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ACUTE RESPIRATORY DISEASE IN PREGNANT WOMEN AND PERINATAL OUTCOMES

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Abstract: Respiratory viral infections in the process of human civilization manifested themselves through various viral infections. In the XXI century, COVID-19 became a global problem in the history of mankind, and the causative agent of which was the SARs-CoV-2 virus and was the cause of a pandemic around the world, and today this virus has turned into a seasonally aggravated respiratory viral infection. This virus can also cause serious health problems during pregnancy. Unlike the general population pregnant women constitute a special group with a significantly higher risk of viral infection as a unique "immunological" condition and a change in the function of all organs and systems during pregnancy, in this regard, the study of the functional state of the mother-placenta-fetus system in pregnant women, the course of pregnancy, complications and perinatal outcomes, as well as the condition of newborns in women who have had viral infections remains with scientific and practical the point of view of the requirements of modernity.

Key words: Respiratory viral infections; pregnancy; newborns; coronavirus infection; perinatal outcomes.

Relevance:

Numerous studies on the effect of respiratory viruses on the human body have shown that this infection selectively affects the vascular endothelium, causing vasculitis in many organs and systems [4, 5]. From these proofs, it is assumed that systemic vascular endothelial damage can lead to impaired placental formation, the development of placental oxidative stress and a variety of complications of pregnancy and in newborns [1, 3, 9].

At the end of 2019, a new type of respiratory virus was discovered and identified, causing a cluster of pneumonia cases. The virus spread rapidly, and in February 2020, WHO designated this disease as COVID-19, i.e. coronavirus disease of 2019 [2, 7].

The results of studies conducted to date on a global scale have shown that information about the transmission of viral diseases from mother to fetus (with the exception of the herpes virus) is usually carried out by a hematogenic route, through which the virus circulating in the maternal bloodstream enters the placenta and then to the fetus. However, the vertical transmission of COVID-19 has not been proven to date (Alzamora M.C. et al., 2020). In a study by S. Khan et al. (2020) indicated that in 2 cases of neonatal pneumonia in newborns born to a mother infected with the SARS-CoV-2 coronavirus, the SARS-CoV-2

coronavirus was detected in throat swabs taken within 24 hours after birth by PCR. However, placenta, amniotic fluid, and umbilical cord blood have not been tested for coronavirus (Khan S. et al., 2020).

Unlike the general population, pregnant women constitute a special group with a significantly higher risk of viral infection as a unique "immunological" condition and a change in the function of all organs and systems during pregnancy, in this regard, the study of the functional state of the mother-placenta-fetus system in pregnant women who have undergone COVID-19 remains with scientific and from a practical point of view, the requirement of modernity.

Large-scale studies are being conducted all over the world aimed at studying the effect of respiratory viral infections on the state of the mother-placenta-fetus system in pregnant women [3, 9, 10]. In this regard, the priority area of scientific research remains the study of the function of the vessels of the uteroplacental complex, the state of the vascular endothelium and the morphology of the placenta, as well as the assessment of the condition of newborns after childbirth, in women infected with acute respiratory viral infection (COVID-19) during pregnancy.

Research materials and methods. The study was conducted in a Specialized maternity center for pregnant women with Covid-19 in the Samarkand region, morphological studies were conducted in a Multidisciplinary clinic of the Samarkand State Medical University. We examined 86 pregnant women, aged 20 to 35 years, who had been ill with Covid-19 in the II (40) and III (46) trimesters of pregnancy.

The research methods were general clinical and obstetric examinations, ultrasonographic and Dopplerographic examination of pregnant women and newborn examination.

The results obtained and their discussion. In general, the majority of pregnancies ended with urgent delivery 49 (57%) and through the natural birth canal 40 (46.5%). Premature birth due to obstetric complications and the severity of the mother's condition occurred in 19 (22.1%) women. According to the WHO definition, the rate of premature birth before 37 weeks of gestation is up to 10% (WHO, 2018). In our study, premature birth occurred 2.1 times more often in those affected by Covid-19. In this regard, each pregnant patient should be individualized, taking into account the obstetric situation and the state of the mother-placenta-fetus system.

In every fifth (19.8%) patient, amniotic fluid contained an admixture of meconium. Progressive fetal hypoxia (unsatisfactory/inconclusive fetal condition) was observed in 11 (12.8%) cases. Cesarean section delivery occurred in 46 (53.5%) women according to obstetric indications: acute and progressive fetal hypoxia (unsatisfactory/inconclusive fetal condition) – 13 (15%) cases, labor anomalies and uterine scar - 12 (13.9%), PPRP – 4 (4.7%), pelvic presentation of the fetus – 3 (3.5%). Indications for COP in connection with the severe condition of the mother were carried out in 14 (16.3%) women.

