

NEUROLOGICAL COMPLICATIONS ASSOCIATED WITH ARBOVIRUSES DURING THE ZIKA OUTBREAK IN SALVADOR, BAHIA-BRAZIL

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An unprecedented and concurrent outbreaks of Dengue (DENV), Chikungunya (CHIKV) and Zika (ZIKV) virus happened in Brazil in 2015. Approximately 8019 cases of DENV and 18.372 cases of an indeterminate acute exanthematous illness were notified in Salvador, Bahia. At the same period several cases of Guillain-Barré Syndrome (GBS) raised. We started a hospital surveillance for GBS and other neurological syndromes in two general hospitals with neurology units in Salvador, northeastern Brazil. Since May 2015, 27 cases were included, of which 18 (66%) were female and 9 (33%) male. The mean age was 40 years and 26 (93%) of them had acute symptoms suggestive of arbovirus infection before onset of neurological symptoms. The main virological 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, 1 (5%) as classic Miller-Fischer syndrome (MF) and. Twelve (44%) patients were admitted in 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 positive results (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. Herein, we describe 28 cases of GBS and other neurological syndromes associated with ZIKV, but also with CHIK and DENV infection. 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 for the potential severe neurological complications associated with ZIKV, CHIKV and DENV infection in epidemic areas.