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PREGNANCY DURING THE COVID-19 CORONAVIRUS PANDEMIC. RISKS AND IMPACTS ON THE UNBORN CHILD

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Abstract: Pregnancy is a special time, full of excitement and anticipation, for every woman. But for expectant mothers, fear, anxiety, and uncertainty are overshadowing this joyful time due to the current COVID-19 situation.

Pregnant women with COVID-19 experience significantly worse outcomes from both pregnancy and the coronavirus infection. These mutually complicating effects significantly increase the risk of maternal mortality.

However, if a pregnant woman is infected with COVID-19, the risk of severe infection does increase. This is not least because during pregnancy, the expectant mother's body undergoes physiological changes that suppress the immune response — to prevent rejection of the fetus, which is, after all, "a semi-foreign implant".

Keywords: Pregnancy, COVID-19, pandemic, preventive measures, ultrasound examination, biochemical blood tests.

INTRODUCTION

As countries take stricter measures to contain the spread of the COVID-19 coronavirus, our country has also adopted a number of regulatory acts.

By the order of the President of Uzbekistan dated January 29, 2020, in order to ensure a favorable sanitary and epidemiological situation and prevent the importation and spread of a new type of coronavirus infection 2019-nCoV (hereinafter referred to as COVID-19) in the territory of Uzbekistan, a Special Republican Commission was established.

In addition to the decisions made by the Republican Commission, the following regulations have been adopted to date to prevent the spread of COVID-19:

- Decree of the President of the Republic of Uzbekistan No. 5969 of March 19, 2020 “On priority measures to mitigate the negative impact of the coronavirus pandemic and global crisis phenomena on economic sectors”;
- Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 176 of March 23, 2020 “On additional measures against the spread of coronavirus infection”;
- Decree of the President of the Republic of Uzbekistan No. 5978 of April 3, 2020 “On additional measures to support the population, economic sectors and business entities during the coronavirus pandemic.”.

Our world has been living with COVID-19 for over two years. During this time, sufficient data has accumulated on the specifics of the novel coronavirus infection in pregnant women, the risks, and the impact on the unborn child.

Oxford University scientists conducted an international study in 18 countries. The study found that COVID-19 during pregnancy is associated with a significantly higher risk of severe complications for mother and child than previously thought.

METHODS

Pregnant women with Covid, like healthy pregnant women, undergo a triple ultrasound screening:

- 10-14 weeks
- 20-24 weeks
- 30-32 weeks

During an examination at 10-14 weeks, severe malformations and/or signs of genetic abnormalities that could potentially require termination can be detected. At this stage of pregnancy, it is important to perform an ultrasound to measure the fetal crown-rump length (CRL), the nuchal fold (NT), the nasal bone (NB), and, of course, the fetal NT. Every fetus has a small amount of fluid in the nuchal translucency area. The diameter of this fluid space is measured by ultrasound. Also performed at this stage is a combined screening (a blood biochemical test using the PAPP-A test), which helps doctors calculate the risk of chromosomal abnormalities and growth retardation in the fetus, as well as the risk of preeclampsia in the pregnant woman. The PAPP-A test has been proven to be more specific for assessing the risk of chromosomal pathologies, including Down syndrome. The test detects over 80% of fetuses with Down syndrome. To determine a more precise risk level, the results of the PAPP-A test, maternal age, and fetal tuberculosis (NT) are taken into account. A large amount of fluid (NT) indicates an increased risk of Down syndrome and other defects (primarily heart defects). NT screening is especially important in multiple pregnancies, as it is a selective test among all existing screening methods, used to calculate the potential risk of Down syndrome in each fetus. After the 16th week of pregnancy, a triple test is performed, which checks the maternal blood levels of free estriol, AFP (alpha-fetoprotein), and hCG. This test detects over 65% of fetuses with Down syndrome and helps identify other serious pathologies, especially neural tube defects.

Between 20 and 24 weeks, an ultrasound evaluates the structure of the fetus's internal organs, detects developmental abnormalities, and promptly diagnoses potential disabling diseases. An ultrasound at this stage of pregnancy can diagnose or rule out up to 80-90% of fetal abnormalities. Based on the results of the first and second screening periods, the obstetrician-gynecologist, in consultation with the pregnant woman, decides on further pregnancy management.

Between 30 and 32 weeks, fetal growth rate and presentation, size, and estimated weight can be determined, any malformations that only become apparent later in pregnancy can be ruled out, the condition of the placenta and the amount of amniotic fluid can be assessed, and the fetal blood supply can be determined. Based on the results of this examination, a decision is made regarding the method of delivery—whether a vaginal birth is possible or a cesarean section is necessary.

