



Mini Review

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Congenital Zika Syndrome in Mexico



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After the arrival of Zika in the Americas, there was an increase in cases of acute neurological syndromes in adults (mainly Guillain Barré syndrome) as well as cases of microcephaly (now called congenital Zika syndrome) that ignited global epidemiological alerts [1]. After the above, the neurotropic and teratogenic nature of virus [2], together with other characteristics that make it different from other arboviruses such as: Transmission in various ways including maternal fetal, through breast milk, blood products, sexual transmission and transmission from person to person without mediating a vector [3]. Being a virosis that is often asymptomatic and even afebrile [4]. Use other vectors than *Aedes aegypti*, such as *Aedes albopictus*, *Aedes vexans* and species of the genus *Culex* [5,6].

The cases of microcephaly, being the manifestation that attracted attention, were soon accompanied by various cranial alterations, as well as auditory and ophthalmic alterations, organic agenesis, cardiopathies and various pneumopathies, hydrops fetalis, arthrogryposis, among others that together constitute the syndrome congenital by Zika. The incidence of this syndrome throughout the continent varies from 6% in North America to 42% in Brazil. The risk of birth defects and congenital Zika syndrome overall was higher in the first trimester of pregnancy with 3.6 and 6.9% respectively [7].

According to the latest report published by the WHO/PAHO from 2015 to 2018, a total of 1,003,509 cases of Zika virus infection were reported in the Americas, of these 3,720 cases correspond to congenital Zika syndrome. Brazil stands out with 2,952 cases of the syndrome, Colombia with 248 cases, Guatemala with 140 cases and the United States of America with 102 cases [8].

In Mexico, 12,932 confirmed autochthonous cases of Zika have been reported from 2015 to 2019, the main affected states are Veracruz, Yucatán, Nuevo León and Chiapas. In the same period of time, 7,134 cases of pregnant women with confirmed Zika virus infection were reported, predominantly in the states

of Yucatán, Veracruz, Tamaulipas and Nuevo León [9]. 54 cases of the syndrome associated with Zika have been reported, according to reports from the Ministry of Health, highlighting important aspects such as:

Three asymptomatic cases were reported in the mother, with involvement of the newborn. A case of involvement in a twin pregnancy has been reported.

80% of cases are reported in the first trimester of pregnancy. The main affected states are Veracruz, Chiapas, Guerrero and Nuevo León (both the south and the north of the country have reported cases of the syndrome and are the states with the highest incidence of Zika cases) The main manifestations of the syndrome lie in the neurological sphere with cases of microcephaly, ventriculomegaly-hydrocephalus, anencephaly. A case of macrocephaly. A case of congenital heart disease. A case of horse foot.

Regarding mortality, 2 cases were stillborn, 10 were born alive but died some time later (from days of extrauterine life to months), the rest are alive with various disabilities [10]. Since the publication of the Zodiac study, which was the first to document the first experiences of children affected by the syndrome in Brazil, few studies have followed the documentation of experiences in other centers. This study showed that the 19 children studied for 19-24 months presented various alterations highlighting: severe motor disorders (15 cases), seizures (11 cases), sleep disorders (10 cases), hearing problems (13 cases), problems visual (11 cases), difficulty feeding (9 cases), frequent hospitalizations for bronchitis or pneumonia (8 cases) and reported 3 or more complications of those mentioned together (14 cases).

In Mexico, there have been publications of particular experiences of hospital centers in some areas of the country, predominantly in the southeast, highlighting variable results from no incidence of congenital Zika syndrome despite being documented pregnant women with confirmed Zika virus infection, to case reports and case series. Therefore, it is very important to

continue the documentation of cases to generate experiences that help the diagnosis and treatment of these patients, as well as the treatment of their sequelae, which are often multiple, and merit multidisciplinary management. Similarly, do not forget that agents previously known as those of the TORCH profile are still in force as responsible for microcephaly and other congenital alterations, together with other arboviruses with potential neurotropism such as chikungunya and the Chimere cohort reported in the islands Meeting that showed the affectation neonatal due to said virus conditioning severe neonatal encephalopathy conditions [7,11].

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