

Congenital Zika virus syndrome: importance of the multidisciplinary approach

In 2015, Brazil underwent an outbreak of Zika virus (ZIKV) infection, transmitted by the *Aedes aegypti* mosquito. The severe neurological impairments in newborns caused congenital ZIKV syndrome to gain world repercussion, being declared “Public Health Emergency of International Concern” by the World Health Organization. One of the main consequences of infection by ZIKV are the fetal abnormalities detected by ultrasound in 30% of the ZIKV-positive pregnant women. Fetal abnormalities, such as decreased intrauterine growth, abnormal amniotic fluid volume, abnormal brain or umbilical flow, ventricular calcifications, and other changes in the central nervous system, in addition to fetal death, were found. Part of the ultrasonographic findings during pregnancy were confirmed in the newborns assessed so far. In the most serious cases, the neurological changes may cause microcephaly, which is accompanied by major functional impairment and neuropsychomotor developmental delay.

These signs and symptoms were elegantly reported in the *New England Journal of Medicine*¹ from the cohort study conducted by the Laboratory of Acute Febrile Illness of Fundação Oswaldo Cruz, in Rio de Janeiro. Since the beginning of 2016, the Laboratory of Neurofunctional Evaluation of the Physical Therapy Program of Faculdade de Medicina of Universidade de São Paulo has collaborated by evaluating the risks for neurological impairment and characterizing the neuropsychomotor development of newborns and infants of this cohort. Our results so far show that about 40% of these newborns and infants present risks for neurological disorders and that the vast majority does not have microcephaly.

Before this, we alert to the need for follow-up, by the multidisciplinary team, of all the

children of pregnant women infected with ZIKV, even in the absence of microcephaly. We also highlight that only 20% of people infected with ZIKV present its symptoms. That is, there is a population of infants four times larger than the so far seen with potential risk to changes in the neuropsychomotor development. Physical Therapy has a key role in the evaluation and choice of appropriate conducts to encourage motor development in these babies.

Welfare policies should be implemented for actively searching these infants at risk for developmental changes among the children of infected mothers, of symptomatic mothers with yet unproven ZIKV exposure, and of mothers living in risk areas. Therefore, health professionals and managers should direct their efforts to identification and intervention strategies for minimizing the impairment to the neuropsychomotor development of this still much underestimated population of children with congenital ZIKV syndrome.

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REFERENCE

1. Brasil P, Pereira Junior JP, Moreira ME, Nogueira RMR, Damasceno L, et al.; Zika virus infection in pregnant women in Rio de Janeiro. *NEJM* (Online). 2016;375:2321-34.