



Article review The Risks of Contracting a Virus Covid-19 During Pregnancy and After Birth

Ghofran Flaih Abd-Alhussan Al-juburi

Laboratory Investigation Department, Faculty of Science, University of Kufa Email: <u>ghufranf.aljuburi@uokufa.edu.iq</u>

Introduction

The relation between COVID-19 and abortions has been a subject of controversy since the emergence of a virus COVID-19, with a positive SARS-CoV-2 test result have a higher risk of abortion, according to various state reports and case studies published during the epidemic. During influenza virus infection, placental inflammation can cause, fetal development retardation and death. There was no convincing evidence of the virus being transmitted vertically from woman to fetus, which necessitates additional inquiry. Hospitals saw an inflow of COVID-19 patients as the epidemic expanded, as well as significant reduction in the time of everything from hospital beds to personal protective equipment (PPE). At the same time, healthcare institutions had to accommodate current patients, including pregnant women, who still need care . Recent research on the transmission of the virus Covid-19 among pregnant women has revealed that pregnancy significantly raises the risk of infection with the covid-19 virus. According to the Centers for Diseases Control and Prevention, pregnant women are more tend to have respiratory disease or problems that need special care than non-pregnant women (1).

Keyword: Virus Covid, Pregnancy, SARS, PPE

Risks during pregnancy

COVID-19 has a low risk to pregnant women,on the hand female who were recently pregnant are at increased danger for acute or severe illness with infection by the virus COVID-19. Severe disease means that you need to be hospitalized, have more care or be putted on a ventilator to help her with breathing. Women pregnancy with COVID-19 infection are also expected to deliver a fetus before the start of the 36-37th week of pregnancy (2),this process called (premature birth) and may be at increasing danger for problems like lost of pregnancy . Infection with the COVID-19 virus in pregnant women who are Hispanic and black appears disproportionately. COVID-19 may expose pregnant female at a significantly greater risk of serious illness if they have existing chronic diseases like diabetes. Pregnant women with COVID-19 are more likely to have a preterm labor and cesarean delivery, and their newborns seem to be more susceptible to a premature infant, according to some study (3).

With invasive infections with TORCH pathogens such as (Toxoplasma, Rubella, Herpes, Zika virus and Cytomegalovirus), vertically maternal-fetal transport with acute fetal effects is possible (4). Due to the development of the fetal organs through the first weeks of gestation, mother infections will be more harmful to fetus than at later gestations. (5,6).

loss of Pregnancy is defined as miscarriage or abortion within the first 24 weeks of gestation, which includes the majority fetus loss occurrences (7). An approximately 10-15% of clinically confirmed babies died in the first stage. E nvironmental,

URL: http://www.uokufa.edu.iq/journals/index.php/ajb/index http://iasj.net/iasj?func=issues&jld=129&uiLanguage=en Email: biomgzn.sci@uokufa.edu.iq



genetics and multifactorial are considered a risk factors for the first-trimester abortion exist (8). MTL (middle-trimester pregnancy loss) happens between 12-24 weeks of pregnancy, with an average occurrence about 1-2 % of all pregnancies. MTI is caused by a variety of factors and that more than first-trimester of abortion is influenced by the mother's in the general health conditions (9).

The etiologic reasons of fetal died through the first 24 weeks of pregnancy were divided into many systemic inflammatory episodes, but were not limited to placental inflammation ($\underline{3}$), these causative variables may induce early membrane disruption and contracting, leading in preterm birth. Furthermore, it is widely recognized that the majority of early pregnancy losses are caused by inherent embryonic inborn abnormalities (10).

Shortly after delivery, several babies tested positive for COVID-19. It's unclear if the virus affected these neonates before, during, or after delivery as a result of contact with an infectious individual. Different pathways of COVID-19 transmission from mother to fetus, such as vertically transmission and placental dysfunction, must be attention in studied clinical and animal investigations (11).

