International Journal of
Health Systems and Medical Science

ISSN: 2833-7433
Volume 2 | No 6 | Jun - 2023

# Covid-19, Pregnancy and Perinatal Outcomes

**Gulrukh Nuriddinovna Indiaminova**[1]

[1]Samarkand State Medical University, Samarkand, Uzbekistan

**Abstract:** The COVID-19 coronavirus, which emerged in 2019, has caused serious health problems around the world. In particular, in the area of "Maternal and Child Health", the COVID-19 virus is one of the factors contributing to complications of pregnancy and worsening of perinatal consequences. Pregnant women have a high tendency to become, infected with this infection due to altered physiological and immunological functions. Long-term observations have shown that during pregnancy there is a predisposition to respiratory viral infections. Due to physiological changes in the immune and cardiopulmonary systems, pregnant women are more likely to have severe respiratory viral infections. One of the most controversial and unexplored aspects of the Covid-19 problem is the course and outcome of a new coronavirus infection in pregnant women. Based on the available data on the prevalence of a new coronavirus infection and knowing that other infections are severe and lead to a number of complications in pregnant women, it can be assumed that Covid-19 infection can occur in different ways, in different populations and ethnic groups also, in different territories of the same country.

**Key words:** COVID-19 coronavirus, perinatal diseases, newborn, pregnant, intrauterine infection, perinatal lesions of the central nervous system, pneumonia, non-specific functional bowel disorders.

## Introduction

Although most patients showed no clinical signs of COVID-19 coronavirus, most pregnant women complained of mild colds and flu. In the United States (USA), 23,000 pregnant women and 386,000 women of reproductive age (RYoA) were laboratory-confirmed SARS-CoV-2 and had symptoms of COVID-19 infection.

Indicators of clinical signs of coronavirus COVID-19, cough in pregnant women 50.3% (51.3% in women of reproductive age), headache 42.7% (54.9%), muscle pain 36.7% (45.2 %), fever 32% (39.3%), sore throat 28.4% (34.6%), shortness of breath 25.9% (24.8%), loss of smell and taste 21.5% (24, 8%).

Other symptoms: fatigue, weakness, loss of appetite, diarrhea, nausea and vomiting were observed in more than 10% in each group (1, 2, 3, 5, 7, 8.).

According to the findings, 7% of pregnant women tested positive for the COVID-19 virus, and 75% had no symptoms. Some studies have shown that even 95% of pregnant women with COVID-19 may not have symptoms. Of 95% of pregnant women, 59% were asymptomatic with continued follow-up. Sometimes, the clinical indicators of COVID-19 can be similar to the usual symptoms of pregnancy - weakness, shortness of breath, nasal congestion, nausea and vomiting. Body temperature may also not rise (1, 2, 4, 7, 8.).

During the monitoring process, the diagnosis of COVID-19 in some cases was confirmed and other cases was in doubt.

Illness in 11,000 pregnant women and newborns: 13% were severe, 49% developed pneumonia, 30% received nasal oxygen, 4% were treated in an intensive care unit, and 3% were on long-term mechanical ventilation. The mortality rate ranged from 0.15% to 0.6%. Maternal mortality occurs in the chronic course of the disease of a pregnant woman. The causes of death are complications such as shortness of breath, sepsis.

5% of pregnant women with COVID-19 required inpatient treatment and were hospitalized. Such a severe course of the disease occurred mainly in women over 35 years old, suffering from obesity, hypertension and diabetes (3,5, 6,8).

As a result of gestation, spontaneous miscarriages of the fetus increased by no more than 2%. In the United States, pregnant women with COVID-19 completed two large cohort tests. As a result, premature birth is higher than 7.2% in pregnant women with COVID-19 (5.8% in pregnant women without COVID-19), 28.9-34.0% (27.5%) with caesarean section, caesarean section The overall cutting rate is 31.9%.

This showed that the incidence of caesarean section in pregnant women with COVID-19 was low. Fetal stillbirth was 3%. A high risk was observed during an exacerbation of the infection (1, 2, 5, 4, 7, 8).

Although COVID-19 is known, to be specific for immunocompromised people with chronic diseases such as diabetes, cancer and lung diseases, i.e. the elderly, pregnant women also fall into this group of people with immunodeficiency. Although the absolute risk of severe COVID-19 in pregnant women is very low, early detection of symptoms and appropriate therapy should be started immediately. Most women with COVID-19 feel mild symptoms that disappear after a few days, but there is also a severe course of the disease (1,3,4,5).

