

Letter to the editor

Congenital Zika syndrome with prolonged detection of Zika virus RNA



Dear editor,

Zika virus (ZIKV) persistence in serum, urine, semen and other body fluids is a matter of concern [1–3]. In the case of semen, as has been referred by Abushouk et al., [2], the RNA of ZIKV can persist for up to 62 days, but in pregnancy infections, where ZIKV may cause the Congenital Zika Syndrome (CZS) [4,5], some reports also indicated that the duration of detectable viral RNA in serum would be longer than expected [6,7]. Then, we would like to take the opportunity to discuss and present a confirmed case of CZS in which the newborn was RT-PCR positive and 4 months later persisted positive.

A 24-y pregnant women living in a Zika, chikungunya and dengue endemic area of Colombia, when she has 8 gestational weeks, presented fever and chills, with no rash, pruritus and arthralgias. She did not consult at the time, but had 8 antenatal care consultations with no ultrasound identified fetal anomalies. Newborn was obtained vaginally, at 38 gestational weeks. His father serum was RT-PCR positive for Zika at the time of delivery (negative for dengue and chikungunya). Mother at delivery was RT-PCR positive for Zika at breastmilk, urine and serum (with high viremia, by qRT-PCR). Newborn was RT-PCR positive, presenting microcephaly, ventriculomegaly, basal ganglia and bilateral subcortical calcifications (CZS) (Fig. 1). STORCH agents screening and Hepatitis B and HIV-ELISA as well, were negative in both, mother and newborn. His EEG was slightly altered, with inadequate modulation (Fig. 1). Ophthalmological assessment was normal. Neurological examination found generalized hypertonia (Fig. 1). After six months, neurological findings persisted, head circumference at born was 30 cms ($< -3SD$), at 4th month 34 cms ($< -3SD$) and 6 months later 35 cms ($< -3SD$), with eye alignment alteration and a prominent frontal fontanelle. At 4th and 6th months, both, mother and infant, were positive at the RT-PCR for Zika in serum. The protocol used for the detection was previously reported by our group [8].

Several questions remain regarding the findings of prolonged detection of Zika virus RNA [1–3,6,7]. Would be this correlated with the presence of infectious virus? The frequency of this in newborns has been unfrequently described and further studies are still required [7]. Previous reports have found ZIKV infection persisting in congenitally infected newborns for up to 2 months [7], in our case, after 6 months still ZIKV RNA was detectable and at 6 months neuropsychomotor developmental delay was found. Clinical analysis of our infant indicates intrauterine infection, although hard to establish when, since there is no certainty of when the mother acquired ZIKV.

In recent studies, the median time until the loss of RNA detection was 14 days (95% confidence interval [CI], 11–17), and the 95th percentile of time was 54 days (95% CI, 43–64) [1], then highlighting the need for more studies about it, especially in newborns, particularly because its clinical implications as well long-term impact at neurological development still is unknown, as well plausible molecular diagnosis of ZIKV up to six or more months.

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Competing interests

None of the authors report competing interests.

Ethical approval

Informed consent was obtained.

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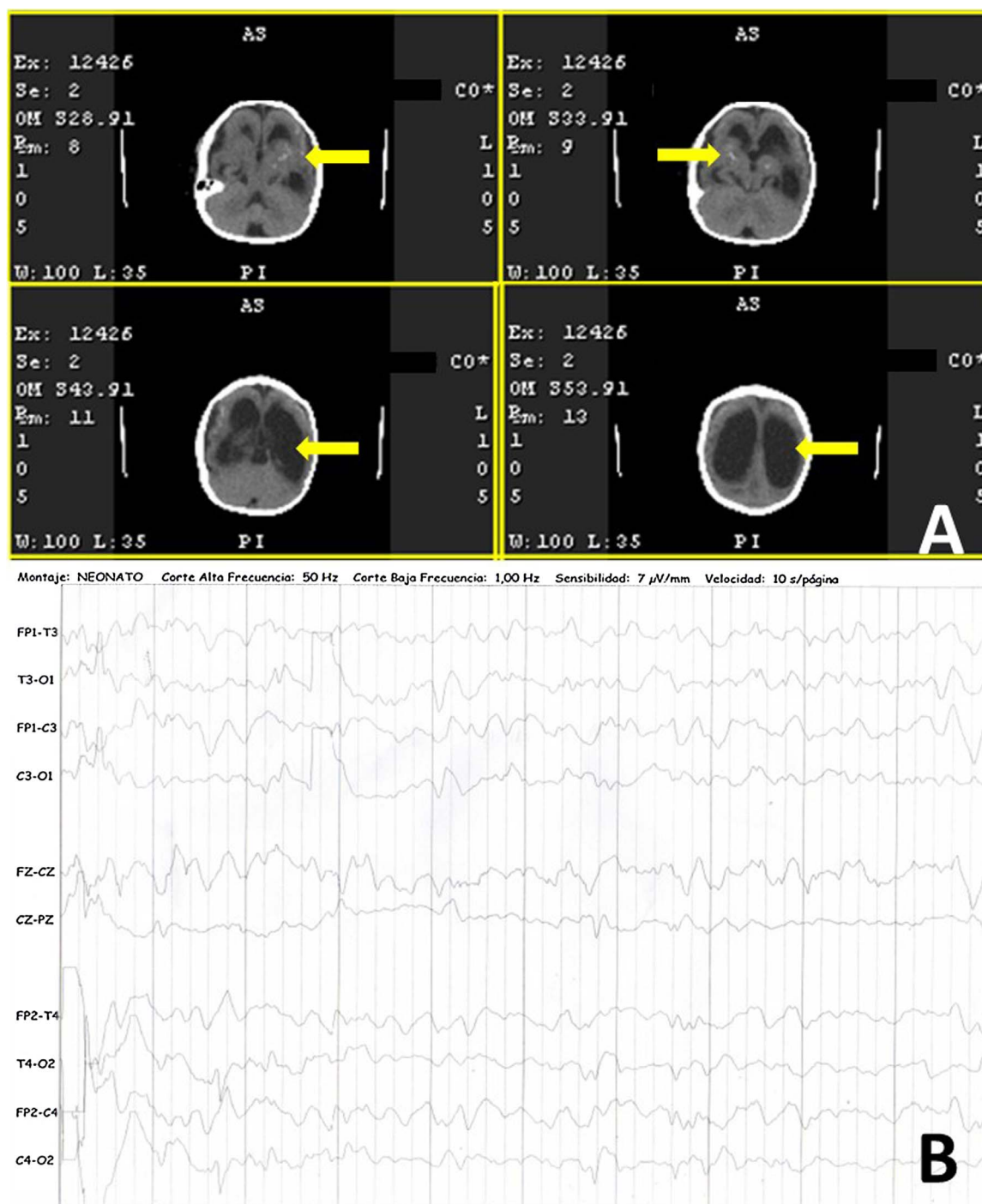


Fig. 1. A Findings at CT-scan, including microcephaly, ventriculomegaly, basal ganglia and bilateral subcortical calcifications. B. EEG, slightly altered, with inadequate modulation.

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