According to certain studies, some research found COVID-19-positive pregnant women are more likely to give birth prematurely, and their newborns are more susceptible to a newborns hospital. If you have symptoms of COVID-19 or have been exposed to patient infection with the virus COVID-19, it is suggested that you get tested for the virus that causes COVID-19. Before going to your visit, call your health care provider to inform him or her of your symptoms and probable exposure, If the women have COVID-19 during pregnant, the treatment will focus on symptomatic treatment, which may include lots of fluids and resting, as well as drugs to lower fever, alleviate discomfort, or minimize coughing. If you're very unwell, you might need to go to the hospital.

Impact on prenatal care

The US Centers for Disease Control (CDC) suggested priority essential visits and deferring elective treatment in the early months of the epidemic, while pregnant women were advised not to miss prenatal checkups. Less is known about COVID-19's impact on pregnant women and newborns and there were no standard recommendations for evaluating or managing COVID-19 in women who are pregnant. While the CDC stated that motherhood does not look to increase the danger of contracting COVID-19, those who did admit that pregnancy has just been linked to a "higher risk of severe illness when infected with viruses that are similar to COVID-19, as well as other viral respiratory infections, such as influenza."To achieve social distance and reduce exposure for both patients and providers, many clinicians redesigned treatment for pregnant women patients.To achieve social distance and reduce exposure for both patients many clinicians redesigned treatment for pregnant women patients. To achieve social distance and reduce exposure for both patients many clinicians redesigned treatment for pregnant women patients. To achieve social distance and reduce exposure for both patients many clinicians redesigned treatment for pregnant women patients.

In-person visits were minimized in some situations (14), while modifications to prenatal care were negligible in others. The goal of this descriptive approach was to see if and how pregnant women's antenatal care has changed as a result of COVID-19, as well as the psychological response of those alterations (15).





Controlling the spreading of the COVID-19 virus in your community may limit your access to adequate prenatal care. Consult your health care physician to see whether virtual prenatal care is a viable choice for you, as well as if it is accessible in your region and how it works. Inquire with your doctor if any instruments, including a blood pressure , may be beneficial to have at home. Preparing a list of questions all of time and take meticulous notes during any virtual visits to get the most out of them. Also, look into the possibility of taking online pregnancy classes. Types of assessment may not be a possibility if you have certain high-risk conditions during pregnancy. Inquire with your doctor about how your care may be affected (13).

A number of 2,809 females, 2519 of them will be from the America, replied to our research with open-ended questions about the influence of COVID-19 on their prenatal care. The 290 respondents from outside the United States originated from 27 different nations, thus this paper focuses on women in the United States. Respondents were on average 32.7 years old, and they were 24.3 weeks pregnant at the time of the study. The majority (88.4%) had already given birth, and the average number of prenatal visits at the time of the study was 6.5. Nearly half (50.6%) held a master's degree or more, the majority (57.0 percent) resided in an endo region, and the majority were white (88.%).

Impact of COVID-19 on Perceived Quality of Care

Changes in antenatal care had different effects on women's views of care quality, with some believing that their treatment had been degraded and others believing that it had actually improved. Some women claimed that their meetings had shifted away from pregnant and toward addressing the effects of COVID and related subjects, with less time spent on 'normal' pregnancy concerns. Changes in prenatal care had varying implications on women's perceptions of care quality, with some saying their caring had deteriorated and the others thinking it had changed and improved. Some female reported that the focus of their sessions had turned away from gestation and more towards COVID and related topics, with less time spent on 'typical' pregnancy issues.While the data did not allow for a direct comparison of women who received treatment from midwifery with women who received healthcare from the other types of care, numerous respondents expressed relief at being able to get healthcare from a maternity care which was not located in a hospital.It's also comforting to know that because our midwife works out of a private office (rather than a hospital), her danger of COVID-19 contact is much lower than that of a healthcare provider, so we feeling very much at peace visiting them in person than we would do in a hospital (14).

Behavioral changes in pregnancy as a result of COVID-19

The ladies in our research indicated numerous ways where in the Covid-19 structural alterations have changed prenatal care behavioral practices for both patients and caregivers. Self-monitoring at home, especially utilizing blood pressure monitors and dopplers to track their personal health, was one of the pregnancy behavioral adjustments for women.