Consequences for the fetus. Infection of the fetus in the womb is rare - 2%. The infection is transmitted from mother to fetus mainly by hematogenous route. However, there is insufficient data on the occurrence of congenital malformations in the fetus. There is currently no evidence that the virus is teratogenic. To date, there is no data on the course of COVID-19 as an intrauterine infection. The pathway of vertical transmission of COVID-19 from mother to fetus is under consideration (3.6). That is, the vertical transmission of COVID-19 from mother to fetus has not been proven. This is due to the fact that the antigen of the COVID-19 virus was not detected in swabs taken from the amniotic fluid of the fetus, umbilical cord blood, breast milk and the nasopharynx of the baby. According to the data, 46 out of 55 pregnant women infected with the coronavirus COVID-19 did not give birth to any signs of vertical transmission of the virus in their babies.

In China, the National Health Commission recommends to monitor babies born to pregnant women infected with COVID-19 in separate rooms for 14 days. Even after the woman was completely cured of COVID-19, laboratory tests were repeated and the result was negative. After complete recovery, the woman started breastfeeding (2,5,6,7,8).

Consequences of Infancy: 95% of babies born from infected with SARS-CoV-2 were born healthy. Occasionally, mothers had to undergo mechanical ventilation in their infants when COVID-19 was severe or prematurely born. Complications such as respiratory distress syndrome, fetal distress syndrome and coagulopathy have also been reported (1,2,5,6).

In children, COVID-19 often presents with pneumonia. When examining 2143 children with ARVI, it was found that only 5.9% of them were infected. This is more common among them, especially the younger they are. Other types of viruses have been found in the remaining children as well as in adults. The COVID-19 clinic in children is nonspecific, like the ARVI clinic: short-term alcohol consumption, difficulty breathing through the nose, sore throat, weakness, headache. Unlike adults, 57% of children have gastrointestinal symptoms - abdominal pain, nausea, vomiting,

diarrhea. Rarely, conjunctivitis, convulsions, broncho-obstructive syndromes occur. COVID-19 is asymptomatic in 15% of children, and in 20% - with upper respiratory tract inflammation, as in the ORVI clinic. 65% of these children develop pneumonia, sometimes pneumonia can only be detected radiographically (1,2,4,6,7,8).

Today, the transmission of the novel coronavirus COVID-19 to the fetus, the study of perinatal effects, reduces maternal mortality, as well as perinatal morbidity and mortality. To this end, scientific research is a problem that needs to be studied today in obstetrics and gynecology, perinatology, pediatrics and other fields.

The goals and objectives of the study: to study the consequences of pregnancy and childbirth, as well as perinatal morbidity in pregnant women with COVID-19 coronavirus infection.

Materials and research methods: Among the sick newborns admitted to the Samarkand Regional Multidisciplinary Children's Hospital in December 2020 and January 2021, 25 newborn women with a history of COVID-19 coronavirus were analyzed. These 25 infants were assigned to the 1st main group (1-AG). From the history of 20 newborn women whose mothers were not infected with the COVID-19 coronavirus, were identified as control group 2 (2-NG). 45 infants were selected for the study.

Inspection results: Of the women in 1-AG, 19 were rural (76%) and 6 were urban (24%). Their average age was 23.5 ± 2.7 years. 22 housewives (88%) and 3 workers (12%) by profession. The degree of kinship is present in 2 (8%). Of the women in 2-NG, 12 were rural (60%) and 8 were urban (40%). Their average age was 22.5 ± 2.9 years. By profession, 18 housewives (90%), 2 workers (10%). The degree of relationship is present in 1 person (5%).

Women with an anamnesis of 1-AG had moderate levels of toxicosis during pregnancy, risk of miscarriage, moderate to severe anemia, pyelonephritis, influenza, and COVID-19 if untreated. Women in the 2-NG group also had moderate levels of toxicosis during pregnancy, risk of miscarriage, moderate to severe anemia, pyelonephritis, and influenza if untreated. However, COVID-19 has not been infected with the coronavirus.

