

Pregnant Women and COVID-19 Pandemic

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Dear Editor

The current global pandemic of COVID-19, with its accelerated spread rate, is caused by a novel coronavirus SARS-CoV-2. By now, over 90 million people have been infected across 180 countries around the world, with overall mortality reaching 1,984,459 by Jan 14, 2021. Iran is also one of the countries with a relatively high prevalence of Covid-19. By this date, Iran has reported a total of 1,305,339 COVID-19 cases and 56,457 COVID-19 related deaths.¹

In general, all age groups are at risk for COVID-19, but its effect on pregnant women has attracted a great deal of attention due to the specific immune status of pregnancy and the increased risk of respiratory infections. Because pregnant women are more prone to complicated infection by other types of coronaviruses such as Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS), pregnancy might be considered as high risk, and they are asked to be more careful regarding preventive regulations during the outbreak of COVID-19.² In a study including 8207 pregnant women, they needed significantly more inpatient admission (RR, 5.4; 95% CI, 5.1– 5.6), ICU care (RR, 1.5; 95% CI, 1.2–1.8), and mechanical respiratory aid (RR, 1.7; 95% CI, 1.2–2.4).³ However, until now, most of the data are in favor of pregnancy being no more susceptible to this particular pathogen than the general population. In pregnant women, 80% to 90% of infections are not severe similar to non-pregnant adults and also, risk factors for severe disease in pregnancy have been shown to be similar to the non-pregnant patients. Given concerns about resource-constrained health care systems and reduced transmission

risks in pregnant women and health care providers, the International Federation of Obstetricians and Gynecologists (FIGO) advised reducing or suspending much routine antenatal care and replacing them with different online communications, if possible. Vertical transmission is possible, but its mechanism is not well established. Thirteen studies evaluated SARS-CoV-2 in neonates, and positive cases were recognized in three articles, most of which were asymptomatic or had mild symptoms.⁴

WHO defines an asymptomatic case as a laboratory-confirmed infected person, who doesn't show classic clinical symptoms, and has no obvious abnormal findings, as well as on lung CT scan. Identification of asymptomatic pregnant cases with SARS-CoV-2 as a role in the transmission chain has important implications for controlling the prevalence of the disease in communities and neonatal care. The rate of positive serologic or PCR tests in different asymptomatic subgroups is reported with a range of 1.6-30% in the literature. Also, the prevalence of the seropositive or PCR positive cases in asymptomatic pregnant women has been reported with a range of 2.9 - 54%. It is noteworthy that an extensive study reported an asymptomatic COVID-19 rate of 54% in pregnancy. In one research conducted in Iran, of the 193 asymptomatic pregnant women for Covid-19, 23 cases (11.91%) had a positive serological test.

Advice from the Society for Maternal-Fetal Medicine in conjunction with the Centers for Disease Control and Prevention (CDC) was to avoid prioritization of asymptomatic patient testing; this may result in unrecognized infection transmission and incorrect personal

protective equipment (PPE) use.

COVID-19 infection has been shown to cause less severe disease in women than men and is associated with lower mortality, which may indicate a possible role for estrogen and progesterone in this effect. Finally, higher levels of the hormone in pregnant women may provide greater protection against symptomatic COVID-19, and there may be a higher proportion of asymptomatic cases in pregnant patients than in the general population. On the other hand, pregnant women are expected to take extra care due to concerns about their own health and the well-being of the fetus; thus, their risk of acquiring infection may be lower than the general population.

In the end, it is necessary to mention that being successful in controlling of COVID-19 pandemic requires special considerations in breaking the transmission chain including asymptomatic cases.

Conflict of Interests

None.

References

1. medicine JHU. Corona virus resource center. 2020
2. RCOG. Coronavirus (COVID-19) infection and pregnancy. 2020.
3. Ellington S, Strid P, Tong VT, Woodworth K, Galang RR, Zambrano LD, Nahabedian J, Anderson K, Gilboa SM. Characteristics of women of reproductive age with laboratory-confirmed SARS-CoV-2 infection by pregnancy status. *MMWR Morb Mortal Wkly Rep* .2020; 69: 769-75. doi:10.15585/mmwr.mm6925a1
4. Wastnedge E.A.N, Reynolds R.M, van Boeckel S.R, Stock S.J, Denison F.C, Jacqueline A. Maybin J.A et al. *Physiol Rev*. 2020; 101: 303-18. doi:10.1152/physrev.00024.2020
5. Delahoy M, Whitaker M, O'Halloran A. haracteristics and Maternal and Birth Outcomes of Hospitalized Pregnant Women with Laboratory-Confirmed COVID-19 - COVID-NET, 13 States. *MMWR Morb Mortal Wkly Rep*. 2020;69: 1347-54. doi:10.15585/mmwr.mm6938e1