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Short Communication

Diagnosis of neurological disorders and the Zika virus epidemic in Colombia 2014 –2016

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Zika virus infection in Colombia was first notified in August 2015, and the first cases of native transmission occurred in October of that year.[1–3] The infection has been associated with several complications including certain neurological disorders, such as an increased incidence of Guillain–Barré syndrome (estimated odds ratio >34), microcephaly, and polyneuropathy. The health care systems of affected countries and the World Health Organization have increased efforts towards research, prevention, and control because of the multiple negative implications of this infection in the population.[4,5] Colombia has experienced the second highest number of cases of Zika virus infection in South America.[2]

Following the publication of a review article reporting the increased risk of neurological disorders caused by Zika virus infection,[5] all records of these diagnoses reported as the primary diagnosis in a population database of about 6.5 million people, corresponding to 14.1% of the population of Colombia, were investigated. This resulted in a descriptive study of all patients of any age affiliated with the Colombian health care system who were treated at a medical consultation and received a prescription for neurological or psychiatric medication between January 2015 and March 2016. Data were obtained from the database of the largest drug dispenser in the country, Audifarma S.A., and validated.

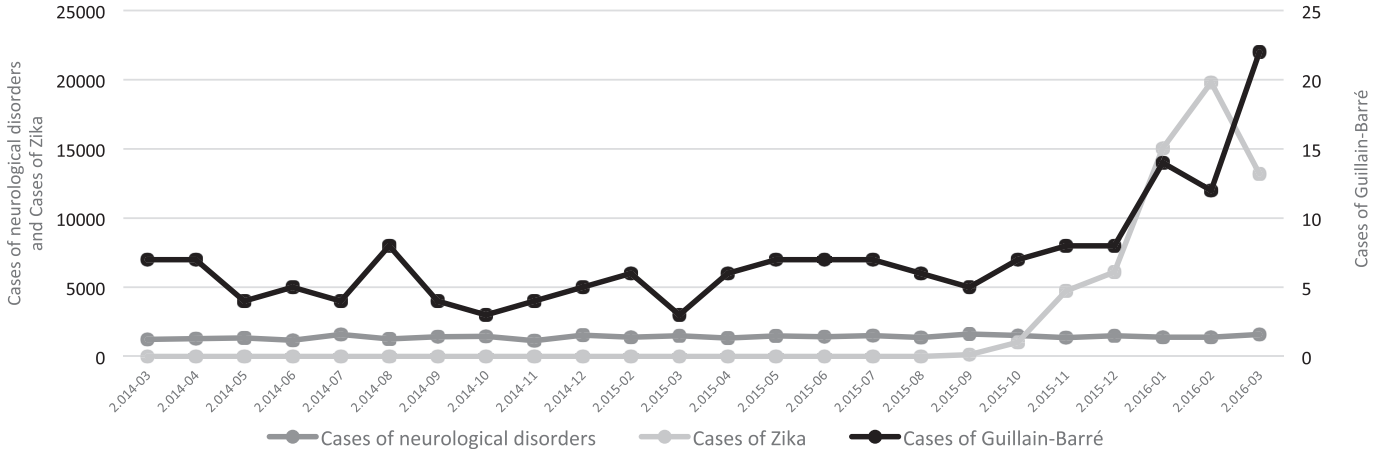

Figure 1. Number of new cases of Guillain-Barré syndrome, Zika virus infections and neurological disorders in a population database of Colombia, 2014-2016.

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A total of 81 neurological disorders included in the International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10) were identified during the observation period (diagnoses of myelopathy, neuropathy, paralysis, and demyelinating disorders were included). The number of new monthly cases of Guillain–Barré syndrome remained stable during the first 7 months of 2015, but from August 2015, when Zika virus infection first appeared in Colombia, the number of reported cases started to increase, reaching a four-fold increase in March 2016, the time of the greatest number of reported cases in the country (Figure 1). During the same period of time, the number of new diagnoses of other neurological disorders showed no increase (Figure 1). From the beginning of the epidemic phase (week 40, 2015) to epidemiological week 15 of 2016, there were 3292 confirmed cases and 68 660 suspected cases of infection in Colombia.[3]

These results suggest the possibility that Zika virus infection is associated with Guillain–Barré syndrome (besides microcephaly), but not with other neurological disorders. Prompt confirmation of the infection and increased measures aimed at searching for and identifying Guillain–Barré syndrome should be promoted in order to start treatment early and avoid the appearance of complications.[5–7]

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