The analysis of the course of labor in two groups showed the following. In patients who underwent Covid-19 in the second trimester of pregnancy, childbirth occurred on average at 35.3±3.9 weeks, while complications occurred in 3 (7.5%). Patients who had a coronavirus infection in the third trimester of pregnancy were delivered later in pregnancy, on average at 36.2±4.8 weeks, complications occurred in 10 (21.7%) women.

In the structure of indications for surgical delivery, the inconclusive condition of the fetus was in group 1 – 5 (12.5%), in group 2 – 7 (15.2%) cases.

In total, 86 newborns were born, 51 of them full-term, 1 newborn was with signs of postponement and 34 newborns were born with signs of prematurity. Of these, in 9 cases, childbirth occurred at 24-28 weeks gestation and the newborns showed signs of severe prematurity. Due to prematurity and severe condition of newborns at birth, perinatal mortality was 5.8% (5 cases, 58%).

The average birth weight of newborns in the 1st group was 2800.0±250.0; in the 1st group - 2950.0±330.0. The assessment of the condition of newborns on the Apgar scale averaged 3-4 points in 11 (12.8%) newborns, 5-6 points in 23 (26.7%) newborns and the remaining 52 (60.5%) newborns were born in satisfactory condition and the Apgar score was 7-8 points or higher.

Conclusions: Given that Covid-19 is a viral respiratory infection that has caused an ongoing pandemic, it is important to understand its impact on women in labor and their newborns [3, 5, 6]. Moreover, two other known human coronaviruses (SARS-CoV and MERS-CoV) have been associated with adverse clinical outcomes, including life-threatening maternal disease, maternal mortality (in a small but significant number of cases), delayed fetal development, premature birth, hospitalization of women and newborns in the intensive care unit, spontaneous abortions and perinatal death [1, 4, 8].

An analysis of the results of the study shows that in patients with viral infections, the frequency of premature birth and the need for surgical delivery is higher than in the population. During our study, perinatal mortality was 5.8%. To improve perinatal outcomes and the risks of additional complications in newborns and pregnant women with respiratory viral infections, it is necessary to prescribe drugs to improve blood flow in the mother-placenta-fetus system.

References:

1. Abdullayeva L.M., Kim V.S. Perinatal outcomes in patients with COVID – 19 //Journal of Theoretical and Clinical Medicine. – 2021 – Vol. 1. - No.6. – pp. 12-14.
2. Dustova N.K., Ikhtiyarova G.A. Infection of the placenta in pregnant women who suffered coronavirus infection during the pandemic //Journal of Theoretical and Clinical Medicine. -2021.– Vol.1. – No. 6. – Pp.56-59.
3. Indiaminova G. N. The Effect of Covid-19 on the State of The Hemostasis System In Pregnant Women In Different Trimesters //Research Journal of Trauma and Disability Studies. – 2023. – Vol. 2. – No. 3. – P.95-98.
4. Agababyan L. R., Indiaminova G. N. Homiladorlik davrida koronavirus (Covid-19) infeksiyasining xususiyatlari va perinatal natijalar (adabiyotlar sharhi) //Biomedicine va amaliet journal. - 2021. – Vol.6. – No.3. – pp. 19-24.
5. Indiaminova G. N., Agababyan L. R. Covid-19, pregnant and features of the state of hypercoagulability // World Bulletin of Public Health. – 2022. – Vol. 9. – pp. 154-155.
6. Farxodovna I. G. N. J. S. The state of the hemostasis system in pregnant women with respiratory viral infection //Scientific Journal of Medical Science and Biology. - 2024. – Vol. 1. – No. 1. – pp. 18-21.
7. Indiaminova G. N., Sattarova N. A. Perinatal outcomes in acute respiratory viral infection in pregnant women //Central Asian Journal of Medical and Natural Science. – 2024. – Т. 5. – №. 1. – С. 502-504.
8. Indiaminova G. N. et al. Changes in the “Mother-Placenta-Fetus” System in Pregnant Women with Respiratory Viral Infection //European journal of modern medicine and practice. – 2024. – Т. 4. – №. 2. – С. 153-155.
9. Indiaminova G. N. Covid-19, Pregnancy and Perinatal Outcomes //International journal of health systems and medical sciences. – 2023. – Т. 2. – №. 6. – С. 107-112.
10. Индиаминова Г. Н. Киличова Г. Д. Респираторно-вирусные инфекции (covid-19) у беременных и морфологические изменения в плаценте //Central Asian Journal of Medical and Natural Science. – 2024. – Т. 5. – №. 1. – С. 405-407.