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Follow-up of asymptomatic positive COVID-19 patients after delivery

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Thank you for your comments regarding our article titled "Obstetrical outcomes and follow-up for patients with asymptomatic COVID-19 at delivery: a multicenter prospective cohort study." The author brings up several issues that we wish to address.

First, the positive predictive value of a test depends on the prevalence of the disease in the population that is being tested. COVID-19 is an infectious disease and thus minimizing the false negatives is the important test characteristic, in addition to the sensitivity and specificity. Our study used the Cepheid Xpert Xpress rapid COVID-19 test, which has a 99.4% sensitivity, 96.8% specificity, 77% positive predictive value, and 100% negative predictive value in our patients. In a larger study in which 27,421 asymptomatic individuals were tested and 49,542 tests were used, there was a positive predictive value of 86.7%.[1] Our positive predictive value was slightly lower, but this may be because of the declining prevalence of the disease during the course of our study.

Second, the questions raised regarding the diagnosis of a true infection bring up a question that we had considered when designing our study. Initially, our plan was to obtain viral load data and compare it with the severity of symptoms that our patients experienced. The testing platform that we used, Cepheid Xpert Xpress, had this capability.[2] However, when we analyzed our data and found that most of the patients who tested positive were asymptomatic, we determined that the addition of viral load data would not strengthen our results. Although we understand that an accurate laboratory diagnosis is necessary, we were focusing on the follow-up of these patients.

We acknowledge the limitations of our study and we appreciate the questions that were asked. Despite the positive predictive value of our test being 77% with the possibility of erroneous diagnoses, we found that most of our patients were asymptomatic positive and did not go on to develop clinically significant infections.

Jennifer Hill, MD
Todd Rosen, MD
Division of Maternal-Fetal Medicine
Department of Obstetrics
Gynecology and Reproductive Sciences
Robert Wood Johnson Medical School
Rutgers
The State University of New Jersey
New Brunswick, NJ 08901
Division of Maternal-Fetal Medicine
Prenatal Testing Center
Hartford Hospital
University of Connecticut School of Medicine
Hartford, CT
jenn.hill.md@gmail.com

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REFERENCES

1. Wachinger J, Olaru ID, Horner S, Schnitzler P, Heeg K, Denkinger CM. The potential of SARS-CoV-2 antigen-detection tests in the screening of asymptomatic persons. Clin Microbiol Infect 2021. [Epub ahead of print].
2. Loeffelholz MJ, Alland D, Butler-Wu SM, et al. Multicenter evaluation of the Cepheid Xpert Xpress SARS-CoV-2 test. J Clin Microbiol 2020;58:e00926-20.

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