In order to adapt fundamental changes in health, providers have also had to adjust their behavior. In addition to donning protective gear and creating social distance in the therapeutic setting, physicians are being forced to discern what is actually medically required in the event of a worldwide pandemic, a worry for patients Doctors have had to shift their conduct in order to respond to significant changes that occur. Physicians are indeed being pressured to perceive what is relay medically required in the event of a worldwide pandemic, a worry for patients. In addition to wearing safety gear and generating social range in the therapy room, clinicians are being compelled to distinguish what is acute mania required in the incident of a world - wide pandemic (15).

Emotional challenges resulting from COVID-19

Women experienced a number of emotional repercussions as a result of this change in antenatal visits brought on by COVID-19, the most serious of which was heightened dread and concern about their prenatal and delivering care.Women expressed fear that, in addition to depression over the pandemic issue, interruptions in antenatal care could lead to possible pregnancy issues being overlooked.Some women showed emotional turmoil as they compared the risk of contracting the virus by approaching a healthcare institution versus the risk of failing a pregnancy problem if they can't attend in-person consultations. Women generally express a lack of assistance out of their own support people owing to restrictions on who is permitted to accompany them to appointments, as well as from their providers given the lack of direction and information.According to the coronavirus problem ,sentiments amongst some of the women in our sample appear to have switched predominantly from joy to dread (16).

Similarly, additional researchers discovered that pregnancy who gave birth through the COVID-19 infleunza pandemic had fewer symptoms of depression in the postoperative period than women who gave birth before the pandemic(17). Our findings further highlight the complicated link between structural improvements aimed at reducing COVID-19 transmission and the potential for adverse impacts on pregnant female .

According to Beukens and associates, health systems like physical separation and containment may have unexpected effects for pregnant females, such as enhanced domestic violence, a loss of social support, a decision to skip pre- and prenatal appointments, and an aggravation of post-partum severe mental health situations. (18). According to one research from India, the lockout alone was enough to induce anxiety, tension, and depression symptoms. (19).

This research has a number of significant consequences. Clinicians across the United States have reacted to the COVID-19 epidemic in a variety of ways, resulting in a wide range of service interruptions for women. While a few women valued the being above they received despite of structural reforms in care, some felt abandoned, or though one of our participants put it, left to sort this out on my way (20).

URL: http://www.uokufa.edu.iq/journals/index.php/ajb/index http://iasj.net/iasj?func=issues&jld=129&uiLanguage=en Email: biomgzn.sci@uokufa.edu.iq



The practical contribution of this research include that clinicians have to do a better job of explaining with patients, moderating expectations, and ensuring that patients understanding new processes and methods, given the vast variation of women's views of quality of treatment while the fragmented architecture of the US health system makes advocate for the course of pregnancy during COVID-19 difficult to envision, such rules might go a long way towards enhancing care. In the face of a worldwide epidemic, it makes no sense for care to differ by provider.

Our findings show that pregnant mothers during the COVID-19 epidemic require additional assistance. This might include extending the employment of case services and counselors, engaging medical volunteers, and performing frequent psychological evaluations with direct funding for mental health providers (12).

Future studies should also look into the long-term effects of COVID-19 on pregnant mothers moms. While some studies has suggested that COVID-19 has enhanced results ,e.g. lower levels of preterm (21), Increased stress during gestation has been associated to an elevated risk of post-partum depressive episodes and poor delivery outcomes (22), therefore it will be crucial to examine if these findings are linked to COVID-19 stress. According to a recent study, the number of infant deaths increased during COVID-19 (23).

This research has a number of important advantages. It was a countrywide survey of over 2500 pregnant female in the early acclimation period of COVID-19 mostly in United States, with respondents from 47 states and a wide variety of ages, prior births, and pregnancy length. When asked how the COVID-19 epidemic has influenced their prenatal care, the survey's free prompting allowed for replies representative of women's first instincts, reducing potential biases by asking about particular components of prenatal care. We believe it is one of the first studies to attempt to qualitatively characterize how COVID-19 has influenced women's quality of the care (24).

