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MASSIVE OBSTETRIC HEMORRHAGE- RISK FACTORS AND DIAGNOSIS

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Abstract
In connection with the above, the purpose of this study was to study the risk factors leading to the development of massive obstetric hemorrhage. An analysis of 302,000 birth histories in the Samarkand region for the period 2021-2023 was conducted, among which 51 cases of MOH were identified during childbirth and the postpartum period, which amounted to 0.2%. Clinical, laboratory, functional and statistical research methods were used.

Keywords: Obstetric hemorrhage, maternal mortality, postpartum period, uterine atony, thrombocytopenia, somatic diseases, MOH.

Introduction

Massive obstetric hemorrhage (MOH) is one of the leading causes of maternal mortality in modern obstetric practice and one of the most urgent problems facing the global health system. According to the World Health Organization (WHO), more than 14 million women worldwide suffer from obstetric hemorrhage every year, and 70–80 thousand of them die from severe hemorrhagic complications. These figures are especially high in developing countries, accounting for 25–30% of deaths.

The causes of massive obstetric hemorrhage are multifactorial, among which uterine atony, placental abruption, incomplete separation of postpartum tissues, hemostasis system disorders, and complications resulting from major surgical interventions are leading. At the same time, early identification and assessment of existing risk factors during pregnancy and childbirth, and preventive measures by isolating high-risk groups can significantly reduce maternal mortality.

Diagnosis and management of MOH requires a modern approach, namely the integration of clinical, laboratory and instrumental examinations. In particular, early determination of the volume of blood loss, real-time monitoring of hemodynamic parameters, analysis of laboratory hemostasis tests, ultrasound examinations and methods for rapid assessment of coagulopathy are important.

In this regard, a systematic study of risk factors for massive obstetric hemorrhage, improvement of diagnostic capabilities and identification of mechanisms for their application in clinical practice is one of the current scientific directions of medical science. The results of this study are of great importance not only for preserving maternal health, but also for developing comprehensive measures to improve the quality of obstetric care in the republic and reduce mortality rates.

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Actuality

One of the main indicators of not only the state of reproductive health of women, but also the level of development and organization of medical care in the country is maternal mortality (MM) [3,7,8]. In recent decades, medicine in the country, including maternal and child health services, have been carrying out their activities under the banner of combating maternal morbidity and mortality. Despite the fact that maternal mortality has tended to decrease over the past 10 years (from 24.1 in 2011 to 18.1 in 2021), obstetric hemorrhage remains the leading cause of maternal mortality [1, 4, 6]. At the same time, maternal mortality among rural residents is similar to that among urban areas (73.6%) and exceeds similar rates among ginseng, farmers, and urban areas by 2.78 times [10]. According to the general opinion of scientists from different countries and regions, the most common reasons for the development of massive obstetric hemorrhage (MAH) are preterm detachment of the normally located placenta (PONRP), placenta previa, placental abruption, large fetus, multiple pregnancy, preeclampsia, liver disease, disorders of the system hemostasis, etc. [2,10]. However, often krasviti and obstetrical pathologies and disorders of the hemostasis of the circulatory system lead to conditions of health, nutrition, extragenital disease (liver disease, severe anemia, kidney disease) and pregnancy disease (preeclampsia). Vse eti faktori, v tselom, mojno oboznachit, kak epigeneticeskie faktori, raspolagayushchie k razvitiyu patologii, zabolevaemosti i deathnosti genshchin. The Damocles sword of the modern world is the socio-economic factor leading to life-threatening conditions, NM (NM) and MS [6,8]. Modern studies provide information on clinical and social correlates of NM with income below the poverty line, urban/rural residence, educational level, caste membership, marital status, and the possibility of antenatal fornication [8].

According to generally accepted standards, massive bleeding is defined as blood loss during labor and the postpartum period exceeding 500 ml, and during CS, exceeding 1000.0 ml. On average, 0.5-5.0% of births are complicated by MAC [5]. Globally, massive bleeding occurs in 14 million women annually, and 125,000 patients die from this pathology annually [5,9]. The mortality risk from MAC is 1 in 100 thousand births in the UK and the USA, and 1 in 1000 in some developing countries. Women who survive MAC are now classified as NM (neo miss), i.e., barely surviving, and in most cases, becoming lifelong invalids due to complications from acute blood loss and its consequences. This raises the question of why bleeding can be controlled in most cases, while in some women this is not possible. Apparently, a number of factors influence the stress resistance of the female body.

