is one of the clinical manifestations of placental insufficiency, the frequency of which in cases of underlying maternal diseases, preeclampsia/eclampsia, multiple pregnancies, and prolonged threat of miscarriage reaches 80–90% [13]. In multiple pregnancies, the incidence of ORP is 30–40% [14]. According to WHO, the incidence of newborns with growth restriction ranges from 31.1% in Central Asia to 6.5% in developed European countries. In the United States, ORP occurs in 10–15% of births, while severe intrapartum hypoxia is observed in 30% of children born with signs of ORP. In Russia, the frequency of ORP ranges from 2.4 to 17% [15]. Children with ORP make up 30.1% of newborns with low birth weight. Thus, children with intrauterine growth restriction make up 67.4 per 1000 newborns born alive at term and 179.5 per 1000 born prematurely. With ORP, a lag in body weight and/or fetal length is often combined with a lag in the development of individual organs, most often parenchymal ones.

The most significant risk factors for ORP include pregnancy complications such as [16] preeclampsia/eclampsia, multiple pregnancies, chronic maternal diseases: chronic arterial hypertension; diabetes mellitus with microangiopathy; collagenosis, kidney disease, heart defects with circulatory disorders, anemia in pregnancy, antiphospholipid syndrome, acute infectious diseases during pregnancy, burdened social history, including a low level of education; hard physical labor; smoking and alcoholism; malnutrition, complicated obstetric history, including spontaneous miscarriages; premature birth, low attachment of the placenta; burdened gynecological history: infertility, colpitis, endometritis, uterine fibroids, the long-term wearing of an intrauterine contraceptive. The most common cause of fetal impairment during pregnancy is placental insufficiency, a clinical syndrome caused by morphological and functional changes in the placenta. A viral infection plays a significant role in the development of fetal growth restriction syndrome. The leading role is given to enteroviruses, herpes simplex virus, cytomegalovirus, and rubella virus, which can cause the birth of a child with low body weight. It has been established that an increase in the concentration of pro-inflammatory cytokines such as interleukin-1, interleukin-8, and tumor necrosis factor leads to disturbances in the coagulation link of the hemostasis system in the uteroplacental basin and disruption of the immune relationship between mother and fetus [17]. The main factors influencing the growth and development of the fetus are somatotrophic hormone, insulin, somatomedin C, and some other hormonal substances. The most important thing in diagnosing ORP is the accurate determination of gestational age. The use of

clinical methods alone makes it possible to diagnose only 1/4 of cases of ORP [18]. Fetal biometry using ultrasound methods is recognized as the gold standard for diagnosis [13].

Low birth weight is a more significant risk factor for reduced life expectancy and increased morbidity than obesity, smoking, alcoholism, hypertension, etc. Information obtained in recent years about the impact of low birth weight on the entire future life of an individual has become the basis for the formulation of a global international problem of ensuring comfortable conditions for the intrauterine life of the fetus through antenatal influences on the fetoplacental system.

Based on the above analysis of modern scientific research, we can conclude that it is important to prevent fetal growth restriction syndrome in women with vaginal bleeding of early gestation. Identifying the risk of having low birth weight babies, including those with ORP, can help improve perinatal outcomes in women with bleeding in the first trimester of pregnancy.