The probable bring to mind associated with an online questionnaire distributed mostly via social media, creating a sample that is generally well enough and disproportionately white, are among the study's drawbacks. While we feel the volume and regional variety of our sample and the paucity of comparable data on this issue is suggestive of the significance of these information as a window into how mothers are thinking about their encounters of antenatal care during COVID-19 .The importance of future research by focusing on communities of color cannot be overstated (25).

The documented restrictions to care and disparities in COVID-19 outcome measures among Dark women and female of color in the United States call for a respectful, thorough, interpretive investigation aimed at adressing the unique issues that pregnant female of color face in the United States (26),(27).Moreover, because of the open-ended narration solution structure, we would be unable to perform any further encouraging, restricting our capacity to elicit additional remarks or explain

> URL: http://www.uokufa.edu.iq/journals/index.php/ajb/index http://iasj.net/iasj?func=issues&jld=129&uiLanguage=en Email: biomgzn.sci@uokufa.edu.iq





ambiguity As an example, in-depth interviews or group focus discussions may be used to gather information. While some may argue that this template is optimal for qualitative approach, we will have 2519 women who have been motivate to speak about their antenatal care perceptions in a free format, implying that, while not desirable, this format did give voice to essentional information that would have been missed normally (28).

Labor, delivery recommendations and Postpartum guidance

If you're in good health as you near the conclusion of her pregnancy, several parts of labor and birth may go as planned. However, be prepared to be adaptable. You and your support person may be evaluated for COVID-19 symptoms 1 to 2 days before your arrival at the hospital if you are expected for induction of labor Before reaching the labor and delivery unit, you may be screened again. Your intervention or C-section may be postponed if you have symptomatic or the virus which causes COVID-19.Some institutions may limit the amount of individuals you can have with the hospital during labor and birth to safeguard your and your baby's healthy. Visits after the baby is born may also be influenced. Additionally, you and your support worker may be evaluated for symptoms each day while in the hospital (26).

If you really have COVID-19 or who are awaiting test results according to symptoms, it is suggested that you use a cotton face mask and care for your infant with clean hands while in the hospital after labor. It's fine to have your newborn's crib next to your bed while you're in the hospital, and it is also a good idea to keep a safe space between you and your baby. When these precautions are performed, the chances of a baby contracting the COVID-19 virus are slim. According to research, only approximately 2% to 5% of children delivered to women who had COVID-19 near the time of delivery tested positive for the COVID-19 virus in the days after delivery. However, if you really are seriously unwell having COVID-19, you may need to be removed from your infant for a period of time (25).

It is suggested that postpartum care be a continuous practice following childbirth. Discuss virtual visit possibilities for checking in after birth with your health care physician, and also your need for a doctor's visit. You may be more concerned about own health as a result of your family at this difficult period. Keep an eye on your mental wellness. Seek assistance from friends and family while taking care to avoid becoming infected with the COVID-19 infection. You can have postpartum depressive if you suffer major mood changes, decreased appetite, excessive weariness, and an absence of joy in life soon after giving birth. If you believe you might have been depressed, see your doctor, specially if your symptoms shouldn't go away on their own, you're having problems caring for you baby or completing everyday duties, or you're thinking about killing yourself or you baby (24).





Breast-feeding implications

The COVID-19 virus is not yet known to be transferred through mother's breast milk. There has been no indication of the virus in the abreast milk of women who have COVID-19, according to limited study. The greater question is whether a virus-infected woman may pass the virus to her infant via coughing or sneezing during breastfeeding. Take actions to prevent the virus from spreading to your baby if you really have COVID-19 infection or are a symptomatic individual under examination for the virus. This involves cleaning your hands before handling your infant and, if feasible, breast feeding while wearing a face mask. If you're producing breast milk, clean your hands before handling any pumping or bottle pieces, and clean your device according to the manufacturer's instructions. If at all feasible, see someone who is healthy administer the extracted breast milk to the infant (27).

What you're doing?

