

Confirmation of Zika virus infection in suspected cases: a pilot study in the Fundação de Medicina Tropical Doutor Heitor Vieira Dourado, Manaus, Brazil

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According to the National Notifiable Diseases Information System (SINAN), the incidence of Zika virus (ZIKV) infection in Brazil declined dramatically from 2016 to 2017: the proportion of ZIKV suspected cases subsequently confirmed dropped from 31616/91387 (34.6%) between 2016 epidemiological weeks 1-13 to 1320/4894 (27%) between 2017 epidemiological weeks 1-12. In Brazil, the confirmation of a ZIKV suspected case is based on clinical-epidemiological criteria (general population) or laboratory criteria (pregnant women). To evaluate the feasibility of recruiting a population during their acute ZIKV disease for a study on ZIKV persistence in body fluids, we conducted a pilot study to estimate acute ZIKV infection prevalence among ZIKV suspected adult patients presenting at the outpatient clinic in Fundação de Medicina Tropical Doutor Heitor Vieira Dourado (FMT-HVD), Manaus, Brazil. Those with symptoms suggestive of ZIKV infection, such as rash and arthralgia or conjunctivitis, were invited to participate. Pregnant women were not included. Blood and urine samples were collected for ZIKV RNA detection on reverse-transcriptase-polymerase-chain-reaction (RT-PCR) following the protocol established by Lanciotti et al (2008). From 20th to 31st March 2017, 38 patients with clinical-epidemiological diagnosis of ZIKV infection were included (32 females and 6 males), of which 32 (84.2%) were confirmed by RT-PCR testing. ZIKV infection was more prevalent in female [24/32 (75%) versus 2/6 (33.3%); $p = 0.044$]. The results showed a higher proportion of lab confirmed cases by molecular biology technique when compared to confirmation of infection in the suspected cases reported in the country. We have also described the frequency of ZIKV infection in non-pregnant adult population. Confirming suspected cases with laboratory testing would allow a more accurate description of the ZIKV infection burden in the Brazilian population.

Keywords: Zika, laboratory diagnosis, notification

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