One of the largest studies to date examining COVID-19 outcomes in pregnancy included data from over 2,100 pregnant women from 18 countries. Pregnant women with COVID-19 experience significantly worse outcomes during both pregnancy and the coronavirus infection. These mutually complicating effects significantly increase the risk of maternal mortality.

RESULTS

However, if a pregnant woman is infected with COVID-19, the risk of severe infection does increase. This is not least because during pregnancy, the expectant mother's body undergoes physiological changes that suppress the immune response—to prevent rejection of the fetus, which is, after all, "a semi-foreign implant."

In the second half of pregnancy, as the fetus grows, the pressure of the uterus on the diaphragm increases, causing the mother's breathing to become more shallow. The risk of oxygen deprivation increases dramatically if this natural process is accompanied by a viral lung infection.

The results of the study, which began in March of last year, differ significantly from the ideas of scientists a year and even six months ago.

Initially, WHO experts believed that the new coronavirus posed no particular danger to pregnant women—"unlike swine flu," which caused the 2009 pandemic. However, this conclusion was reached when the number of confirmed cases of Covid-19 had barely surpassed 50,000, almost all in mainland China.

By the summer, when the outbreak had become a full-blown pandemic, the number of pregnant women infected with the coronavirus had reached tens of thousands. It was then that it became clear that expectant mothers were admitted to intensive care at least one and a half times more often than women of the same age who were not pregnant. It turned out that expectant mothers were even more likely to be placed on ventilators.

In Uzbekistan, 234 cases of coronavirus infection among pregnant women have been registered, 120 of whom have recovered and been discharged from medical facilities. In total, over 2,500 pregnant women are under quarantine observation. The mortality rate among pregnant women is 2.9% (7 people).

Fatalities were observed in pregnant women with underlying medical conditions, including type II and III obesity, cardiovascular disease, and respiratory and renal diseases. However, in practice, and according to research by the World Health Organization, no deaths have been observed in pregnant women with coronavirus alone.

However, it is known that since changes occur in the body during pregnancy, including in the immune system, some respiratory infections can pose a serious threat to pregnant women, the WHO reported.

Therefore, it is important for pregnant women to take preventative measures to protect themselves from COVID-19 and to report possible symptoms (in particular, such as fever, cough, difficulty breathing) to their doctor.

The study was conducted according to the highest scientific standards, and its findings are more convincing and credible.

First, each participant was monitored throughout the entire pregnancy: from diagnosis to delivery and for some time afterward.

Secondly, each of these patients was assigned an individual control group for comparison – two pregnant women who were as similar as possible to her in age and health, but who had not been diagnosed with coronavirus.

It should be noted that not all infected pregnant women developed a severe form of Covid-19.

The COVID-19 virus has not been detected in vaginal fluid, cord blood, or breast milk," says Kade, although data is still being collected.

To date, COVID-19 has also not been detected in amniotic fluid or placenta.

Scientists have found that the virus is not transmitted to the baby through breast milk, but protective antibodies are. While it's impossible to ensure a safe distance during breastfeeding, the risk of infection transmission between mother and child can be reduced to virtually zero by expressing milk and feeding babies "distanced."

DISCUSSION

The best we can do is take all necessary precautions to avoid getting COVID-19.

Do simple relaxation exercises at home, such as stretching, breathing exercises, and talk to your midwife if needed.

Take care of yourself as much as possible. Eat well, drink plenty of fluids, rest your hands on your belly, and enjoy your pregnancy.

Additional protective measures include frequent handwashing with soap and water, regularly cleaning and disinfecting frequently touched surfaces at home, self-monitoring for any signs or symptoms consistent with COVID-19, and promptly seeking medical attention if present.

If you suspect you may have COVID-19, it is important to seek medical attention promptly and follow your doctor's instructions. Mothers who are well enough should take precautions before feeding their baby, including wearing a mask, washing their hands before and after contact with the baby, and cleaning/disinfecting surfaces. If you are feeling unwell, express milk and feed it to your baby using a clean cup and/or spoon, following the same precautions.

Pregnant women with COVID-19 experience significantly worse outcomes from both pregnancy and the coronavirus infection. These mutually complicating effects significantly increase the risk of maternal mortality.

However, if a pregnant woman is infected with COVID-19, the risk of severe infection does increase. This is not least because during pregnancy, the expectant mother's body undergoes physiological changes that suppress the immune response—to prevent rejection of the fetus, which is, after all, "a semi-foreign implant."

But we urge you not to panic, jump to conclusions, or make hasty decisions. For example, don't postpone a planned pregnancy, and certainly don't terminate one that's already begun.

We would like to emphasize that pregnancy during a pandemic is not a cause for panic. The vast majority of women will have a normal, healthy birth, regardless of whether they were infected with the coronavirus.

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