FERTILITY PRESERVATION WITH COMPREHENSIVE VIRUS SCREENING IN ZIKA VIRUS INFECTED REPRODUCTIVE AGE WOMEN DURING THE 2016 ZIKA VIRUS EPIDEMIC IN THE FRENCH TERRITORIES OF THE AMERICAS

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Abstract Body

Background:
Zika virus (Zikv) is a mosquito-borne virus that can be transmitted transplacenta and lead to severe birth defects. Throughout the 2016 Zikv epidemic in the French Territories in the Americas, no medically induced pregnancy was allowed by French Authorities. Thus, fertility preservation was offered to infertile couples seeking medical treatment, together with thorough viral screening.
Methods:
We present a cohort of 13 women who had a positive viral RNA detection by RT-PCR in at least one sample. They received controlled ovarian stimulation for 17 oocyte vitrification cycles at least 3 months after the acute infection. Screening was implemented to ensure the collection of mature oocytes without the presence of the virus. Various samples were collected for Zikv RNA testing in serum, urine, genital tract, endometrial biopsies, follicular fluids and immature oocytes. LN samples from the vitrification process and the storage containers were analyzed. All cycles were conducted in an IVF laboratory adapted for biological-risk cases.
Results:
Patients were 28 to 43 years old (mean 37.75 ± 4.0) with normal karyotype, negative vaginal culture and no systemic diseases. Mean BMI was 24.5±1.8. At enrollment, all 13 patients showed a verified Zikv infection, with positive RNA detection in at least one sample. For 8 patients, we performed one oocyte pick up (OPU), for 3 and 1 patients, respectively, two and three OPU. Mean number of oocytes/OPU was 6.82±5.1, mean number of mature vitrified oocytes/OPU was 4.82±3.54. Samples from the endometrium (9), follicular fluid (17), immature oocytes (10) and LN (5) tested negative for Zikv RNA. Ovarian reserve for patients before and after Zikv infection showed no significant variation. To date we performed oocytes thawing cycles for 10 patients out of 13.
Conclusions:
We implemented a preservation fertility program with viral screening in the case of a previously unknown virus outbreak of unforeseeable duration to help protect future fertility potential. Indeed as medical knowledge progressed, animal studies have shown that Zikv infection could impact negatively on fertility. Preliminary results in our study do not concur, but long term follow up is needed to ascertain it.