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Risk exposure to COVID-19 in pregnant healthcare workers

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The ongoing pandemic of coronavirus disease 2019 (COVID-19) is spreading in all over the world, with more than 700.000 confirmed cases and almost 40.000 deaths at the end of March 2020.[1] Clinical features range from mild to severe or even critical respiratory illness, including pneumonia.[2] In some cases, patients may require intensive care (25%) and mechanical ventilation (10%).[3]

As known, the risk of exposure to coronavirus is higher among healthcare workers than other workers, due to their role in assistance and care of COVID-19 patients.[4] Physicians, nurses, and other healthcare workers (HCWs) are in the front-line of the medical emergency. Healthcare workers must comply with prevention and protection measures and adopt personal protective equipment. However, many healthcare workers have been affected by COVID-19, and some of them died. It follows that workers' protection is a core issue in occupational medicine now more than ever. Although some papers have dealt with the workers' exposure to COVID-19, the problem related to pregnant workers has still not been faced.

Pregnancy is a physiological status in which many changes affect the woman body, including immune alterations. It is known that pregnant women may be more susceptible to acquisition of infectious diseases, and several infectious diseases can have an increased severity during pregnancy.[5]

Novel coronavirus SARS-CoV-2 was first detected at the end of 2019 and data referred to pregnant patients are still very limited. Some limited data are available about previous coronavirus infections, such as severe acute respiratory syndrome (SARS-CoV) and Middle East respiratory syndrome (MERS-CoV). SARS during pregnancy seems to be associated with spontaneous miscarriage, preterm delivery, and intrauterine growth restrictions.[6] MERS seems to be associated with maternal and perinatal disease and death.[7]

Since the structural analysis of novel coronavirus has suggested that it would use the same mechanism of SARS-CoV, it is fundamental to consider the potential role of SARS-CoV-2 during pregnancy.[8] However, to date, there is no evidence that pregnant women are more susceptible or at higher risk of severe illness than non-pregnant women, although in some cases pregnant women seem to have atypical clinical symptoms, comparing with non-pregnant women.[9–11] Furthermore, there is no evidence for intrauterine infection due to a vertical transmission in pregnant women affected by COVID-19.[9,12]

Besides the issue related to the direct effects of COVID-19 in pregnant women, we should also consider if treatments, that could be necessary in case of infection, may have a potential impact for the fetus.

Nevertheless, it is important to note that data on COVID-19 are still poor, since it is a very recent pandemic. Information about susceptibility and severity during pregnancy is even more limited, due to the small samples size of studies.

For these reasons, in our opinion pregnant healthcare workers should not be exposed to confirmed or suspected COVID-19 patients, even if they wear appropriate personal protective equipment. Further studies are needed to better assess and understand the potential role of novel coronavirus during pregnancy. Furthermore, pregnant workers should comply with the same recommendations for other workers, such as wash and clean hands with water and soap, maintain social distance at least one meter, and avoid touching their eyes, nose, and mouth.[4]

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