Prevalence of SARS-CoV-2 among pregnant women in Kyoto, Japan: Is universal screening for SARS-CoV-2 before delivery necessary?

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Dear Editor,

We found the prevalence of SARS-CoV-2 among pregnant women in Kyoto to be quite low. The outbreak of COVID-19, which has spread all around the world, shows no signs of slowing down. As of June 29, 2020, confirmed COVID-19 cases had surpassed 10 million, with over 500,000 deaths globally, according to the Center for Systems Science and Engineering at Johns Hopkins University (https://coronavirus.jhu.edu/map.html). Asymptomatic SARS-CoV-2 infection in pregnant women is common¹ and can cause nosocomial transmission among mothers, infants, and obstetric care providers. In a New York study, SARS-CoV-2 RNA was identified in 14% of asymptomatic women admitted for childbirth in late March and early April,¹ and 88% of all pregnant women who were COVID-19-positive had no symptoms.¹ Japan also experienced an outbreak of COVID-19 in April,² and Kyoto, where there had been many tourists from all over world, saw signs of the spread of COVID-19 with a peak of 154 patients admitted for COVID-19 on April 13, 2020 (https://hazard.yahoo.co.jp/article/covid19kyoto). The number of new COVID-19 cases per 100,000 over the period of seven days had also increased to 2.8 (from April 7 to April 13). Yet, the Japanese government’s policy was to perform PCR testing only in symptomatic patients and the number of possible COVID-19 cases remained unknown. Against this backdrop, in order to clarify the prevalence of COVID-19-positive pregnant women in Kyoto, Kyoto University Hospital (tertiary referral hospital) and Adachi Hospital (primary hospital with the highest number of deliveries in Kyoto) initiated universal screening for SARS-CoV-2 in pregnant women on April 16, 2020. In this retrospective study, we reviewed 886 pregnant women (roughly half of women who gave birth in Kyoto City during the study period) who were tested for COVID-19 either before delivery or at the time of admission in four tertiary referral hospitals in Kyoto City and Adachi Hospital between April 16 and June 30, 2020.

During the study period, 886 pregnant women were tested for COVID-19 near delivery or upon emergency hospitalization (Table 1). Only one woman was tested positive for COVID-19; she was asymptomatic. The overall prevalence of positive test results was 0.1%. No healthcare workers in the obstetric wards of the participating hospitals were infected with SARS-CoV-2.

Our findings suggest that asymptomatic pregnant women are extremely unlikely to be infected with COVID-19, unless the infection becomes considerably more prevalent. Japan has adopted a policy of testing only those who are strongly suspected of being infected, such as those who were in close contact with infected patients. Thus, the number of infected cases may differ greatly from those in Europe and the United States, where screening tests have been actively performed even in asymptomatic individuals. As a result, in Japan, no indicator of COVID-19 spread currently suggests the need to carry out universal screening for pregnant women. Our findings reveal for the first time that universal screening for SARS-CoV-2 prior to delivery may not be necessary, if the number of new COVID-19 cases per 100,000 over the past seven days remains low.
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(about 3) with rigorous contact tracing (i.e., a method that focuses on potential clusters and identified clusters, rather than conducting mass testing). In contrast, in a Tokyo study, three pregnant women (4% of all tested asymptomatic obstetric patients) were tested positive for COVID-19 in April,2) when the number of new COVID-19 cases per 100,000 over the past seven days was 8.4 (https://hazard.yahoo.co.jp/article/covid19tokyo). In Japan, healthcare workers and patients wear masks at all times. Infection control measures, such as personal protective equipment use and PCR tests for pregnant women, should be optimised according to the number of new cases over the past seven days in the general population.

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Conflicts of interest

The authors report no conflicts of interest to disclose.

References