



## Yellow Fever Virus Transmission via Breastfeeding: Follow-up to the Paper on Breastfeeding Travelers

### To the Editor-in-Chief:

We wish to call readers' attention to a case that has been published since the publication of our paper, Breastfeeding Travelers: Precautions and Recommendations,<sup>1</sup> in the January issue of the *Journal of Travel Medicine*. The Centers for Disease Control and Prevention (CDC) reported that, in 2009, transmission of yellow fever vaccine virus through breastfeeding occurred in an infant (age 23 days) in Brazil whose mother received a primary yellow fever vaccination 8 days prior to the onset of symptoms in the infant.<sup>2</sup> The infant was diagnosed with encephalitis but recovered completely, and its neurological development and growth were normal through 6 months of age. Yellow fever virus RNA was recovered from the infant's cerebrospinal fluid and was found to be identical to the 17DD yellow fever vaccine virus. This case was classified as yellow fever vaccine-associated neurologic disease and demonstrated the transmission of the live vaccine virus through breastfeeding.

At the time of publication of our paper, this report had not been published. Our review had found no published data that confirmed the transmission of yellow fever virus through breastfeeding. We noted that (see Table 1 in Ref. 1) "although transmission to infant has not been reported, vaccination should be avoided due to the theoretical risk of transmitting 17D virus to the breastfed infant." We listed yellow fever vaccine to be used with precaution in breastfeeding women, "but to be considered if risk of infection is substantial." The Advisory Committee on Immunization Practices also recommends precautions in using the vaccine in breastfeeding women and states that "yellow fever vaccination of nursing mothers should be avoided," except when travel to high-risk areas cannot be avoided or delayed.<sup>3-5</sup>

In Brazil, yellow fever vaccine has been recommended for everyone in the risk areas where recent yellow fever outbreaks have occurred.<sup>2</sup> Presumably, breastfeeding women have been vaccinated during yellow fever vaccine campaigns. However, there are no published studies on this population, and we have found no estimates of the number of women who may have received yellow fever vaccine during any yellow fever vaccine campaigns.

This is the first published report documenting the transmission of yellow fever vaccine virus through breastfeeding. We would like to highlight this CDC report so that travel medicine providers exercise appropriate precaution in deciding whether to administer a primary yellow fever vaccination to breastfeeding women, especially when their infants are less than 6 to 9 months of age.

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## References

1. Chen LH, Zeind C, Mackell S, et al. Breastfeeding travelers: precautions and recommendations. *J Travel Med* 2010; 17:32–47.
2. Centers for Disease Control and Prevention (CDC). Transmission of yellow fever vaccine virus through breastfeeding—Brazil, 2009. *MMWR* 2010; 59:130–132.
3. CDC. Yellow fever vaccine recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2002; 51(RR17):1–11.
4. Gershman M, Schroeder B, Staples JE. Yellow fever. In: Centers for Disease Control and Prevention. *CDC health information for international travel 2010*. Atlanta: U.S. Department of Health and Human Services, Public Health Service, 2009.
5. CDC. ACIP Provisional Recommendations for the Use of Yellow Fever Vaccine (posted December 9, 2009). Available at: <http://www.cdc.gov/vaccines/recs/provisional/default.htm>. (Accessed 2010 Feb 17)