EFFECTS ON THE REPRODUCTIVE SYSTEM OF DECEASED PREGNANT WOMEN FROM SARS-COV-2

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ABSTRACT

Currently, the most urgent problem is the infection caused by the new coronavirus SARS-COV-2 and declared a pandemic by WHO on March 11, 2020[5]. One of the risk groups are pregnant women, so doctors around the world are increasingly paying attention to the analysis of the impact of this infection on the course of pregnancy, childbirth and perinatal outcomes. Data on 100,000 pregnant women included in a systematic review of foreign literature showed the possibility of vertical transmission in 5.3% and the birth rate of COVID-positive newborns in 8% of cases. The most frequent complications of perinatal outcomes are fetal distress syndrome (26.5-30.0%), low birth weight (25.0%), neonatal asphyxia (1.4%)[2]. Hospitalization of children in the intensive care unit is required in 43% of cases, and perinatal mortality is 0.35-2.2%.

Key words: COVID-19, cytokine storm, the uterus of the ovaries SARS-CoV-2, follicular granulosa cells.

The COVID-19 pandemic has crippled many health systems, making any emergency medical services a low priority to allow the health system to cope with the large influx of patients infected with COVID-19[4]. At the same time, there are areas where delays in providing care are unacceptable. One of these areas is maternity protection. Reduced access to basic health services for mothers and newborns during a pandemic leads to increased complications and deaths among mothers and newborns during pregnancy, delivery, or the postpartum period. After carrying out their research in their scientific works, the scientists of the world came to the conclusion that "the risk of perinatal transmission of SARS-CoV-2 is low" and they could not prove that the umbilical cord blood and placenta samples were negative for SARS-CoV-2. Doctors note that the second trimester is a very dangerous period for any infectious disease in pregnant women. It is during this period that fetal pathologies may appear. However, it has not yet been confirmed that the child could be infected with the coronavirus in the womb[3].

Effects of the virus on the fetus, teratogenic and mutagenic properties have not yet been studied. COVID-19 (the disease caused by the novel coronavirus 2019) continues to threaten global public health. Epidemiological data show that the most

susceptible to SARS-CoV-2 (coronavirus with severe acute respiratory syndrome 2) are patients with metabolic diseases and chronic diseases[1]. Pregnant women are known to be at risk of contracting Covid due to physiological immunosuppression. Pregnant patients with chronic liver diseases are more susceptible to the clinical consequences of COVID-19, because this infection often leads to hypoxia and hypoxia due to severe pneumonia or "cytokine storm".

Severe cases of coronavirus can affect the reproductive system of men and women, the development of complications depends on the level of immunity. In severe cases, the coronavirus can affect the reproductive system of women, as well as all organs in general. Medicines used for patients with severe COVID-19 can cause specific problems. Theoretically, the ovaries may be dysfunctional.

Purpose of the study. To reveal the morphological features of the structure of the uterus of the ovaries and the placental tube and its influence on the state of fetuses and newborns in pre- and postnatal ontogenesis, as well as in the pathology of COVID-19.

Materials and methods. To achieve this goal, a retrospective analysis of 17 autopsy protocols was carried out and 2 study groups were formed: the main group - 10 pregnant women, delivered in 2021 and the comparison group - 7 women, delivered in 2020. Diagnosis of COVID-19 was based on a clinical study, epidemiological history and laboratory data. The study used general histological methods: staining of sections with hematoxylin and eosin to study the general plan of the structure of the mucous membrane of the placenta and umbilical cord; staining with picrofuxin according to Van Gieson and Mallory to assess the condition of the connective and muscle tissue; staining according to Weigert to identify the elastic fibers of the connective tissue; alcian blue stain to detect mucin; histochemical method, as well as morphometric and statistical research methods.

Results. In all cases, the myometrium was identified with edema and hypertrophy, areas of hemorrhage, plethora and vein thrombosis. In the second group in the tissue, there is a lesion of the ovarian stroma with foci of fibrosis and cells of the granulosa membrane of the follicles, atretic bodies.

Conclusion. SARS-CoV-2 has been confirmed to infect the stromal component of the ovary and follicular granulosa cells, thereby reducing reproductive function or leading to miscarriage. The damaging effect on the endometrial epithelium can prevent normal embryo implantation.

LITERATURE

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