In 1-AG, 22 (88%) and 3 premature (12%) pregnancies occurred on time. 3 people (6%) were born with 6-7 points, 18 people (72%) with 7-7 points, 2 people (8%) with 5-6 points and 2 people (8%) with 3-4 points. In 21 of them, the amniotic fluid was clean (84%), in 4 of them the amniotic fluid contained meconium (16%). In 2-NG, all women gave birth on time - 20 (100%). 2 (10%) received an assessment of 6-7 points, 15 (75%) received an assessment of 7-7 points and 3 (15%) received an assessment of 7-8 points. In 14 (70%) the amniotic fluid was clear, in 6 (30%) the amniotic fluid contained meconium.

Thus, it can be said that the difficult birth of babies in 1-AG is associated with the fact that the mother is infected with the COVID-19 coronavirus. In 2-NG, babies were judged to be inversely proportional because they were not born heavy even with meconium in the amniotic fluid. In both groups, the turbidity of the peritoneal fluid during pregnancy in infants born with perinatal diseases was directly proportional.

Perinatal incidence of newborns in women who have been infected with the COVID-19 coronavirus. Clinical symptoms in infants: In group 1-AG, 21 (84%) had an average of 49-54 breaths per minute. On auscultation, lactation is heard in 18 patients (80%), shortness of breath - in 18 (72%), cyanosis - in 18 (72%) and 18 (72%). Increased body temperature - in 16 (64%), abdominal relaxation - in 14 (56%), anxiety and excitement - in 9 (36%), increased muscle tone - in 9 (36%), 2 (8%) ineffective, 2 (8)% had diarrhea, nausea, vomiting, 1 (4%) had a decrease in muscle tone, and 1 (4%) had symptoms of hypothermia.

In NG, not affected by the COVID-19 coronavirus during pregnancy, abdominal relaxation in infants was observed in 10 (50%), discomfort and agitation in 7 (35%), increased muscle tone in 7

(35%), increased body temperature in 6 (thirty%). %), 6 people with rapid breathing (30%) had an average of 49-54 breaths per minute. Clinical symptoms such as diarrhea, nausea, vomiting were observed in 3 (15%), and lactation deficiency - in 2 (10%).

Thus, in 1-AG, infant complaints, delayed lactation and inability to swallow 22 (88%), shortness of breath 18 (72%), fever 16 (64%), abdominal rest 14 (56%), anxiety and irritability 9 (36 %). In 2-NG, 10 (50%) had complaints of abdominal rest, 7 (35%) had discomfort and irritability, and 6 (30%) had dyspnea and fever.

Test results: B 1-AG blood group 12 (48%) A (II) Rh +, 8 (32%) V (III) Rh +, the remaining 3 (12%) O (I) Rh + and 2 (8) %) AV (IV) was born with Rh +. In total blood hemoglobin was in the range of 84-92 g / l in 24 (96%) people born with moderate and severe anemia. 1 (4%) was born with severe anemia. In a general blood test, leukocytosis, a parallel increase in stab leukocytes, was recognized as normal in segmented leukocytes in 13 (52%). In 7 (28%) monocytes decreased. An increase in ECG by 13-25 mm / h was normal in 20 (80%) and 5 (20%) patients. In 17 (68%) cases, the amount of calcium in the blood ranged from 1.76 to 1.9 - a significant decrease. In 1 (4%) lymphocytosis, 45 (19-37) were detected and in 2 (8%) hyperblirubinemia. On 1-AG radiography of the lungs revealed bronchopneumonia in 20 (80%) and neurosonography-ventriculodilation in 4 (16%). In 2 of them (8%) the appearance of bronchopneumonia on neurosonography - ventriculodilation and radiography of the lungs. In 2-NG, bronchopneumonia was detected in 3 people (15%) on radiography of the lungs and ventriculodilation in 2 people (10%) on neurosonography.

