Likely Sexual Transmission of Zika Virus from a Man with No Symptoms of Infection — Maryland, 2016

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In June 2016, the Maryland Department of Health and Mental Hygiene (DHMH) was notified of a nonpregnant woman who sought treatment for a subjective fever and an itchy rash, which was described as maculopapular by her provider. Laboratory testing at the Maryland DHMH Laboratories Administration confirmed Zika virus infection. Case investigation revealed that the woman had not traveled to a region with ongoing transmission of Zika virus, but did have sexual contact with a male partner who had recently traveled to the Dominican Republic. The male partner reported exposure to mosquitoes while traveling, but no symptoms consistent with Zika virus infection either before or after returning to the United States. The woman reported no other sex partners during the 14 days before onset of her symptoms and no receipt of blood products or organ transplants.

The couple reported having had condomless vaginal intercourse twice after the man’s return from the Dominican Republic and before the woman’s symptom onset, approximately 10 days (day 10) and 14 days (day 14) after the man’s return. The man also reported that he received fellatio from the woman during their sexual encounter on day 14. On day 16 (2 and 6 days after the episodes of condomless vaginal intercourse) the woman developed symptoms of Zika virus infection, including fever and rash. On day 19 (3 days after symptom onset) she sought medical care; the provider suspected Zika virus infection, and serum and urine specimens were collected. Flavivirus and chikungunya virus tests were performed at the Maryland DHMH Laboratories Administration. Zika virus RNA was detected in urine, but not in serum, by real-time reverse transcription–polymerase chain reaction (rRT-PCR) using a test based on an assay developed at CDC (I). Serum rRT-PCR testing for dengue virus and chikungunya virus was negative. Serologic testing was negative for Zika virus immunoglobulin M (IgM) antibodies using the CDC Zika IgM antibody capture enzyme-linked immunosorbent assay (Zika MAC-ELISA) and negative for dengue virus and chikungunya virus IgM antibodies using InBios ELISA kits (InBios International, Inc., Seattle, Washington). Confirmatory serologic testing at the CDC Arbovirus Diagnostic Laboratory was equivocal for Zika virus IgM antibodies using the Zika MAC-ELISA. Plaque-reduction neutralization tests (PRNTs) performed at the CDC Arbovirus Diagnostic Laboratory confirmed a recent Zika virus infection. Convalescent serologic testing performed at the Maryland DHMH Laboratories Administration on day 56 (40 days after symptom onset) was equivocal for Zika virus IgM antibodies using the CDC Zika MAC-ELISA and negative for dengue virus and chikungunya virus IgM antibodies using InBios ELISA kits. PRNTs performed at the CDC Arbovirus Diagnostic Laboratory confirmed a recent, unspecified flavivirus infection.

The woman’s male sex partner was interviewed on day 26 after his return to the United States. He reported that he had no symptoms consistent with Zika virus infection (i.e., fever, rash, conjunctivitis, or arthralgias) either during his travel or since his return, and he did not have any of the following other symptoms: myalgias, chills, eye pain, oral ulcers, genital ulcers, anal ulcers, hematomas, hematuria, dysuria, and prostate pain. He reported feeling tired, which he attributed to having recently traveled. Serum, plasma, and urine specimens were collected from him on day 29, at which time he reported no new symptoms. Zika virus rRT-PCR testing performed at the Maryland DHMH Laboratories Administration was negative on serum and plasma and equivocal on urine. Serologic testing was positive for Zika virus IgM antibodies using the CDC Zika MAC-ELISA and positive for dengue virus IgM antibodies using an InBios ELISA kit. PRNTs performed at
with a diagnosis of Zika virus infection should wait at least 6 months before attempting conception, and women with a diagnosis of Zika virus infection should wait at least 8 weeks before attempting conception. Health care providers should counsel couples that correct and consistent use of condoms reduces the risk for sexually transmitted diseases and discuss the use of the most effective contraceptive methods that can be used correctly and consistently (6). Couples who do not desire pregnancy should consider abstaining from sex or using the most effective contraceptive methods that can be used correctly and consistently in addition to barrier methods, such as condoms, which reduce the risk for sexual transmission of Zika virus and other sexually transmitted infections (3). As more is learned about the incidence and duration of seminal shedding of Zika virus in infected men, recommendations to prevent sexual transmission of Zika virus will be updated if needed.

References