“Letter to Editor”

Should women postpone childbearing during the COVID-19 pandemic?

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It is not clear whether women can decide to become pregnant during the COVID-19 pandemic or whether they are at risk, because examining the long-term consequences of the virus, especially in the first months of pregnancy, requires further time and research¹. The COVID-19 virus has not been found in the semen and testicles of men infected with the virus in the acute phase or during the recovery period, so it is unlikely that the disease will be transmitted sexually². However, it has been reported that the male reproductive system is vulnerable to the infection, and significant changes have been observed in the sex hormones of patients with COVID-19, suggesting damage to gonadal function. Therefore, young men who have recovered from COVID-19 and are interested in having children should receive counseling when deciding to have children³.

Due to damage to cellular immunity and physiological changes, pregnant women are susceptible to respiratory diseases and are more likely to develop severe pneumonia⁴. Pregnant women may be at increased risk for severe COVID-19 disease. To reduce severe COVID-19 disease, pregnant women should be aware of the potential risks of the severe form of the disease. Therefore, the need to prevent COVID-19 in pregnant women should be emphasized, and potential barriers to these measures should be identified⁵. However, a systematic review study found that pregnant women with COVID-19 had milder symptoms than the general population, and that despite the symptoms of viral pneumonia, their RT-PCR tests may be negative⁶. Pregnant women with COVID-19 have a higher prevalence of preterm labor, low birth weight, cesarean delivery, and hospitalization in the NICU than in the general population⁶,⁷. In reproductive-aged women with COVID-19 infection, pregnancy has been associated with increased risk of hospitalization in the intensive care unit and mechanical ventilation, but has not increased the risk of death. Although most mothers have been discharged from the hospital without any serious complications, severe maternal morbidity, multiple maternal deaths, and prenatal deaths due to COVID-19 have been reported. The possibility of vertical transmission of the virus to the fetus has not been ruled out, and therefore careful monitoring of pregnancy in cases of COVID-19 and measures to prevent neonatal infection are essential⁸,⁹. Vertical transmission has been reported in several cases of maternal infection around delivery in the third trimester, suggesting fetal infection but it is not common.

In the at risk newborns, neonatal outcomes such as preterm labor or placental abruption have been well reported in the absence of other problems¹⁰. Little is known about the consequences of maternal infection in the first and second trimesters of pregnancy¹⁰. Fever or hyperthermia during the first trimester of pregnancy, when organogenesis occurs, may be an environmental risk factor for fetal abnormalities, especially

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neural tube defects and miscarriages\textsuperscript{(11)}. Given that there is no evidence of maternal teratogenicity or increased risk of miscarriage, mortality, or maternal morbidity, fertility decisions (such as pregnancy decisions, termination of pregnancy) should not be made on the basis of these concerns from the outset\textsuperscript{(10)}. It should be noted that some of the drugs used to treat COVID-19 are contraindicated in pregnancy or their effects on the fetus are unknown. Antiviral drugs such as Remedivir and Arbidol have been shown to be effective against COVID-19, but further investigation is needed to assess their effectiveness in pregnancy\textsuperscript{(12)}. Pregnant and lactating women have been excluded from these studies\textsuperscript{(12)}.

