29th ECCMID Amsterdam, Netherlands 13 – 16 April 2019

The congress of ESCMID

O0996 Comparison of the risk of birth defects in live births from pregnant women infected and not infected by Zika virus in Guadeloupe, 2016-2017

Anna Funk*[1], Bruno Hoen[2], Benoit Tressières[2], Ingrid Vingadassalom[2], Eustase Janky[3], Philippe Kadhel[3], Catherine Ryan[3], Kinda Schepers[2], Stanie Gaete[4], Arnaud Fontanet[1]

[1] Unité d'épidémiologie des maladies infectieuses, Institut Pasteur, Paris, France, [2] Inserm CIC 1424, Centre Hospitalier Universitaire de la Guadeloupe, Pointe-a-Pitre, France, [3] Service de Gynécologie-Obstétrique, Centre Hospitalier Universitaire de la Guadeloupe, Pointe-a-Pitre, France, [4] CRB - Karubiotec, Centre Hospitalier Universitaire de la Guadeloupe, Pointe-à-Pitre, France

Background: In the French Territories in the Americas (FTA), the risk of birth defects possibly associated with Zika virus (ZIKV) infection was estimated at 7% among fetuses/infants in a cohort of 546 women who developed a symptomatic RT-PCR confirmed ZIKV infection during pregnancy (NEJM 2018;378:985-94). There was no concomitant prospective cohort of pregnant women without ZIKV infection to use as a control group.

Materials/methods: In Guadeloupe, one of the 3 FTAs that participated in the FTA cohort study, pregnant women were recruited at the time of delivery and tested for ZIKV infection. Women who had a confirmed negative IgG serology test for ZIKV at delivery and no other positive ZIKV test during pregnancy were considered to be ZIKV non-infected. Information on the course of the pregnancy was collected retrospectively and outcomes of live born infants of ZIKV non-infected women were analyzed, using the same definition criteria as those used for the FTA cohort study. Pregnancy outcomes were compared to those of the 241 ZIKV-exposed live born infants in Guadeloupe, extracted from the FTA cohort.

Results: Of the 490 live born infants without in-utero exposure to ZIKV, 42 infants (8.6%) had neurological abnormalities that were described as 'potentially linked to ZIKV infection'; all but one of these were microcephaly without any other brain or clinical abnormalities. The proportion of such abnormalities was not statistically different from that observed in the 241 live born infants with ZIKV exposure (6.6%, P=0.36). When re-considering the combined 8 fetuses and 241 infants of women with confirmed ZIKV infection in Guadeloupe from the FTA cohort, only two (0.8%) live born infants and three (1.2%) medically-aborted fetuses had birth defects that could still be linked to ZIKV infection.

Conclusions: Isolated anthropometric and other mild neurological abnormalities had the same prevalence among live born infants with and without in-utero ZIKV exposure. The high prevalence of isolated microcephaly among ZIKV non-infected women in our study population suggests that the sensitive definition for microcephaly, using a -2 SD cut-off with international growth curves, may lead to an overestimate of the rate of neurological complications of ZIKV infection during pregnancy.