

PREGNANT WOMEN ZIKV INFECTION DIAGNOSIS IN MARTINIQUE

Alice Monthieux¹, Fatiha Najioullah², Arm Ibrahim¹, Raymond Césaire²,
Bruno Schaub^{1,3}, Jean-Luc Volumenier^{1,3}

¹Department of Gynecology and Obstetrics, University Hospital Center of Martinique, Fort De France, Martinique, ²Virology Department, University Hospital Center of Martinique, Fort De France, Martinique, ³Centre Pluridisciplinaire De Diagnostic Prénatal, University Hospital Center of Martinique, Fort De France, Martinique

Zika virus spread worldwide and reached the French Overseas Departments of America in December 2015. Martinique Island experienced an epidemic from January 20th, 2015 to October 13th, 2016. Because of fetal complications' risks, rapid screening is essential to provide appropriate follow-up to pregnant patients. Although infection can be asymptomatic, it is sometime revealed by clinical symptoms.

To study pregnant women's symptomatology, we conducted an exhaustive prospective study in the gynecological emergencies of the House of the Mother, Woman and Child (MFME) of Martinique. All patients reporting telltale symptoms for less than 10 days were tested throughout the epidemic. Blood sample PCR was performed if symptoms had appeared for 6 days or less, urine sample PCR was performed for symptoms appeared for less than 10 days. Both blood and urine samples were performed if symptoms occurred between 1 to 6 days before the samples.

An analysis was performed for 310 patients, 201 patients had a positive blood PCR, and 192 had positive urine PCR. Among those patients 185 had both positive blood and urine PCR. Positive blood PCR with negative urine PCR was found for 16 patients, and positive urine PCR with negative blood PCR was found for 7 patients.

248 women (80%) consulted within 5 days after the first symptomatology with 78 % positive PCR. 37 % reported myalgia or joint pain, rarely associated to a rash, and 23 % experienced hyperthermia.

The maculopapular rash sensibility was 94 % and its specificity was 64 %, while sensibility and specificity for conjunctivitis were at 30 % and 75 % respectively. The combination of maculopapular rash with conjunctivitis had a sensibility of 80 % and a specificity of 86 %.

Blood and urine samples were concordant in most cases. Thanks to the French authorities' recommendations women were well informed about ZIKV infection symptomatology, which pushed them to consult early.

In conclusion, clinical diagnosis is possible during the epidemic only if the co-circulation of other arboviruses (dengue fever and chikungunya) is not effective. Cogent clinical signs combination associated with urine sample, which is easier to obtain, could constitute a good test for the initial confirmation of ZIKV infection.