COVID-19 and Perinatal Psychiatry

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Pregnant women are theoretically more vulnerable to having negative clinical outcomes following infection with a viral pathogen.[1] Pregnancy is a partially immunocompromised state with altered respiratory and cardiovascular physiology.[1,2] Potential complications during pregnancy including hypertension, diabetes, and heart failure are identified as risk factors for more severe coronavirus disease 2019 (COVID-19) infection in nonpregnant patients.[2]

Previous viral outbreaks of severe acute respiratory syndrome, Middle East respiratory syndrome, influenza H1N1, Ebola virus disease, and Zika virus disease were associated with high rates of maternal morbidity and mortality.[1] There were also adverse fetal effects with death and harm.[1] The data retrieved from clinical studies in pregnancy and COVID-19 show the outcomes in pregnant women have been similar to nonpregnant adult patients.[1] Vertical transmission and neonatal infections have been rare.[1,2] However, pregnant women are still at risk of having a severe form of disease with potentially life-threatening complications.[1,2]

Maternal Mental Health

Each year, 131 million women give birth.[1] Pregnancy demands significant transition and adaptation. It is well recognized as an anxious and stressful time for many. These reactions will be amplified during the current pandemic. Wu et al[3] recently reported that after the Chinese government declared a risk of human-to-human transmission of COVID-19 on January 20, 2020, there was a clinically significant increase in the prevalence of depressive symptoms in pregnant women. This rate increased from 26% before this date to 34.2% between the 5th and 9th of February 2020. These women were also more likely to endorse thoughts of self-harm.[3] A survey conducted March 16–27, 2020 (delay phase of pandemic) by Corbett et al[4] confirmed a rise in anxiety among the Irish pregnant population. Most respondents (83.1%) reported that they did not worry about their health previously, but 50.7% stated that they worried about their health often or all the time during those dates in March.[4]

Before the COVID-19 pandemic, the World Health Organization[5] estimated that 10% of pregnant women and 13% of postpartum women experience a mental disorder. This disorder is most commonly depression.[5] The postpartum period is also recognized as a time of high risk of relapse for those with existing psychiatric illness.[6] Patients with a diagnosis of bipolar affective disorder are more likely to have a psychiatric inpatient admission.[6] Postnatal mental disorders can cause substantial distress and impairment while escalating risk. The safety of both the mother and newborn can be compromised. Suicide is noted as a significant cause of death in women during pregnancy and the postpartum period.[5] Maternal mental illness is described as a major public health challenge because of the negative impact on both the mother and the subsequent growth and development of the child.[5]

We predict that the current crisis will increase the prevalence of perinatal mental disorder. The risk factors include natural disasters, emergency situations, and exposure to violence including domestic abuse. Complications during pregnancy, economic hardship, and social isolation with lack of support have also been identified. Those with previous or current psychiatric illness and a positive family history would be at greater risk.[5–7] We have already highlighted our concerns about the increased incidence of intimate partner violence during this pandemic.[8] The aforementioned risk factors have been connected with COVID-19 in some way. Antenatal services have been affected, and partners may be prevented from jointly attending appointments. The restriction of accessing appropriate health and social care is likely to exacerbate already high levels of anxiety. Prenatal psychological distress can increase the risk of obstetric complications including miscarriage and preterm birth.[9,10]

Immunologic Effects

The activation of the immune system postpartum has been proposed in the etiology of acute mania, psychosis, postnatal anxiety, and depression.[6] Bergink et al[6] reported findings of abnormalities in monocyte activation and T cell function during the acute stages of postpartum psychosis compared to controls. They also reported the co-occurrence of postpartum psychosis with thyroiditis and preeclampsia, both of which have an autoimmune and inflammatory etiology.[6] Giordano and Pauls[11] found that peripheral inflammatory markers were raised in women with postpartum psychosis. They identified higher serum levels of IL-10 and TNF-α in women at risk of postpartum psychosis.[11] These cytokines have been found at higher concentrations in those with COVID-19 infection.[12]

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Box 1. Resources for Pregnant Women During the COVID-19 Pandemic

World Health Organization: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/q-a-on-covid-19-pregnancy-and-childbirth
Royal College of Psychiatrists: https://www.rcpsych.ac.uk/mental-health/treatments-and-wellbeing/perinatal-care-and-covid-19
Royal College of Obstetricians and Gynecologists: https://www.rcog.org.uk/coronavirus-pregnancy
American Psychiatric Association: https://www.psychiatry.org/patients-families/postpartum-depression
American College of Obstetricians and Gynecologists: https://www.acog.org/clinical/clinical-guidance/practice-advisory/articles/2020/03/novel-coronavirus-2019

Sleep disruption has been recognized as a common symptom among pregnant women during the COVID-19 pandemic.[13] Issues with sleep have been implicated in the potential development of mania or a mixed affective state in the postpartum period.[6] Sleep disturbance may also precipitate the onset of a mental disorder throughout the course of pregnancy. It is important that physicians remain vigilant for insomnia and implement the necessary intervention. Nonpharmacologic approaches in the form of cognitive-behavioral therapy would be the preferred mode of treatment for insomnia during pregnancy.