There is still no vaccine to prevent coronavirus infection, and few drugs have been shown to reduce mortality and morbidity\textsuperscript{(13)}. The COVID-19 crisis may also make it difficult for women to access to information, services, and essential products for sexual and reproductive health\textsuperscript{(14)}. The COVID-19 pandemic has reduced the number of pregnancy visits\textsuperscript{(10)}. There is still scarce knowledge about the short-term and long-term mental health of mothers and fetuses following maternal experience during the pandemic\textsuperscript{(15)}. However, according to the American College of Obstetricians and Gynecologists, pregnancy in the COVID-19 conditions is a personal choice and decisions about becoming pregnant should be made independently and based on their health status, potential risks of COVID-19 and other factors. People with a history of diabetes, lung disease, and heart disease have a higher risk of developing severe COVID-19 disease. Patients should also consider the economic aspect of pregnancy and the increase in family size in the situation that the pandemic has impaired the economy\textsuperscript{(16)}. According to the WHO, those who have given birth in the past six months or have experienced conditions such as diabetes, high blood pressure or breast cancer, or who smoke cigarette, should use a safe contraceptive method during the COVID-19 pandemic\textsuperscript{(17)}. Given the gap of knowledge, infertile patients should also be consulted about the advantages and disadvantages of initiating infertility treatment during the COVID-19 pandemic. This advice should be given to those who have certain conditions such as high blood pressure, diabetes and obesity that may be at increased risk if they become infected. Also, people with the disease should avoid pregnancy until they are fully recovered, and if they are during the infertility treatment cycle, it is recommended that they freeze their eggs or embryos and do not transmit the embryo until complete recovery\textsuperscript{(13)}.

It is important to follow the recommendations of the Centers for Disease Control and Prevention (CDC), including washing hands with soap, not touching face, and observing physical isolation in all pregnant women or those planning to become pregnant\textsuperscript{(18)}. It is clear that access to contraception must also be maintained, and a range of long-term to short-term contraceptive methods, including emergency contraceptives, must be available to individuals. Preferably, contraceptive methods should be given to people for a few months and, if possible, counseling should be done remotely and people should be directed to self-management\textsuperscript{(10,14)}. Considering that we have to live in these certain conditions until the discovery of a vaccine or drug, all couples who want to become pregnant should receive sufficient and up-to-date information about the known risks of COVID-19 infection during pregnancy and how to prevent it. The use of telehealth or telemedicine for pre-conception counseling and other sexual and reproductive health services is a priority.

**Keyword:** COVID-19, Pregnancy, Childbearing

**Conflict of Interest:** No


Received: 4 Jan 2020
Accepted: 4 Apr 2020
نامه به سردبیر «آیا زنان باید باروری خود را در زمان پاندمی COVID به تأخیر بیندازند؟»

به درستی مشخص نیست که آیا زنان می‌توانند طی پاندمی کرونا تصمیم بگیرند یا این که حتماً را تهیه می‌کنند یا چیزی به‌دنبال آن گذشته‌اند. به این ترتیب، زنان باید باروری خود را در زمان پاندمی COVID به تأخیر بیندازند.

به دلیل آسیب به ایدئولوژی و تغییرات فیزیولوژیک، زنان باردار نسبت به بیماری‌های تنفسی حساس هستند و احتمال وقوع پنومونی شدید در آن‌ها بیشتر است. ایران، تهران، ایران

برای کاهش بیماری‌های COVID-19، زنان باید از خطرات بالا میزان شدید بیماری آگاه باشند. به‌طور کلی، زنان باید بر بروز بیماری COVID-19 در زنان باردار تاکید شده و موافقت با کاهش این اقدامات مشخص گردند.

می‌توان گفت که زنان باردار می‌توانند به یک COVID-19 منفی باشند. در زنان باردار می‌توان RT-PCR می‌تواند با وجود علائم گرفته وروسی در می‌تواند کاهش COVID-19 شیوع زایمان زودرسی و زایمان سازاری در است. COVID-19 می‌تواند با وجود علائم سوزند در زنان باردار با باروری بیشتری و افزایش خطر بستری بیش از COVID-19. در زنان سایر باروری بیشتر به علت COVID-19

به‌طور کلی، احتمال انتقال عمودی ویروس به جنین نیست و مواردی که آن را ادعا کرده‌اند، اشتباهی بوده است. در پاسخ به این احتمال، محققان در مورد انتقال عمودی وروست به جنین در پنهانی باید مطالعات بیشتری انجام دهند.

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کلید واژه‌ها: 19.COVID-19، بارداری، فرزند آوری

تعارض منافع: وجود ندارد.

تاریخ دریافت: 20/07/98

تاریخ پذیرش: 20/07/98
نامه به سردربر، آیا زنان باید باروری خود را در زمان پاندمی COVID در نظر گرفته باشند؟

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