Long-Lasting Persistence of Zika Virus in Semen

To the Editor—We recently reported a case of male-to-female sexual transmission of Zika virus (ZIKV) [1]. The index case returned from Brazil where he experienced fever, asthenia, myalgia, chills, and a cutaneous rash from 7 February 2016 to his arrival in France on 10 February 2016. ZIKV RNA was evidenced by reverse-transcription polymerase chain reaction (RT-PCR) in urine samples obtained 16 and 24 days after the onset of symptoms with a viral count of $4 \times 10^3$ and $2.1 \times 10^4$ copies/mL, respectively. Semen samples obtained on day 18 and on day 24 tested positive for ZIKV RNA by RT-PCR with a high viral load of $2.9 \times 10^8$ and $3.5 \times 10^7$ copies/mL, respectively. ZIKV was isolated by means of culture from these 2 semen samples.

We report the further follow-up of ZIKV RNA in urine and semen in this patient. Urine and semen samples obtained on 27 April 2016 (day 80) tested positive with a viral count of $2.4 \times 10^2$ and $1.2 \times 10^3$ copies/mL, respectively. ZIKV could not be isolated by means of culture from this semen sample. Urine and semen samples collected on 10 May 2016 (day 93) tested negative.

The presence of ZIKV RNA has been reported in semen up to 62 days after the onset of illness, but infectious virus was not cultured [2]. A delayed sexual transmission, probably between 32 and 41 days after the onset of ZIKV symptoms, has also been described [3].

Our report shows that ZIKV excretion in semen can last at least 80 days after onset of symptoms, known to occur 2–12 days after exposure. This is currently the maximum documented time of ZIKV detection in semen. The current World Health Organization [4] and Centers for Disease Control and Prevention [5] guidelines for prevention of sexual transmission from men to women of childbearing age recommend that, to avoid the risk of fetal damage in case of procreation, individuals consider using condoms or abstaining from sex for at least 8 weeks after return from area where active ZIKV is occurring. This recommendation is extended to 6 months for men who had confirmed ZIKV infection or clinical illness consistent with ZIKV disease. The 6-month interval was chosen as it allowed 3 times the longest documented period that ZIKV RNA has been detected in semen after symptom onset (ie, 62 days) [4, 5]. This probably needs to be further justified. However, applying the same methodology, an interval of at least 8 months should be now considered for condom use or abstinence. Case series and/or clinical cohorts are needed to better define the duration period for prevention of ZIKV sexual transmission.

Note

Potential conflicts of interest. Y. Y. has served on the boards of and received personal fees for development of educational presentations from AbbVie, BMS, Gilead, MSD, Roche, Johnson & Johnson, ViV Healthcare, Pfizer, and Janssen. All other authors report no potential conflicts. All authors have submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Conflicts that the editors consider relevant to the content of the manuscript have been disclosed.

Sophie Matheron,1,2,3 Eric d’Ortenzio,2 Isabelle Leparc-Goffart,4 Bruno Hubert,5 Xavier de Lamballerie,6 and Yazdan Yazdanpanah7,8

1Service des maladies infectieuses et tropicales, Assistance Publique-Hôpitaux de Paris, Hôpital Bichat, 2Institut national de la santé et de la recherche médicale (INSERM), UMR 1137, 3Université Paris Diderot, Sorbonne Paris Cité, 4Centre National de Référence des Arbovirus, Institut de Recherche Biomédicale des Armées, Marseille, 5Santé publique France, Saint-Maurice, 6and 7UMR 190 Université Aix-Marseille, Institut de recherche pour le développement, INSERM 1207, Ecole des hautes études en santé publique, France

References


Correspondence: S. Matheron, Service des maladies infectieuses et tropicales, CHU Bichat-Claude Bernard, AP-Hôp, 46, rue Henri Huchard, Paris 75018, France (sophie.matheron@aphp.fr).