At present time, there is no vaccination available to fight infection with the COVID-19 virus. Avoid direct contact with anybody who is sick or who has symptoms, and keep approximately 1 meter between yourself and those outside your family to lower your chance of infection. In public and at work, wear a cotton face mask. As many as possible, avoid interacting with people. Instead, consider photographing, videotaping, or video-conferencing with friends and family. Hands should be washed usually with soap and water for at least 30 seconds, or an alcoholbased hand sanitizer containing at least 70% alcohol should be used. Above all, remember to look for yourself and your child. To address any concerns, visit your health care practitioner. Consult your doctor if you're having problems coping with stress or worry (28).

References

1.Phoswa WN, Khaliq OP (2020) Is pregnancy a risk factor of COVID-19? European Journal of Obstetrics and Gynecology and Reproductive Biology 252: 605–609. pmid:32620513

2.Dashraath P, Wong JLJ, Lim MXK, Lim LM, Li S, et al. (2020) Coronavirus disease 2019 (COVID-19) pandemic and pregnancy. American journal of obstetrics and gynecology 222: 521–531. pmid:32217113.

3.Prochaska E, Jang M, Burd I (2020) COVID-19 in pregnancy: Placental and neonatal involvement. American Journal of Reproductive Immunology 84: e13306. pmid:32779810.

4.Silasi M, Cardenas I, Kwon JY, Racicot K, Aldo P, et al. (2015) Viral infections during pregnancy. American journal of reproductive immunology 73: 199–213. pmid:25582523







5.Alvarado MG, Schwartz DA (2017) Zika virus infection in pregnancy, microcephaly, and maternal and fetal health: what we think, what we know, and what we think we know. Archives of pathology & laboratory medicine 141: 26–32.

6.Schwartz DA, Graham AL (2020) Potential maternal and infant outcomes from coronavirus 2019-nCoV (SARS-CoV-2) infecting pregnant women: lessons from SARS, MERS, and other human coronavirus infections. Viruses 12: 194.

7.Wilcox AJ, Weinberg CR, O'Connor JF, Baird DD, Schlatterer JP, et al. (1988) Incidence of early loss of pregnancy. New England Journal of Medicine 319: 189– 194. pmid:3393170

8.Cohain JS, Buxbaum RE, Mankuta D (2017) Spontaneous first trimester miscarriage rates per woman among parous women with 1 or more pregnancies of 24 weeks or more. BMC pregnancy and childbirth 17: 1–7. pmid:28049520

9.McNamee KM, Dawood F, Farquharson RG (2014) Mid-trimester pregnancy loss. Obstetrics and Gynecology Clinics 41: 87–102. pmid:24491985.

10.Pylyp LY, Spynenko LO, Verhoglyad NV, Mishenko AO, Mykytenko DO, et al. (2018) Chromosomal abnormalities in products of conception of first-trimester miscarriages detected by conventional cytogenetic analysis: a review of 1000 cases. Journal of assisted reproduction and genetics 35: 265–271. pmid:29086320.

11.Zeng L, Xia S, Yuan W, Yan K, Xiao F, et al. (2020) Neonatal early-onset infection with SARS-CoV-2 in 33 neonates born to mothers with COVID-19 in Wuhan, China. JAMA pediatrics 174: 722–725. pmid:32215598.

12.A.F. Peahl, A. Novara, M. Heisler, V.K. Dalton, M.H. Moniz, R.D. Smith **Patient preferences** for **prenatal** and **postnatal** care delivery Obstetrics & Gynecology, 135 (5) (2020), pp. 1038-1046.

13.R.E. Gur, L.K. White, R. Waller, R. Barzilay, T.M. Moore, S. Kornfield, L. Maaya n **The disproportionate burden of the COVID-19 pandemic among pregnant black women** Psychiatry Research, 293 (2020), Article 113475.

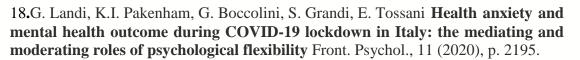
14.Goligoski (2020).**Prenatal Care May Look Very Different After Coronavirus** Available at: <u>https://www.nytimes.com/2020/04/28/parenting/pregnancy/coronavirus-prenatal-care.html</u>

15.Hauser (2020).**Redesigning Prenatal Care During the COVID-19 Pandemic** Available at: <u>https://labblog.uofmhealth.org/rounds/redesigning-prenatal-care-during-covid-19-pandemic</u>.