Purpose of the study. Based on the above, the aim of this study was to investigate the risk factors leading to the development of MAC.

Research materials and methods. Clinical, laboratory, functional, and statistical research methods were used. An analysis of 302,000 birth records in the Samarkand region for the period 2021-2023 was conducted. Of these, 51 cases of MAC were identified during labor and the postpartum period, representing an incidence of 0.2%.

Study results

An analysis of birth records shows that the highest incidence of major obstetric hemorrhage is observed in women living in rural areas than in urban areas. Of the 51 women who gave birth with

MAC, 36 (70.5%) lived in rural areas and 29.5% in urban areas. Age distribution of the study subjects showed that most of the women were in their prime reproductive years (18 to 35 years). The average age of the subjects was 27.4 ± 2.6 years.

Table 1. Age distribution of women in labor who experienced massive obstetric hemorrhage

Group	Up to 20 years old	21-29 years old	30-35 years old	Over 35 years old
Total number with MAC (n=51)	1 (2,5%)	26 (51,3%)	13 (25,3%)	11 (20,9%)

This analysis shows that the most vulnerable age for developing MAC is pregnant women aged 21 to 35 years. However, it should be remembered that this is the most active age for childbearing in our Republic, which likely impacts the indicators studied. The older reproductive age group, which included one in five women with MAC, also poses a no less risk. A study of birth parity indicators showed that 26.9% were primiparous, while 35.8% were multiparous with two to three births. 47.3% of women with MAC were multiparous, with four to seven births. These data suggest that the risk of developing obstetric hemorrhage increases almost threefold compared to primiparous women.

Table 2. Social employment of the studied patients

Group	Housewives	Workers	Employees	Students
Total number with MAC (51)	33 (65,0%)	10 (20%)	6 (10,3%)	2 (0.7%)

The analysis shows that almost two-thirds of the patients were housewives, and one in five were engaged in heavy physical labor, such as agricultural work.

It is known that medical history and status significantly influence not only the course and outcome of pregnancy and childbirth for the mother, but also the health of the fetus and newborn. Iron deficiency anemia is the most common disease among pregnant women, typically characterized by a chronic, protracted course.

Table 3. Chronic somatic diseases in pregnant women

Indicator	*Number of subjects studied (n=51)*	*%*
Mild and moderate anemia <=81 g/L	*30*	*58,8*
Severe anemia <=70 g/L	*4*	*6, 9*
Kidney disease - BMI	*8*	*13,7*
Varicose veins of the lower extremities	*7*	*11,1*
Obesity	*5*	*5,6*
Thyroid disease	*25*	*25,3*
Respiratory diseases	*5*	*9*
Thrombocytopenia/thrombocytopathy	*2*	*2*
Liver and gallbladder disease	*6*	*11,5*

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Thus, the most common chronic somatic pathology in pregnant women with MAC was chronic iron deficiency anemia, which was severe in almost 7% of cases, naturally affecting blood coagulation. Thyroid disease was detected in almost one in four women. Chronic liver and kidney diseases also contributed to impaired hematologic parameters. Thrombocytopenia was present initially in two cases. Acquired or congenital platelet deficiency, according to literature sources, occurs in up to 2% of all pregnant women, which was consistent with our data. Moreover, the diagnosis of thrombocytopenia in the studied cases was made only at the end of pregnancy, before delivery.

According to literature sources, alimentary obesity, regardless of severity, occurs in up to 18.2% of all pregnant women. In the retrospective group, obesity of varying degrees was diagnosed in 6%. However, our body mass index calculations indicate that obesity was observed in 18% of women. It is known that alimentary obesity leads to decreased uterine contractility due to the high breakdown of oxytocin in adipose tissue, which causes weak labor and uterine atony [2,9,10]. However, consultation with an endocrinologist and correction of lipid metabolism were not performed in any case.

Table 4. Structure of the main causes leading to massive bleeding

Causes	Retrospective analysis (p-51)
Placenta previa, low-lying placentation,	13 (24,9%)
Placenta previa, low-lying placentation	6 (12%)
Uterine atony	13 (24,6%)
Coagulopathy, disseminated intravascular coagulation	9 (14,6%)
Severe preeclampsia with hepatic syndrome	14 (25,9%)

Despite the difficult premorbid background, massive bleeding could have been avoided if severe complications of pregnancy and childbirth had not developed in the cases we analyzed.

