

14th World Pediatrics & Neonatal Healthcare Conference

September 11-12, 2017 Los Angeles, CA, USA

<http://pediatrics.cmesociety.com>

Evaluation of urological outcomes in children exposed to fetal infection by Zika virus

Costa Monteiro LM¹, Fontes JMA², Cruz GNOA², Saad Salles T², Boechat M², Monteiro ACA³, Ferreira TVLA² and Moreira MEL²

¹National Institute of Women, Adolescent and Child Health Fernandes Figueira, Brazil

²Instituto Nacional de Saude da Mulher, Criança e Adolescente (IFF/Fiocruz), Brazil

³University of California, Los Angeles, USA

Background & Aim: Zika virus is a mosquito borne flavivirus that may affect pregnant women and their infants by causing fetal abnormalities. This Congenital Zika Syndrome (CZS) is associated with microcephaly and central nervous systems malformations. We identified that some of the regions damaged by CZS are also known to influence the neural circuitry controlling the lower urinary tract. The goal is to investigate an association of CZS and neurogenic urinary tract dysfunction to increase knowledge in the field and mitigate the impact of the disease in infected children.

Methods: Urological assessment was performed in pediatric patients with confirmed CZS referred to our Urology Clinic between June 2016 and June 2017. It consisted of clinical history, laboratory tests, renal ultrasound and urodynamic evaluation. ZIKV was previously confirmed by maternal history and positive PCR in babies/mothers. Microcephaly and other CNS abnormalities were established based on neurological and image evaluation (CT and/or MRI).

Findings: Twenty eight CZS patients were tested, 15 females and 13 males, age 10 months old in average (ranging from 2 mo to 19 mo old). All were presented with microcephaly. Urological assessment confirmed neurogenic urinary tract dysfunction in 100%, some with high risk profile. Most were asymptomatic but urological screening confirmed urinary tract infection in 5 and renal US were already abnormal in 3 patients.

Conclusion: Urological comorbidities are associated with congenital Zika syndrome, including high risk urodynamic patterns that can cause renal damage if left untreated. This is potentially the only treatable health condition in CZS setting and neonatologist and pediatricians need to be aware to promote proactive management that mitigates disease burden to patients and their families.

Biography

Lucia M. Costa Monteiro, M.D, Ph.D., works at Instituto Fernandes Figueira/Fiocruz (www.iff.fiocruz.br), the Brazilian National Institute of Health for Women, Children and Adolescents. Her research interest is neurogenic bladder and voiding dysfunction and since 1998 has been the research group leader: (<http://dgp.cnpq.br/dgp/espelhogrupo/3929782950316727>). From 2002-2004 she collaborated/worked as a research associated at the Children's National Medical Center. Member of the International Children's Continence Society and Member of Editorial Board of *Revista Brasileira de Saúde Materno Infantil* (2006), *Jornal de Pediatria* (2008) and *SM Journal of Nephrology and Kidney Diseases* (2017).

lucia@iff.fiocruz.br

Notes: