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PREDICTION OF NON-DEVELOPING PREGNANCY IN AN ADVERSE EPIDEMIOLOGICAL SITUATION.

Lagiya M. Abdullayeva - Professor of the Department of Obstetrics and Gynecology of the FPC of the Tashkent Medical Academy, Tashkent, Uzbekistan, lola1957@mail.ru;
Xusain X. Buriyev - Chief specialist of the Department of Motherhood and Child Protection of the Ministry of Health, Tashkent, Uzbekistan, dr_xusain_xamroqulovich@mail.ru.
Azizbek F.Valijonov - 6th year student of the medical faculty of the Tashkent Medical Academy. Tashkent, Uzbekistan,
Azizbekvalijonov97@gmail.com.

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Abstract:
The third "coronavirus" year has already begun - and we can conclude that SARS-CoV-2 has become a sad everyday occurrence. Global health has undergone a difficult adaptation to the pressures of a pandemic. Obstetricians and gynecologists have a special responsibility: the global guideline does not recommend postponing pregnancy planning and childbirth for the post-Covid period. It is unknown when it will come and whether it will come at all.

Keywords: Non-developing pregnancy, epidemiological unfavorable situations.

PURPOSE OF THE STUDY: To improve the tactics of preconceptional preparation of women and the prevention of this complication of the gestational period.

If the patient is infected with COVID-19, the risk of serious maternal and perinatal complications is significantly increased. And according to world sources, non-developing pregnancy is one of the most common pathologies after suffering from COVID-19.

In the 21st century, coronavirus infection has become relevant as a causative agent of community-acquired pneumonia with an "atypical" course. Over the past 20 years, coronaviruses (CoV) have caused the third outbreak of morbidity:

- 2002-SARS (severe acute respiratory syndrome), the causative agent of SARSCoV - mortality among pregnant women up to 25%.
- 2012-MERS (Middle East respiratory syndrome), the causative agent of MERS-CoV - mortality among pregnant women up to 37%.
- 2019-COVID-19 (coronavirus disease 2019), causative agent SARS-CoV-2.

Novel coronavirus infection (NCI) COVID-19 is a disease caused by a new viral pathogen called Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). The current outbreak of coronavirus disease 2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARSCoV-2), was declared a pandemic by the World Health Organization (WHO) on March 11, 2020. Hemostasis disorders play an important role in the pathogenesis and clinical manifestations of COVID-19. At the onset of COVID-19, hypercoagulation is detected, and consumption coagulopathy and disseminated intravascular coagulation (DIC) are usually recorded in the later stages of the disease. In the pathogenesis of hypercoagulation in COVID-19, proinflammatory cytokines, hyperfibrinogenemia, increased blood levels of von Willebrand factor, factor VIII, neutrophil extracellular traps, platelet activation, production of antiphospholipid antibodies, and microvesicles play a role. Laboratory parameters reveal increased plasma concentrations of D-dimer, fibrinogen, an increase in prothrombin time and a decrease in the number of platelets. The cumulative incidence of thrombotic complications ranges from 21 to 31%. Pathogenetically, these same factors often play the role of trigger mechanisms for the development of undeveloped pregnancy.

Non-developing pregnancy (NDP) is one of the modern world obstetric problems, called a silent pandemic in 2006 at the FIGO Congress, since the inexplicable spread of this phenomenon, included in the concepts of fetal loss syndrome and the problem of spontaneous miscarriages, including habitual ones, became obvious to everyone continents of the globe. And for almost a decade and a half, no reliable answer to the question of etiology or causal factors has been received. This is what motivates various studies and attempts to prevent subsequent UXOs, in fact, all over the world. The latest (October 2018) FIGO congress in Rio de Janeiro was no exception, where the lack of breakthrough data on both recurrent miscarriage and NPL was noted. These literatures offer versions, counterversions, and achievements of clinical practice for the familiarization of practitioners, because much remains unclear along this path. It seems all the more necessary to regularly update knowledge on this extremely important problem.

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The proportion of pregnancies that fail to progress worldwide has increased significantly from 20 to 46% of total pregnancies. Failure to develop pregnancy is one of the outcomes of primary placental insufficiency, caused by defective placentation as a result of abnormal angiogenesis in the placenta and impaired remodeling of the spiral arteries of the uterus supplying the intervillous space. This remodeling of the spiral arteries ensures the occurrence of blood flow in the intervillous space, and as a result, oxidative stress, which plays an important physiological role in normal differentiation of the placenta. In 2/3 of cases of early pregnancies, anatomically defective placentation was proven, characterized by thin fragmented trophoblast with weak invasion into the lumens of the terminal zones of the spiral arteries. This fact is associated with the premature occurrence of intervillous blood flow and acute oxidative stress in the placental tissue in most cases of non-developing pregnancies.

The deficiency of vitamins, microelements and nutrients in the modern world is a problem that is recognized as a pandemic of the 21st century, despite the development of medical knowledge and the availability of information. Recently, the role of vitamin D and some micronutrients in reproductive medicine, obstetrics and gynecology has been actively studied. Vitamin deficiency among pregnant women in the world reaches 50–80%, which creates unfavorable conditions for the process of implantation, development of the embryo and fetus. Against the background of vitamin D deficiency, a patient of any age develops chronic inflammation, which significantly reduces the body's resistance to bacterial and viral diseases. Taking into account the biological role of vitamin D in maintaining antiviral immunity and the significant prevalence of deficiency of this vitamin, its compensation is a necessary component of the prevention of the new coronavirus infection COVID-19. Vitamin D is fundamentally necessary to maintain the level and activity of interferon-dependent antiviral defense proteins, weaken the effects of the cytokine storm and compensate for comorbid pathologies. This dictates the need for more in-depth research to identify risk groups, develop prognostic criteria and carry out treatment and preventive measures in order to reduce perinatal losses and protect the health of mother and child.

At the same time, medical science and practice are not immune to the development of new viral infections or mutations of existing ones in the coming years. All of the above determines the relevance of this study.

Until proven otherwise, COVID-19 or SARS CoV-2 infection is the disease of the century, which turns the world upside down and turns the multidimensional aspects of human life inside out. Since its introduction, it has created much confusion and uncertainty about its ultra-fast spread in temperate climates and the bizarre course of the disease. The less painful and less fatal nature of Covid-19 for pregnant women has also opened up much debate and countless speculations. This happens because although their immunity is weaker than that of non-pregnant women, the high resistance of pregnant women to Covid-19 is a paradox for many researchers.

Key predictors that influence a person's lifestyle and depend on the environment include deficiency of vitamin D and vital nutrients (zinc, magnesium, calcium). The centuries-old history of medicine is directly related to the progressive research of vitamin D [Spirichev V.B., 2011].

However, despite the continuous accumulation of medical facts about the negative impact of vitamin D deficiency and essential micronutrients on the human body and the growing clinical experience of its use in practical medicine, the problem of the high incidence of its deficiency throughout the world remains extremely acute.

Vitamins and minerals are necessary both for the healthy development of the embryo and for maintaining the normal functioning of all body systems of the expectant mother. Micronutrient deficiency in a woman's body and failure to meet the increased need for vitamins and microelements during pregnancy increase the risk of malformations and make a significant contribution to the etiology of numerous pathologies of pregnancy. There is also an incorrect belief that vitamin therapy increases the risk of having a large fetus, but it is the deficiency of certain vitamins and microelements that causes insulin resistance, metabolic syndrome, gestational diabetes mellitus, which leads to macrosomia [Khodzhaeva F. T., 2019].

CONCLUSION:

Analyzing the results of the data, it was found that pregnant women, women in labor and postpartum are also at high risk of developing severe infection during this epidemiological unfavorable situation, especially if they are deficient in vitamin D and micronutrients.

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