



## Opinion

# Epidemiological characteristics of patients diagnosed with dengue from 2015 to 2020 in Celaya, Guanajuato, México

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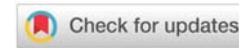
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Dengue is a viral disease transmitted by arthropods. It is caused by four Ribonucleic Acids (RNA) flavivirus serotypes (dengue virus [DENV] -1, -2, -3, and -4) which are transmitted by blood-feeding mosquitoes, primarily the *Aedes aegypti* mosquito. The infection causes flu-like symptoms and sometimes progresses to death.

The city of Celaya is located in the southwest of the state of Guanajuato, in the central zone of Mexico; it does not have coasts and there is no historical precedent of being an endemic region of dengue. In 2017, 4,141 cases of dengue were reported in the city of Celaya.

One of the risk factors for severe dengue is a history of previous dengue infection by a different serotype, for which we consider it imperative to investigate and identify the epidemiological characteristics of patients who were diagnosed with dengue from 2015 to 2020 in the General Hospital of Zone 4 of the Mexican Institute of Social Security in Celaya, Guanajuato to favor action plans, prevention and treatment of the disease [1-5].

We conducted a cross-sectional cohort study, 100% of the population diagnosed with dengue in Zone General Hospital (HGZ) # 4 of the Mexican Institute of Social Security (IMSS) was studied after accessing the database of the National Epidemiological Surveillance System (SINAVE). Data processing and analysis were performed using descriptive statistics.

Fifty-four percent of the patients were men with an average age of 30 years. The municipality that reported the highest frequency was Villagrán, Guanajuato with 10% of the

cases. According to the occupation, the students, housewives, and workers were the most affected. The mosquito is the main vector in 98% of cases. The most frequent symptoms were fever 99%, headache 96% and myalgia 92%. The most frequent comorbidities were Diabetes Mellitus, Pregnancy, and systemic arterial hypertension.

Dengue is a disease of high epidemiological relevance since its potential to develop complications increases when the infection is secondary to new serotypes. After the analysis, we identified that its presence and dissemination have a significant economic impact since it affects the working population (students, housewives, and workers) to a greater extent. We conclude that preventive activities should not cease, on the contrary, those geographical sectors with the highest number of cases should be addressed.

Most of the patients admitted with a diagnosis of dengue come from the municipality of Villagrán, Guanajuato therefore the local health authorities must be notified of the current status of the investigation carried out to carry out preventive actions, in addition to preparing an epidemiological statement for health personnel. Of the community.

Our research was approved by the local ethics committee and the research committee with the following record R-2020-1006-011. The identity of the patients was coded to protect their privacy in accordance with international ethical regulations.

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