Table 3 shows that bleeding during pregnancy or early labor in 36.9% of cases was associated with placental abruption or placenta previa, which developed in the presence of preeclampsia, liver or kidney disease, the development of HELLP syndrome, and severe coagulopathy. In the postpartum period, bleeding associated with uterine atony is prevalent.

Severe liver disease and severe forms of preeclampsia are significant factors in the development of MAC. Hemostasis due to thrombocytopenia, although somewhat less common than other pathologies (14.6%), is a cause of fulminant and severe forms of MAC.

MAC is known to be characterized by the rate of blood loss. Inclusion criteria were MAC with a blood loss volume exceeding 1200 ml and a rate of >150 ml/min. According to the literature, uterine atony is the most significant cause of blood loss in terms of volume and rate of blood loss. Acute severe placental abruption also poses a significant risk in terms of volume and rate of bleeding. According to the literature, uterine atony and placental abruption account for over 50% of cases of maternal-onset.

Conclusion

Thus, our analysis of cases of massive obstetric hemorrhage during pregnancy, childbirth, and the postpartum period allows us to identify the most common epigenetic factors contributing to the

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development of MAC. Preconception preparation for women with life-threatening epigenetic factors, including difficult social status, a high number of frequent births and abortions, uterine scarring, chronic somatic diseases of the cardiovascular system, kidneys, and liver, varying degrees of anemia, obesity, and genital tract infections, can help prevent obstetric hemorrhage progressing to MAC. The risks of MS remain high due to the difficulty of early diagnosis, the woman's distance from a medical facility when a life-threatening condition develops, the time required for transportation, and the woman's limited blood volume. Eclampsia combined with PONRP, requiring an emergency CS complicated by hypotonic hemorrhage, is a potentially fatal combination. There is an obvious need for a dynamic assessment of prenatal and intranatal risk factors that determine the timing of planned hospitalization for childbirth in women at risk of bleeding, necessarily in a hospital of the appropriate level.

References:

1. Ailamazyan E.K., Kulakov V.I., Radzinsky V.E., Savelieva G.M., ed. Obstetrics: a national guide. - Moscow: GEOTAR-Media. - 2013. - C. 436-463. (in Russ)
2. Astafieva N.G., Kusmartseva O.. F. Assessment of quality of life in women of fertile age using a special questionnaire WHQ // Sociology of Medicine - health care reforms: materials of the First All-Russian Scientific and Practical Conference - Volgograd, 2016. - C. 28-31-47. (in Russ)
3. Davydov, A. I. Postpartum hemorrhage: organ-preserving methods of treatment: report / A. I. Davydov // Bulletin of Surgut State University. Medicine. - 2015. - № 6. - C. 56-57. (in Russ)
4. Karimova N.N. Modern approaches to improving the quality of life of women who underwent massive hemorrhage in labor. // Autoref....dissertation (DSc), Tashkent, 2020, 69p. (in Russ)
5. Kattakhodjaeva M.H., Abdullaeva L.S. Significance of prediction of postpartum bleeding in uterine overstretching syndrome in the personalization of preventive measures. // Journal of reproductive health and uro-nephrology research,Uzbekistan, 2022 2, 39(in Russ)
6. Kattakhodzhaeva M.Kh., Abdullaeva L.S. Clinical And Morphological Parallels In Pregnancies Complicated By Polyhydramnios..// // Journal of reproductive health and uro-nephrology research №1 (2021) DOI http://dx.doi.org/10.26739/2181-0990-2021-1 (in Russ)
7. Sukhikh G.T., Serov V.N., Savelyeva G.M. Prevention and therapy of massive blood loss in obstetrics (medical technology) // Moscow, FSU “Scientific Center of Obstetrics, Gynecology and Perinatology named after Acad. V.I. Kulakov Ministry of Health and Social Development of the Russian Federation. - 2017. - C. 13-15. (in Russ)
8. Zainulina M.S., Kornyushina E.A., Krivonos M.I. Strategy to overcome maternal mortality due to hemorrhage // Journal of Obstetrics and Women's Diseases. - 2015. - VOL. LXIV, NO. 2. - C. 33-41. (in Russ).

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