With 1 premature birth, the child was born with a severe degree of asphyxia. In blood tests; total protein was 58.0 g / l (at the age of 3 years - 46–70 g / l). Bilirubin 90.3 μmol / L (3.4-20.5), free bilirubin increased by 83 μmol / L (1.7-17.1), bound bilirubin 3.3 μmol / L is normal (0.86- 5.3). The total hemoglobin in the blood is 80 g / l. Leukocytes are normal - 6.4x109 / l. Monocytes decreased by 2%. ESR is normal at 2 mm / h. Diagnosis: Congenital malformation. Shortness of breath is moderate. Pregnancy period - 31 weeks. Intrauterine infection. Perinatal lesion of the central nervous system. COVID-19. Morphofunctional immaturity. Baby (1700.0 / 39 cm). Test results in 2-NG: blood group 9 (45%) A (II) Rh +, 5 (25%) V (III) Rh +, the remaining 4 (16%) O (I) Rh + and 2 (10% ) AV (IV) was born with Rh +. In total blood, 18 (90%) were born with moderate and severe anemia of hemoglobin 88–92 g / l. In NG, leukocytosis in a general blood test in 8 (40%) infants with a parallel increase in stab leukocytes was normal in segmented leukocytes. In 9 (45%) ECGs increased to 11-17 mm / h, in the remaining 11 (55%) ECGs were normal. In 7 (35%), the amount of calcium in the blood was less than 1.63–1.9. So, in 1-AG and 2-NG in the general blood test, leukocytosis, a parallel increase in rod-shaped leukocytes, an increase in the ECG, and a decrease in the amount of calcium in the blood were observed. In 1-AG alone, monocyte depletion was found in 7 infants (28%), lymphocytosis in 1 infant (4%), and hyperblirubinemia in 45 infants (8%).

Diagnosis: In 1-AG:

Cerebral ischemia, moderate to severe arousal. Vegetative-visceral syndrome. Intrauterine infection - in 4 (16%).

Perinatal damage to the central nervous system. Non-infectious diarrhea in 2 people (8%).

Intrauterine infection. Severe hyperblirubinemia. Extinction syndrome of hemolytic encephalopathy - in 2 (8%).

Pneumonia. Epiphyseal osteomyelitis of the left femur in 1 person (4%).

Pneumonia. Severe acute respiratory failure was observed in 2 (8%).

Acute, severe form of hospital-acquired pneumonia of newborns. The severity of respiratory failure was 16 (64%).

Birth-related brain injury. The second stage of cerebral ischemia is the excitation phase. Intrauterine infection in 1 person (4%).
Birth injury - fracture of the right third of the right humerus. cephalohematoma. mild asphyxia. Cerebral ischemia. Brain hemorrhage. Large fetus in 1 person (4%).
Congenital heart defect. Shortness of breath is moderate. Period of pregnancy 31 weeks. Intrauterine infection. Perinatal damage to the central nervous system. COVID-19. Morphofunctional immaturity. Small child (1700.0 / 39 cm) for 1 person (4%).
Intrauterine infection. Perinatal damage to the central nervous system. Morphofunctional immaturity. Low birth weight in 2 children (8%).
Diagnosis: With 2 NG:
Cerebral ischemia moderate to severe excitation phase. Intrauterine infection in 4 (20%).
Perinatal injury of the central nervous system. Noninfectious diarrhea in 4 people (20%).
Acute course of neonatal hospital pneumonia in 2 (10%).
Acute, severe form of hospital-acquired pneumonia of newborns. Severe respiratory failure is present in 4 people (20%).
Birth-related brain injury. The second stage of cerebral ischemia is the excitation phase. Intrauterine infection-1 (5%).
Intrauterine infection. Perinatal lesions of the central nervous system in 1 person (5%).
Prenatal damage to the central nervous system. Nonspecific functional bowel disorder - in 4 (20%).
Thus, perinatal morbidity in 1-AH, acute course of neonatal hospital pneumonia, severe form in 20 (80%), severe respiratory failure in 18 (72%), perinatal damage to the central nervous system in 10 (40%), intrauterine infection in 10 people (40%), vegetative-visceral syndrome in 4 people (16%), severe hyperblirubinemia, hemolytic encephalopathy disappearance syndrome, non-infectious diarrhea in 2 people (8%), moderate respiratory failure, mild asphyxia associated with complications: craniocerebral injury, cephalohematoma, epiphyseal osteomyelitis of the left femur, congenital trauma, fracture of the middle third of the right humerus, morphofunctional immaturity, small baby at birth of 1 person (4%). Perinatal morbidity in 2-NG, perinatal damage to the central nervous system in 14 (70%), acute neonatal hospital pneumonia, severe form, intrauterine infection in 6 (30%), severe respiratory failure, diarrhea of non-infectious origin, nonspecific functional intestinal disorders Revealed in 4 (20%).
Conclusion:
Clinical features of carrying with coronavirus COVID-19: difficult births of newborns in 1-AG can be explained by the fact that the mother is infected with the coronavirus COVID-19. In 2-NG, the condition of the newborns was assessed as satisfactory, even in the presence of meconium in the amniotic fluid. However, perinatal morbidity was directly proportional to the turbidity of the amniotic fluid.
Symptoms in infants: 1-AG, lactation and inability to breastfeed in 22 (88%), shortness of breath in 18 (72%), fever in 16 (64%), abdominal rest in 14 (56%), discomfort and irritability was present in 9 (36%). In 2-NG, 10 (50%) had complaints of abdominal rest, 7 (35%) had discomfort and irritability, and 6 (30%) had dyspnea and fever.
Interpretation of laboratory results: in 1-AG and 2 NG, in the analysis of whole blood leukocytosis, a parallel increase in rod-shaped leukocytes, an increase in ECG, a decrease in calcium in the blood. In 1-AG alone, monocyte depletion was found in 7 children (28%), hyperblirubinemia in 2 children (8%), and lymphocytosis in 1 infant (4%).
Perinatal morbidity: in 1-AG, primary pneumonia in 18 (72%), second perinatal damage to the central nervous system and intrauterine infection in 10 (40%), third vegetative-visceral syndrome in 4 (16%) and subsequent severe degrees. hyperbilirubinemia, extinction syndrome of hemolytic

