Are pregnant and lactating women and their infants protected with the COVID-19 mRNA vaccines?

Yes, according to the results of a prospective cohort study that included 131 women, COVID-19 mRNA vaccines produce an antibody response in pregnant and lactating women that is comparable to that in nonpregnant women and superior to the antibody response to natural SARS-CoV-2 infection. Additionally, antibodies are present in both the umbilical cord blood and breast milk of vaccinated patients, supporting the transfer of immunity to the fetus and infant. Finally, there were no significant differences in vaccine adverse effects.


EXPERT COMMENTARY
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Pregnant women are among those at highest risk for severe disease and death from SARS-CoV-2 infection. However, exclusion of pregnant and lactating women from the initial COVID-19 vaccine trials has made counseling these patients challenging due to both the novelty of the vaccines themselves and the general lack of data in this vulnerable population. Data for the efficacy and risks of vaccination are needed to inform shared decision making between clinician and patient.

Details of the study
Gray and colleagues conducted a prospective cohort study of 84 pregnant, 31 lactating, and 16 nonpregnant women who received 1 of the 2 COVID-19 mRNA vaccines approved by the US Food and Drug Administration for emergency use authorization (BNT162b2 Pfizer/BioNTech or mRNA-1273 Moderna). The study’s primary objective was to evaluate the humoral immune response (antibody quantification) and adverse effects of these vaccines in the pregnant and lactating women compared with both nonpregnant women and a cohort of 37 women who had natural COVID-19 infection during pregnancy.

Antibody quantification from blood and breastmilk was performed at 4 time points: V0, the first vaccine dose; V1, the second vaccine
Future studies still are needed for long-term data on immunity and safety for the fetus.