



HAL
open science

Is Pregnancy Outcome Influenced by Chikungunya Infection? A Case-Control Study in 1401 Pregnant Women Enrolled in the CHIMERE Cohort

Xavier * Fritel, Alain Fourmaintraux, Olivier Rollot, Jacques Bideault, Louis Lagarde, Barbara Dhuime, Marc Gabrielle, Marie-Christine Jaffar-Bandjee, Alain Michault, Duska Ramful, et al.

► To cite this version:

Xavier * Fritel, Alain Fourmaintraux, Olivier Rollot, Jacques Bideault, Louis Lagarde, et al.. Is Pregnancy Outcome Influenced by Chikungunya Infection? A Case-Control Study in 1401 Pregnant Women Enrolled in the CHIMERE Cohort. 13th ICID, Jun 2008, Kuala-Lumpur, Malaysia. pp.e57, 10.1016/j.ijid.2008.05.032 . inserm-00423721

HAL Id: inserm-00423721

<https://inserm.hal.science/inserm-00423721>

Submitted on 19 Mar 2010

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Is pregnancy outcome influenced by Chikungunya infection? A case-control study in 1401 pregnant women enrolled in the CHIMERE cohort.

Authors: Xavier FRITEL,¹ Alain FOURMAINTRAUX,² Olivier ROLLOT,³ Jacques BIDEAULT,⁴ Louis LAGARDE,⁵ Barbara DHUIME,⁶ Marc GABRIELE,² Marie-Christine JAFFAR-BANDJEE,¹ Alain MICHAULT,² Duksha RAMFUL,¹ Sylvain SAMPERIZ,¹ Liliane COTTE,³ Patrick GÉRARDIN,^{2,3} François FAVIER,³ and the CHIMERE team.

Institutions: 1 CHD Félix-Guyon, CHR de la Réunion, Saint-Denis, France.
2 GHSR, CHR de la Réunion, Saint-Pierre, France.
3 CIC-EC de la Réunion, Saint-Pierre, France
4 CHI de Saint-Benoit-Saint-André, Saint-Benoît, France
5 CH Gabriel-Martin, Saint-Paul, France.
6 Clinique Sainte-Clotilde, Saint-Denis, France.

Background:

In 2005-06 a Chikungunya virus outbreak infected 38% of Réunion Island population. Forty-two cases of mother to child transmission were described for the first time. The purpose of the CHIMERE cohort study was to determine the consequences of Chikungunya infection on pregnancy outcomes.

Methods:

In 2006, 1401 pregnant women were enrolled in the CHIMERE cohort. The diagnosis of Chikungunya was based either on serology (IgM & IgG Chikungunya specific serology) planned at inclusion and at delivery, or RT-PCR performed in case of symptoms. We determined that 584 women were not infected by the virus at delivery (IgM- and IgG-), 648 were infected antepartum (IgM+, RT-PCR+, or IgG seroconversion) and 27 before pregnancy, date of infection was imprecise for 50 and assessment was incomplete for 92. We compared pregnancy outcome (prenatal hospitalization, fetal-loss and stillbirth, premature delivery, mode of delivery, birth weight, fetal malformations, newborn hospitalization) between the 584 women free of Chikungunya infection and the 648 infected during pregnancy. This prospective multicentric study has been approved by IRB (CPP de Tours, France).

Results:

For the 648 women infected by Chikungunya during pregnancy, the infection occurred during the first, second, and third trimester for 15, 59 and 26%, respectively; 50% presented fever, 94% arthralgia and 75% skin rash. The only difference between non-infected and infected women was the number of hospitalization during pregnancy (28 versus 42%, $p=0.0001$). Other outcomes, fetal loss and stillbirth (2.2 versus 2.0%), premature delivery (12 versus 10%), cesarean rates (18 versus 16%), birth weight (3067 versus 3121g), fetal malformations (5.0 versus 5.7%) and newborn hospitalization (6.7 versus 7.4%) were similar.

Conclusion:

We do not find any impact of Chikungunya infection on pregnancy outcomes except for the number of prenatal hospitalizations.