encephalopathy in 2 people (8%), moderate to severe respiratory failure, mild asphyxia, congenital brain injury, cephalohematoma, epiphyseal osteomyelitis of the left femur, congenital trauma of displacement of the right shoulder, morphofunctional weight 1 person (4%). With 2-NG, perinatal damage to the first central nervous system occurred in 14 (70%), second neonatal hospital pneumonia and intrauterine infection - in 6 (30%), third non-infectious diarrhea, nonspecific functional intestinal disorders - in 4 (20%).

**References:**

1. AGABABYAN L. R., INDIAMINOVA G. N. HOMILADORLIK DAVRIDA KORONAVIRUS (COVID-19) INFEKSIYASINING XUSUSIYATLARI VA PERINATAL NATIJALAR (ADABIYOTLAR SHARHI) //БИОМЕДИЦИНА ВА АМАЛИЁТ ЖУРНАЛИ. – 2021. – Т. 6. – №. 3. – С. 19-24.
2. Индиаминова Г. Н. РЕЗУЛЬТАТЫ БЕРЕМЕННОСТИ И РОДОВ У ЖЕНЩИН, ПЕРЕНЁСШИХ ИНФЕКЦИЮ COVID-19, В САМАРКАНДСКОЙ ОБЛАСТИ //VOLGAMEDSCIENCE. – 2021. – С. 299-301.
3. Donaboeva Z.J., Agababyan L.R., Eltazarova G.Sh. New coronavirus infection Clinical signs of Covid-19 in pregnant women. // Problems of Biology and Medicine. Samarkand. 2021. №1.1. (126). B.-85-87.
4. Perepelitsa S.A., Golubev A.M., Moroz V.V. Respiratory failure in premature babies born from multiple pregnancies. // General resuscitation. 2010. No. 4. S. 18-24
5. Petrov Yu.A., Shatalov A.E., Kupina A.D. New coronavirus infection and pregnancy (literature reviewқ) // Clinical Medicine Bulletin of SURSU. Medicine. No. 2 (44). 2020. st. 8-12.
6. Raeva R.M., Kegenbekova A.S., Kokumbekova Sh.B., Suleimenova A.B. and other Obstetric and perinatal outcomes in acute viral infections. // Bulletin Kazakh. national. Honey. un-that. 2013. No. 4 (1). S. 1-2.
7. Chernobrovkina T.Ya., Yankovskaya Ya.D., Buriva S.V. New Coronavirus Infection (Covid-19): Clinical and Epidemiological Aspects "Archive of Internal Medicine". 2020. No. 2. S. 87-92.
8. Berghella V. et al. COVID 19: features of management in pregnant women and antenatal care. 2021. Translation: Konstantin Sergeev, Irina Camp, Nadezhda Knauer, Snezhanna Gening // COVID-19: Pregnancy issues and antenatal care.