Clinical Management

An integrated approach including close collaboration between primary care, midwifery, and obstetric services is required. It is important that organizations find a way to actively reach out to patients by, for example, using digital platforms.[14] Those who have been identified at higher risk of developing psychiatric illness should be referred to specialist perinatal mental health teams. It is important that women are encouraged to maintain their social networks during this critical time. They should be advised regarding general well-being including maintaining good nutrition, sleep, and adequate physical activity. Their anxieties regarding the COVID-19 pandemic must be validated and addressed. They should be referred to resources that offer reliable and consistent information regarding the risks of COVID-19 in pregnancy (Box 1).

Women who develop COVID-19 are encouraged to breastfeed while practicing appropriate respiratory hygiene measures and following infection control precautions.[15] Breastfeeding helps with maternal and infant attachment and bonding and allows the baby to thrive. At the time of this writing, more data are required with regard to the physical and mental health risks of developing COVID-19 during pregnancy.

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REFERENCES

1. Whitehead CL, Walker SP. Consider pregnancy in COVID-19 therapeutic drug and vaccine trials. *Lancet*. 2020;395(10237):e92.
2. Mimouni F, Lakshminrusimha S, Pearlman SA, et al. Perinatal aspects on the COVID-19 pandemic: a practical resource for perinatal-neonatal specialists. *J Perinatol*. 2020;40(5):820–826.
3. Wu Y, Zhang C, Liu H, et al. Perinatal depressive and anxiety symptoms of pregnant women along with COVID-19 outbreak in China [published online ahead of print May 10, 2020]. *Am J Obstet Gynecol*.
4. Corbett GA, Milne SJ, Hehir MP, et al. Health anxiety and behavioral changes of pregnant women during the COVID-19 pandemic [published online ahead of print April 13, 2020]. *Eur J Obstet Gynecol Reprod Biol*.
5. Maternal mental health. World Health Organization website. https://www.who.int/mental_health/maternal-child/maternal_mental_health/en/. Accessed June 29, 2020.
6. Bergink V, Rasgon N, Wisner KL. Postpartum psychosis: madness, mania, and melancholia in motherhood. *Am J Psychiatry*. 2016;173(12):1179–1188.
7. Curry SJ, Krist AH, Owens DK, et al; US Preventive Services Task Force. Interventions to prevent perinatal depression: US Preventive Services Task Force recommendation statement. *JAMA*. 2019;321(6):580–587.
8. Yahya AS, Khawaja S, Chukwuma J. Association of COVID-19 with intimate partner violence. *Prim Care Companion CNS Disord*. 2020;22(3):20com02634.
9. Accortt EE, Cheadle AC, Dunkel Schetter C. Prenatal depression and adverse birth outcomes: an updated systematic review. *Matern Child Health J*. 2015;19(6):1306–1337.
10. Qu F, Wu Y, Zhu YH, et al. The association between psychological stress and miscarriage: a systematic review and meta-analysis. *Sci Rep*. 2017;7(1):1731.
11. Giordano A, Pauls AM. SA86. Neuroinflammation in puerperal psychosis: the relationship between myelin content and peripheral inflammatory markers. *Schizophr Bull*. 2017;43(suppl 1):S144.
12. Huang C, Wang Y, Li X, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet*. 2020;395(10223):497–506.
13. Matvienko-Sikar K, Meedya S, Ravaldi C. Perinatal mental health during the COVID-19 pandemic [published online ahead of print May 7, 2020]. *Women Birth*.
14. Thapa SB, Mainali A, Schwank SE, et al. Maternal mental health in the time of the COVID-19 pandemic [published online ahead of print May 6, 2020]. *Acta Obstet Gynecol Scand*.
15. Breastfeeding and COVID-19 for health care workers. World Health Organization website. https://www.who.int/docs/default-source/maternal-health/faqs-breastfeeding-and-covid-19.pdf?sfvrsn=d839e6c0_1. Accessed June 29, 2020.