ZIKA VIRUS
The Puerto Rican Experience

Valerie Wojna, MD

Zika has been one of the most devastating new emerging viruses epidemic due to its effects on the nervous system mostly newborns. It was an unexpected epidemic that jeopardized our population and those with the appropriate environment for the virus to replicate, the tropics. It took us by surprise and challenged our health system.

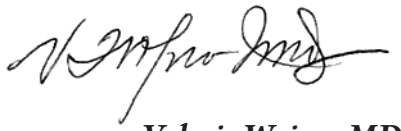
When it arrived in Puerto Rico in December 2015 many questions were raised regarding how the clinical manifestations of the infection will affect our population. Although most of infections go on asymptomatic it was not clear how our population heavily infected with other arboviruses such as dengue and chikungunya will alter the clinical and neurological manifestations of Zika. Other questions regarding our health system preparedness to attend to such an epidemic was questioned.

In this issue of the PRHSJ we present our experience with the Zika infection. We have divided the issue into 5 sections. First the section of Zika Virus in the Americas, Bonilla presents the history of the Zika infection covering in detail the origins and the travel of the infection. The Perspective and Point of View section by Rigau and Nazario presents the controversies in how the epidemic was managed on the Island and the challenges it presented to our health system. Ethics and Justice section discuss and questions how ethics (Esquilin), and reproductive justice (Rabionet) are faced in the management of the Zika infection neurological effects in newborns presenting a new paradigm in the management of the pediatric population. Community Knowledge section presents the importance of education in the prevention of the infection. Finally, the Zika-associated Health Problems including the neonatal and developmental problems (Zorrilla and García), the adult complications mostly of Guillain-Barré (Mayor and Rivera-Concepción) and other problems (Zambrano and Rodriguez-Cintron) are presented.

This epidemic has resulted in long-term programs including a pediatric clinic to evaluate the effects of the Zika infection mostly in the neurodevelopment of newborns infected or exposed to the virus, the implementation and evaluation of Guillain-Barré syndrome surveillance program across the island, the surge of Zika vaccine clinical trials, among others. At present the Zika epidemic in Puerto Rico is mostly contained (http://www.salud.gov.pr/Estadisticas-Registros-y-Publicaciones/Informes%20Arbovirales/Reporte%20ArboV%20semana%20%2047-2018.pdf). Only a few cases have been reported specially after the devastation of Hurricane María that

almost completely eliminated the mosquito population. However, we are at risk of future cyclic outbreaks of Zika, or combined infections of Zika and dengue, and need to be prepared. Not only to provide the needed community education, the health care required, but also the clinical translational research for a better understanding of the pathophysiology of the infection and the creation of treatment modalities.

We hope that these experiences will aid in the establishment of procedures to deal with similar epidemics in the future and help to gain a better understanding of the acute and chronic effects of the infection in the clinical manifestations and possible management of the infection in a clinical and public health manner. Puerto Rico possess a special position in the Caribbean and can serve to spearhead the establishment of procedures to detect, treat, and study the effects of these new emerging virus epidemics. Thereby establishing the needed programs to attend to other similar epidemics.



Valerie Wojna, MD
Editor-in-Chief
Professor of Neurology
PI NeuroAIDS Program
University of Puerto Rico
Medical Sciences Campus