16.Goldfarb, M.Clapp, M. Soffer, L.Shook, K.Rushfirth, A.Edlow A. Bryant **Prevalence and severity of coronavirus disease 2019 (COVID-19) illness in symptomatic pregnant and postpartum women stratified by hispanic ethnicity** Obstet. Gynecol., 136 (2) (2020), pp. 300-302.

17.P. Beukens, J. Alger, G. Breart, M.L. Cafferata, E. Harville, G. Tomasso **.A call for action for COVID-19 surveillance and research during pregnancy** The Lancet Global Health, 8 (7) (2020), <u>10.1016/S2214-109X(20)30206-0</u> E877-E878 .





19.Gopal, A.J. Sharma, M.A. Subramanyam **.Dynamics of psychological responses** to **COVID-19 in India: A longitudinal study** PLoS ONE, 15 (10) (2020).

20.Ayoub MS, Thamir A-K, 8Mahmood UA, Sultan MA9, Klonoff DC, Hoang TDo(2020). Biological and epidemiological8trends in the prevalence/and mortality due to outbreaks of/novel coronavirus Covid-19. J King/ Saud Univ- Sci. <u>https://doi.org/101016/j.jksus.2020.04.004</u>.

21.Hedermann, P.L. Hedley, M. Baekvad Hansen, H. Hjalgrim, K. Rostgaard, P. Poorisrisak, U. Lausten-Thomsen Changes in premature birth rates during the Danish nationwide COVID-19 lockdown: a nationwide register-based prevalence proportion study medRxiv (2020),10.1101/2020.05.22.20109793.

22.R. Brunton, R. Dryer, A. Saliba, J. Kohlhoff **Re-examining pregnancy-related anxiety : A replication study** Women and Birth, 32 (2019), <u>10.1016/j.</u> <u>wombi.2018.04.013</u> e131-e137

23.A. Khalil, P. von Dadelszen, T. Draycott Change in the incidence of stillbirth and preterm delivery during the COVID-19 pandemic JAMA, 324 (7) (2020), pp. 705-706.

24.Bannister-Tyrrell M, Meyer A, Faverjon C (2020).Preliminary evidence that higher temperatures/are associated with lower/incidence of Covid-19, for cases reported / globally up to 29th February./ medRxiv. doi: 6101101/2020.03. 18. 200367319.

25.Onwuzurike, A.R. Meadows, N.M. Nour **Examining inequities associated with changes in obstetric and gynecologic care delivery during the coronavirus disease 2019 (COVID-19) pandemic** Obstetrics & Gynecology, 136 (1) (2020), pp. 37-41.

26.Wu Z,j.McGoogan JM. Characteristicsx of and important lessons from the coronavirus disease 2019(Covid-19) outbreak in China:,summary of a report of 72/314 cases from the Chinese Center for Disease,Control and Prevention./JAMA. 2020. doi:n10.1001/jama.2020.2648.

27.Cuenca, S. Caruso, E. Commadari, A. Barrasa-Shaw, J.F. Lizon.**Analysis of the impact of confinement resulting from COVID-19 on the lifestyle and psychological wellbeing of Spanish pregnant women: An internet-based cross-sectional survey Int J Environ Res Public Health, 17 (2020), p. 5933, <u>10.3390/ijerph17165933</u>.**

28.E.C. Caniglia, L.E. Magosi, Z.A.S.H. Rebecca, M. Diseko, G. Mayondi, J. Mabuta , J. Makhema **Modest reduction in adverse birth outcomes following the COVID-19 lockdow** Am J Obstetrics and Gynecology (2020),<u>10.1016/j.ajog.2020.12.1198</u>.

URL: http://www.uokufa.edu.ią/journals/index.php/ajb/index http://iasj.net/iasj?func=issues&jld=129&uiLanguage=en Email: biomgzn.sci@uokufa.edu.iq





URL: http://www.uokufa.edu.iq/journals/index.php/ajb/index http://iasj.net/iasj?func=issues&jld=129&uiLanguage=en Email: biomgzn.sci@uokufa.edu.iq

62