presented anti-Zika antibodies at the time of delivery. A total of 7 (6.8%) newborns were diagnosed with microcephaly, while 96 (93.2%) were classified as newborns without microcephaly.

Methods & Materials: In June 2017, we began a prospective follow-up of these infants without microcephaly exposed to Zika Virus *in utero* by evaluating neurodevelopment delays, performing neurological examinations and applying the Bayley Scales of Infant Development III (BSID-III), Mental Development Index (MDI) and Bayley-III cognitive and language scales. Auditory evaluations were performed by Otoacustic emissions (OAE) and Brainstem Auditory Evoked Potential (BAEP).

Results: To date we have evaluated 18 infants, mean age 1.7 years. Of these, 55.6% are male and 61% were delivered by C-section. Anti-Zika IgG serology was positive in 75% and three (16.6%) presented positivity for Zika by PCR on urine samples within 24 h of birth. Based on head circumference (HC) at time of birth, all were classified as normal by the Intergrowth scale and currently fall within normal HC percentiles. Cognitive delay was identified in five (33%) infants, language delay in four (26.6%) and motor delay in two (13.3%).

Conclusion: Our preliminary results indicate that *in utero* exposure to Zika virus could be associated with neurodevelopmental delay, even in children born without microcephaly at birth. Currently, only microcephalic infants are referred to specialized care, while normocephalic children are maintained in primary health care. We believe that all newborns exposed to Zika *in utero* should be referred to specialized centers for the early detection of neurodevelopmental delays and timely intervention.

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Neurological complications associated with arboviruses during Zika outbreak in Salvador, Bahia-Brazil

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Background: An unprecedented and concurrent outbreak of Dengue (DENV), Chikungunya (CHIKV) and Zika (ZIKV) virus happened in Brazil in 2015. Approximately 18.372 cases of an acute exanthematous illness were notified in Salvador, Bahia and several cases of Guillain-Barré Syndrome (GBS) raised.

Methods & Materials: We started a hospital surveillance for GBS and other neurological syndromes in two general hospitals in Salvador, northeastern Brazil.

Results: Twenty-seven cases were included, of which 18 (66%) were female. The mean age was 40 years and 26 (93%) of them had acute symptoms suggestive of arbovirus infection before the onset of neurological symptoms. The main symptoms were skin rash, pruritus, myalgia, and fever. The median time between onset of acute

symptoms and neurological symptoms was 10.5 days. Seventeen cases (63%) were classified as GBS, 3 (11%) as acute encephalitis, 2 (7%) as opsoclonus-myoclonus ataxia syndrome (OMS), 2 (7%) as myelitis, 1(4%) as Carpal tunnel syndrome and 1 (4%) as acute disseminated encephalomyelitis (ADEM). GBS cases presented in a variety of clinical spectrum, with 8 (47%) as acute ataxic neuropathy, 5 (29%) as classic GBS, 2 (11%) as bifacial weakness with paraesthesias, 1 (5%) as paraparetic GBS and 1 (5%) as classic Miller-Fischer syndrome. Twelve (44%) patients were admitted to semi-intensive or intensive care units and none died. The arbovirus diagnosis was established in 21(77.8%) of the cases. Serological evaluation by ELISA singly detected IgM-specific DENV antibodies in 3 cases (2 SGB and 1 Myelitis), IgM-specific CHIKV antibodies in 4 cases (3 SGB and 1 myelitis) and IgM-specific ZIKV antibodies in 3 cases (SGB). Six cases had both anti-ZIKV and anti-DENV (2 SGB, 2 encephalitis, 1 ADEM, 1 OMS) with a presumptive ZIKV diagnosis. One case of OMS had a coinfection by CHIKV and DENV-4 established by RT-PCR.

Conclusion: Herein, we describe 28 cases of GBS and other neurological syndromes associated with arboviruses. Besides GBS, we also identified cases of encephalitis, ADEM and OMS, a rare syndrome characterized by chaotic eyes movement and ataxia. Thereafter, clinicians and health care providers should be aware of the potential severe neurological complications associated with arbovirus infection in epidemic areas.

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Projecting the end of the Zika epidemic in Latin America: A modelling analysis

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Background: Zika virus disease emerged in Latin America in early 2015, which had serious implications for population health. In 2016, the World Health Organization declared a cluster of neurological disorders and neonatal malformations associated with Zika cases a Public Health Emergency of International Concern. 2017 incidence has declined, and future disease incidence in Latin America remains uncertain due to gaps in our understanding of the natural history of infection, considerable variation in surveillance and a lack of a comprehensive collation of available data from affected countries.

Methods & Materials: This analysis combines publically available data on Zika virus incidence across most Latin American countries and a spatio-temporal dynamic transmission model for Zika virus infection to determine key transmission parameters and likely future incidence in 87 cities. Seasonality was determined by spatio-temporal estimates of Aedes aegypti vector capacity. Country and state-level data are used to infer key model parameters using Monte-Carlo methods, different movement models were tested against the data and the best-fitting parameter combinations were used to estimate incidence within each city.

Results: We predict that the highest incidence in 2018 will be observed in Colombia and some Brazilian States (Parana, Sao Paulo, Rio de Janiero and Minas Gerias), but the estimated number of