Encephalitis and transverse myelitis in dengue and chikungunya coinfection

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A 53-year-old man from Northeastern Brazil was admitted to the emergency room due to mental confusion and diffuse myalgia, adynamia, fever, and oliguria for 2 days. He had history of type 2 diabetes mellitus with nephropathy and peripheral neuropathy. Dengue immunoglobulin M (IgM) and immunoglobulin G (IgG) and chikungunya IgM serology were positive. Magnetic resonance imaging (MRI) of the brain revealed diffuse accentuation of grooves, which is unusual for this age group, and numerous punctiform areas with hyperintensity in T2-weighted fluid-attenuated inversion recovery (T2w-FLAIR) sequences in the supratentorial white matter, especially within the oval center, indicating encephalitis (Figure 1). MRI of the spinal cord revealed areas with hyperintensity in T2w-FLAIR sequences in the anterior portion in all segments, indicating transverse myelitis (Figure 2). Cerebrospinal fluid (CSF) analysis showed glicorraquia of 103mg/dL, proteinorraquia of 121mg/dL, and non-reagent VDRL. On the 58th day of hospitalization, the patient was discharged.

Dengue and chikungunya coinfection may have a myriad of neurological presentations such as encephalopathy, myelopathy, Guillain-Barré syndrome, cranial neuropathy, cognitive, and psychiatric disorders[1,2]. Transverse myelitis is commonly caused by autoimmune diseases, although certain viral pathologies may also be involved[3]. The diagnosis of neurological manifestations associated with dengue virus/chikungunya virus coinfection may be determined by specific IgM antibodies and increasing IgG antibody titers. However, other methods such as polymerase chain reaction (PCR) in CSF samples may be necessary for the differential diagnosis[4].

Conflicts of interest
The authors declare that there is no conflict of interest.

REFERENCES