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ePoster Viewing

Emerging infectious diseases

Dengue in Brazil: reflections about the largest epidemic in the world and impact of the reduction of mortality

D. Morandim¹, G. Rossi¹, A. R-Viso¹

¹UNAERP University of Ribeirão Preto, Ribeirão Preto, Brazil

Objective

Description and analysis of the epidemiology of dengue in Brazil.

Methods

Literature survey through Pubmed and official health sites such as WHO and PAHO of dengue data by the Health Ministry of Brazil from the beginning of the disease to the end of the first semester of 2014.

Results

Dengue arose in the Americas in the 19th century, with a significant increase in number of cases since 1980. In 1998 Brazil recorded more than 700,000 cases. In 2002, the greatest continental pandemic was observed, reaching 69 American nations and about 800,000 cases in Brazil, i.e., almost 80% of the occurrences on the continent. In 2002, in an attempt to control the epidemic, the Health Ministry implemented the National Program of the Fight Against Dengue, with a significant fall in the incidence of notifications, followed by a tendency to re-growth since 2005. In 2008, more than 700,000 cases and more than 45,000 hospitalizations for dengue were recorded in Brazil. The transmission of dengue is intercalating with the occurrence of epidemics every 3 to 5 years, usually associated with the introduction of new serotypes in areas previously free of the disease or with changes in the predominant serotype. The largest outbreak in Brazil occurred in 2013, with approximately 2 million cases notified. By June 21, 2014 the number of cases was reduced by 55.1% compared to 2013 in all regions of the country. Compared to 2013, there was a proportional 60% reduction of deaths in the country up to June 2014. This reduction was probably due to prevention campaigns for the population, genetic modification of the mosquitoes, habilitation of health professionals for the identification of suspected cases of dengue, classification of severity and early patient hydration as recommended by the WHO. In addition, at the beginning of 2014 there was a 48% increase in relation to 2013 of the survey of the Quick Index of Infestation by *Aedes aegypti* evaluating the percentage of mosquito breeding sites in a given region in order to guide control actions by health managers. In April 2014, a technique of sterilization of *Aedes aegypti* mosquitoes was implemented in Brazil, with no environmental aggression and no health risk to people's health with insecticides. Its impact will be analysed on a medium- or long-term basis.

Conclusion

The goal of the WHO is to reduce dengue mortality by at least 50% and morbidity by 25% by 2020. Comparison of 2013 and 2014 data revealed an important reduction of deaths in Brazil, showing that the path of dengue control must be maintained and a model should perhaps be followed.