

Is termination of early pregnancy indicated in women with COVID-19?

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By Mar 2nd, 2020, more than 80174 confirmed cases and 715 suspected cases infected with 2019 novel coronavirus disease (COVID-19) have been reported in China.¹ Besides the human-to-human transmission via respiratory droplet, vertical transmission has been concerned and not determined since one case of a mother and neonate was laboratory-confirmed with COVID-19. Several days ago, a news program of Hubei TV suggested that early pregnant women infected with COVID-19 should terminate their pregnancies. This viewpoint seems oversimplified but has triggered controversy widely. In February, there were 3 pregnant women with mild COVID-19 infection in the Wuhan Central Hospital (Houhu District) who terminated their pregnancy in the first trimester.

Early pregnancy is a challenging and vulnerable period, and viral infection at this stage could potentially affect embryogenesis and fetal organ development, but there is still no evidence for the vertical transmission of COVID-19 so far. In February 13rd, 2020, Chen *et al.* reviewed nine cases of COVID-19 infected pregnant women, and reported none of their neonates had been infected through vertical transmission.² Prior to COVID-19, there were a total of six coronavirus species that induced human infection including severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV) which led to the outbreak of pneumonia, but no vertical transmission of the coronavirus had been confirmed.^{3,4} With reference to the experience to SARS or MERS, they can cause preterm, miscarriage, stillbirth, and fetal growth restriction in pregnant women, associated with placental insufficiency, but not vertical transmission. There is no evidence that SARS-CoV or MERS-CoV itself can cause fetal malformations, because neither of them passes across the placental barrier.^{3,4} Children born to pregnant women infected with SARS showed similar physical and mental development when followed up to 10 months in both full-term and preterm babies. Current research on long-term health of pregnant women of SARS or

MERS is not available, but we anticipate that maternal SARS-CoV-2 infection would not result in significant, long-term health risks to the offspring.

Pregnant women with SARS-CoV infection have a three times higher mortality rate than non-pregnant populations. However, SARS-CoV-2 infection outcome seems to have a better prognosis than SARS-CoV infection.⁵ Only 7.45% of all confirmed cases are defined as “severe” according to an announcement by National Health Commission of China on Feb 15th, 2020. Based on the limited number of cases reported, there is no evidence indicating a worse outcome of maternal patients than that of general population. On the other hand, pregnancy terminations in early pregnancy may result in post-abortion infection, which might aggravate the maternal COVID-19 illness. Therefore, consideration of termination of pregnancy has to be individualized during this COVID-19 outbreak. For pregnant patients with mild symptoms, treatment should be modified to avoid using teratogenic drugs near the fetus. Patients are commonly at higher oxygen demand during early pregnancy, so hypoxemia should be monitored, and interventions should be provided without delay. For severe patients during early pregnancy, the first priority is to ensure maternal safety. Decisions of early pregnancy termination should be considered upon risk factors including viral load, transmission generations, range of lung lesions by CT (more than two lobes), maternal age, and coexisting disorders (diabetes, cardiovascular diseases etc.).

Although we have made a judgment from a rational level, that is, early pregnant women infected with COVID-19 need to make a careful decision to terminate the pregnancy. However, the reality is that many mild COVID-19 pregnant women still choose to terminate the pregnancy without medical indications (request initiatively or recommended). why? As a sudden public disaster, doctors often overlook the social effects of the epidemic. Even more terrifying than viruses is terror itself. When pregnant women or doctors’ fear of the virus is beyond the bounds of reason, people inadvertently exaggerate the adverse consequences of the virus infection. For example, worrying that the current mild illness will worsen, fearing that the teratogenicity of the virus will appear to herself in the form of an individual case, and eventually some COVID-19 pregnant women decide to terminate the pregnancy full of uncertainty (request initiatively or recommended).

Is termination of early pregnancy indicated in women with COVID-19? It’s not just a medical issue.

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Disclosure of interests

No conflict of interest.

Contribution to authorship

Yan-fen Cai shared case information from the front line of the outbreak. He-feng Huang put forward the initial ideas and opinions, which were drafted by Yan-ting Wu, Cheng Li, and Chen-jie Zhang.

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