Congenital Neurological Disorders in Children with Microcephaly Related to Exanthematous Diseases During Pregnancy: A Cohort Study

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2342. Evaluation of Pregnant Women, Fetuses and Infants with Zika Virus Exposure and Infection: Lessons Learned from the Congenital Zika Program at Children’s National

Robertita DelBisai, MD; MS; Sarah Mulkey, MD, PhD; Caitlin Cristante, BS; Lindsay Pesceleta, RN; Gilbert Vezina, MD; Dorothy Bulas, MD; and Adre Duplessis, MB, ChB; Pediatrics (Infectious Diseases and Microbiology, Immunology and Tropical Medicine, Children’s National Health System, Washington, DC; Fetal Medicine, Children’s National Health System, Washington, DC; Children’s National Health System, Washington, DC; Case Series, we included neonates from 3 NICUs, were classified as suspected/confirmed cases of CHIKV and ZIKA neonatal (CHIK-neonatal, ZIKA-neonatal) in Cartagena–Colombia, between December 2015 to June 2016.

Methods. Case Series, we included neonates from 3 NICUs were classified as suspected/confirmed cases of CHIK-neonatal and ZIKA-neonatal by RT-PCR.

Results. Between September-December 2014, 12 newborns with mean gestational age 38 weeks ± 1.25SD were included as CHIK-neonatal cases, 66.8% (8/12) of newborns presented symptoms confirmed by CHIKV four days before or two days after the delivery. Neonates had symptoms average 7.7 days ± 6.9SD, median 5 [2,7]. Sign-Symptoms: 100% irritability-pain, 83.3% fever, 66.6% exfoliative dermatitis, 58.3% rash, vomiting, abdominal distension and joint edema 16.6% each, 8.3% respiratory distress syndrome. All RT-PCR were positive for CHIKV and leukopenia with lymphopenia. Between December 2015 to June 2016, 23 newborns with malformedities and/or epidemiological data from mother with Zika-infection confirmed by RT-PCR, were included. 85.7% were controlled pregnancy, Median-maternal age 38 weeks ± 1.2SD were included as CHIK-neonatal and ZIKA-neonatal by RT-PCR.

Results. Between January 2016 and May 2017, 36 women/fetuses were evaluated at CZPCPN for possible Zika infection during pregnancy (32 US residents who traveled, 2 with partner who traveled, 2 emigrees). An additional 14 women/infant pairs were evaluated following postnatal referral to our program. Exposure route included arboreal (88%) and/or potential sexual exposure (48%). Symptoms occurred in only 6/50 (12%). Exposure occurred in the preconceptual period in 10/50 (20%), first trimester in 23/50 (46%), second trimester in 13/50 (26%), and third trimester 4/50 (8%). Nearly 50% (24/50) of women presented outside the 12 week window of exposure and could not have infection excluded. ZIKV was confirmed in 22% (11/50) or suspected due to unspecified flavivirus infection in 28% (14/50). Only 7/50 (14%) had negative PCR/IgM testing in appropriate window to exclude infection. Two fetuses with severe neurological impairment were classified as suspected/confirmed cases of CHIK-neonatal and ZIKA-neonatal by RT-PCR. 85.7% were controlled pregnancy, Median-maternal age 38 weeks ± 1.25SD were included as CHIK-neonatal cases, 66.8% (8/12) of newborns presented symptoms confirmed by CHIKV four days before or two days after the delivery. Neonates had symptoms average 7.7 days ± 6.9SD, median 5 [2,7]. Sign-Symptoms: 100% irritability-pain, 83.3% fever, 66.6% exfoliative dermatitis, 58.3% rash, vomiting, abdominal distension and joint edema 16.6% each, 8.3% respiratory distress syndrome. All RT-PCR were positive for CHIKV and leukopenia with lymphopenia. Between December 2015 to June 2016, 23 newborns with malformedities and/or epidemiological data from mother with Zika-infection confirmed by RT-PCR, were included. 85.7% were controlled pregnancy, Median-maternal age 38 weeks ± 1.25SD, 42.8% of mothers had ZIKV symptoms in first trimester, median 10 weeks [10.0–30.0], 42.9% had vaginal delivery, Median gestational age 37.2 weeks [37.0–39.3]. Median weight 2.840 kg [2.490–3.420], Size 48cm [45–51], 57.1% female. 85.7% of newborn had microcephaly, 28.6% xeroderma-desquamation, arthropgyrosis, perinatal asphyxia each, 28.6% myelomeningocele, ventriculomegaly, microcephaly, calcifications and cerebral hypoplasia, 14.3% ocular alterations. Normal hemograms, positive ZIKA-RT-PCR, negative Dengue, CHIKV and negative serology for TORCHS.

Conclusion. CHIK-neonatal and ZIKA-neonatal are an increasing possibility and must be considered in the approach of TORCHS complex (5). The maternal epidemiological background is fundamental in the diagnostic in endemic areas.

Disclosures.

All authors: No reported disclosures.

2345. Infants Born in New York City to Women with Zika Virus Exposure During Pregnancy, January 2016 – May 2017

Ellen H. Lee, MD; General Surveillance, Bureau of Communicable Disease, New York City Department of Health and Mental Hygiene, Long Island City, New York

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Background. African researchers noted that aedes-transmitted Zika epizootics tended to follow aedes-transmitted Chikungunya virus (CHIKV) epidemics. In 2013 CHIKV spread pandemically from Africa-Asia, and Zika followed (1). Cartagena has been affected since 2014 by arboviruses with the most severe clinical forms in fetus, neonates and pregnant (1–4). Aim: To describe clinical, epidemiological profile of CHIKV and ZIKA neonatal (CHIK-neonatal, ZIKA-neonatal) in Cartagena-Colombia, between September 2014 and June 2016.

Results. Between September-December 2014, 12 newborns with mean gestational age 38 weeks ± 1.25SD were included as CHIK-neonatal cases, 66.8% (8/12) of newborns presented symptoms confirmed by CHIKV four days before or two days after the delivery. Neonates had symptoms average 7.7 days ± 6.9SD, median 5 [2,7]. Sign-Symptoms: 100% irritability-pain, 83.3% fever, 66.6% exfoliative dermatitis, 58.3% rash, vomiting, abdominal distension and joint edema 16.6% each, 8.3% respiratory distress syndrome. All RT-PCR were positive for CHIKV and leukopenia with lymphopenia. Between December 2015 to June 2016, 23 newborns with malformedities and/or epidemiological data from mother with Zika-infection confirmed by RT-PCR, were included. 85.7% were controlled pregnancy, Median-maternal age 38 weeks ± 1.25SD, 42.8% of mothers had ZIKV symptoms in first trimester, median 10 weeks [10.0–30.0], 42.9% had vaginal delivery, Median gestational age 37.2 weeks [37.0–39.3]. Median weight 2.840 kg [2.490–3.420], Size 48cm [45–51], 57.1% female. 85.7% of newborn had microcephaly, 28.6% xeroderma-desquamation, arthropgyrosis, perinatal asphyxia each, 28.6% myelomeningocele, ventriculomegaly, microcephaly, calcifications and cerebral hypoplasia, 14.3% ocular alterations. Normal hemograms, positive ZIKA-RT-PCR, negative Dengue, CHIKV and negative serology for TORCHS.

Conclusion. CHIK-neonatal and ZIKA-neonatal are an increasing possibility and must be considered in the approach of TORCHS complex (5). The maternal epidemiological background is fundamental in the diagnostic in endemic areas.

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