REFERENCES

1. Кулаков В. И., Сидельникова В. М., Агаджанова А. А. Профилактика, диагностика и лечение невынашивания беременности. Информационное письмо. — М., 2003.
2. Robinson GE. Pregnancy loss // *Best Pract Res ClinObstetGynaecol.* 2014 Jan;28(1):169–78.
3. Родина, И., & Арипова, Ф. (2021). Диагностика и профилактика вульвовагинитов у девочек. *Перспективы развития медицины, 1(1)*, 511-512.
4. Арипова, Ф. С., & Назарова, К. Я. (2017). Особенности гормонального, иммунологического статуса и данных плотности костей у девочек в регионах Узбекистана. *Молодой ученый, (17)*, 108-110.
5. Курбанов, Д., Арипова, Ф., Назарова, К., & Закирходжаева, Д. (2015). Состояние репродуктивной системы у девочек и девушек в регионах узбекистана с различной экологической обстановкой. *Журнал вестник врача, 1(3)*, 119-119.
6. Tamburlini, G., Yadgarova, K., Kamilov, A., Vacci, A., & The Maternal and Neonatal Care Quality Improvement Working Group. (2013). Improving the quality of maternal and neonatal care: the role of standard based participatory assessments. *PLoS One, 8(10)*, e78282.
7. Расуль-Заде, Ю. Г., & Климашкин, А. А. (2022). Допплерометрические параметры при мониторинге плодов с поздней манифестацией синдрома ограничения роста плода. *Бюллетень медицинской науки, (2 (26))*, 12-18.
8. Расуль-Заде, Ю. Г., Климашкин, А. А., & Назаров, Б. Б. (2012). К вопросу о роли донаторов оксида азота при различных акушерских состояниях. *Український хіміотерапевтичний журнал, (3)*, 108-112.
9. Abdulatiyeva, F. (2023). MOLECULAR ASPECTS OF ENDOMETRIAL HYPERPLASIA. *Science and innovation, 2(D1)*, 22-25.
10. Рахматуллаев, Х., Курбанов, Д., Юлдашев, А., & Зуфарова, Ш. (2015). Состояние факторов местной защиты влагалища у беременных женщин с воспалительными заболеваниями нижних отделов генитального тракта. *Журнал вестник врача, 1(3)*, 47-49.
11. Akhmedova, D. R., & Yuldashev, A. Y. *European Science Review, Issue 5-6/2016.*
12. Арипова, Ф. С., & Назарова, К. Я. (2017). Особенности гормонального, иммунологического статуса и данных плотности костей у девочек в регионах Узбекистана. *Молодой ученый, (17)*, 108-110.

13. Назарова, К. Я. (2017). Характеристика синдрома гиперандрогении у девушек узбекской национальности. *Молодой ученый*, (17), 138-140.
14. Курбанов, Д., Арипова, Ф., Назарова, К., & Закирходжаева, Д. (2015). Состояние репродуктивной системы у девочек и девушек в регионах узбекистана с различной экологической обстановкой. *Журнал вестник врача*, 1(3), 119-119.
15. Иванова, О. В., Шурыгина, О. В., Русаков, Д. Ю., Быкова, Т. В., Петрова, А. А., Юхимец, С. Н., ... & Юлдашева, С. З. (2019). Оценка эффективности криоконсервации гамет и эмбрионов человека в программах вспомогательных репродуктивных технологий. *Морфологические ведомости*, 27(3), 46-50.
16. Саидкариев, Б. К., Закирова, Г. Ю., & Юлдашева, С. З. (2009). Преимущества применения ВМС-как надежного метода контрацепции. *Вестник врача ВОП*, (3 Часть II), 334-335.
17. Юлдашев, А. Ю., Рахматова, М. Х., & Юлдашева, С. З. (2013). Интеграция иммунной и пищеварительной системы в динамике постнатального развития. *Ж. теоретической и клинической медицины*, (6), 15-24.
18. Гулиев, Б. Г., Король, Е. И., Авазханов, Ж. П., Якубов, Х. Х., Агагулов, М. У., & Тальшинский, А. Э. (2021). Эндоскопически ретроградно контролируемое перкутанное лечение мочевых свищей после парциальной нефрэктомии. *Онкоурология*, (2), 128-138.
19. Якубов, Х. Х., Носиров, Т. К., Хужаназаров, Д. А., & Маманиязов, Э. Б. (2021). НЕКОТОРЫЕ СУДЕБНО-МЕДИЦИНСКИЕ АСПЕКТЫ ОЦЕНКИ ПОСЛЕДСТВИЙ ЛЕГКОЙ ЧЕРЕПНО-МОЗГОВОЙ ТРАВМЫ. *Re-health journal*, (2 (10)), 220-224.
20. Якубов, Х. Х. (1993). Продуктивность и пригодность к промышленной технологии коров бурого скота разных производственных типов в условиях жаркого климата.