Book Review

Zika the Emerging Epidemic

Donald G. McNeil

W.W. Norton, New York, 2016, 203 pp.,

ISBN 978-0-393-35396-9

Journal of Public Health Policy (2016) 37, 543–546.

doi:10.1057/s41271-016-0044-x; published online, 19 September 2016

Donald G. McNeil, the well-known *New York Times* global health reporter embarked on the risky endeavor of writing a text on the Zika epidemic for the general public, at a time when basic questions about this viral infection remain unanswered. Probably few professionals could have done this job so rapidly, describing all the relevant aspects of the present epidemic. For those interested in the subject, the detailed 173 notes covering the sources where most of the data were obtained are extremely useful (There is only one unacceptable mistake, particularly for a journalist that mentions having covered nearly 50 different human infections. *Toxoplasma gondii* is not a bacterium (p. 33), but a protozoan parasite).

Three months after the book was completed on 1 June 2016, the bulk of the information on the early stages of the epidemic remains valid. In particular, the first chapters: *The Doença Misteriosa* and *The Origins of the Virus*, will be avidly read for many years to come. The text goes from the discovery of the virus in an Asian monkey in Uganda's Zika Forest in 1947, to the western Pacific outbreak in 2007, followed by the spread to French Polynesia six years later and the appearance of an alarming number of neurological complications of Zika infections manifested as flaccid paralysis or Guillain-Barré syndrome (Guillain-Barré is not one, but two physicians: George Guillain and Jean Alexandre Barré, who described the syndrome one hundred years ago).

What raised the international alarm to unheard levels was the rapid spread by the end of 2015 of the Zika virus in most Latin American countries and the sudden appearance in Brazil of hundreds of newborn babies with microcephaly and other neurological complications, vividly described in the chapter *Fast and Furious*.

“Many of the problems that have bedeviled our response to the Zika epidemic: false rumors, ethnic prejudice and ineffective measures”, mentioned recently by McNeil himself in one of his *NYT* articles, are addressed in his book in different ways.

The Rumors, a particularly interesting section, describes the various hypotheses claiming that the Zika disease is not due to a virus. McNeil compares them to various false rumors that confounded for some time our knowledge on the origins of other important human infections, such as cholera and AIDS.

McNeil himself falls into ethnic prejudice comments, as when in a dialog with a CDC expert, he says: “Those are mostly white women, tourists. But to women who live there, who are brown or black, you only say, It’s a very personal decision” (p. 156).

Regarding ineffective measures, *Delaying pregnancy* is a controversial chapter where McNeil criticizes the futile attempts to cope with the *Aedes* mosquitoes; efforts to spray insecticides by governments of affected countries are considered as publicity ploys, and official recommendations are labeled at best as “wishy-washy”. No group is spared from criticism for not recommending avoiding pregnancy in areas where the Zika virus is prevalent: from health ministers, to right and left wing women’s organizations... “Acknowledging that birth control and abortion would save women from misery, they could have used that as a wedge to try to get conservative governments to ignore fifty years of church pressure” (p. 141). The journalist turns into health adviser by telling bluntly: “What governments should really do was ask women to wait getting pregnant and encourage everyone to get bitten” (p. 140). However, in the *Questions and Answers* chapter the author concludes, much in agreement with present WHO and CDC arguments. “Q. Should I delay having a baby this year? A. That is a difficult question that every woman has to answer for herself” (p. 181).

The chauvinist vein appears more than once in the text: “One thing we Americans don’t realize is how indifferent many other governments are to the fates of their people. We’re used to our politicians reacting... but many countries are run by elites focused on lining their own pockets... and the possibility that their poorest women may have deformed babies really doesn’t really move them” (p. 80). This generalization is totally objectionable.

As could be expected, three months after *Zika, the Emerging Epidemic* was published, some numerical aspects of the book are

becoming outdated: “An estimated 1.3 million Brazilians have been infected” (p. 74), and “Brazil and Colombia were already estimating millions of cases” (p. 141). Instead of millions, at present (early September 2016) the official figure in Brazil for confirmed Zika infections is 78,421.

In addition, there is the lack of consistency when referring to the numbers of microcephalies that have appeared in Brazil as a complication of the disease. Figures vary from 1,400 (p. 55); to more than 2,700 (p. 61); to 3,500 “under investigation” (p. 74) and finally, “more than 1,400 confirmed” (p. 162). Three months after publication of the book the number of confirmed cases of microcephaly in Brazil is 1,845.

Even more confusing is the varying importance given to microcephaly and the Guillain Barré syndrome, the two serious complications of Zika infections. At some point one learns that: “There would be Guillain-Barré cases, but better that than microcephaly cases” (p. 140). Then the author writes: “Pregnant women are the whole reason for making a Zika vaccine” (p. 165). But towards the end of the book, one reads: “Hundreds or thousands of Guillain-Barré victims needing mechanical ventilation might put a far greater strain... than neonates needing intensive care” (p. 171).

The book mentions another frightening possibility: Babies born from Zika infected mothers may develop psychiatric problems later in life. A scary message like this should not be given in a text for the general public, because the only valid consideration is that this possibility will not be known for years. In contrast, the author is more cautious when referring to the epidemiologic importance of Zika virus transmission through sex, by concluding that there is not yet a scientific estimate on how often it occurs.

Even though the explosive expansion of the Zika virus to more than fifty American countries, reaching Puerto Rico and Miami, has continued unabated and is therefore a warning of possible extension to other continents, by the end of May the epidemic was already slowing down. Somewhere in the text this is considered: “There were reports that northeast Brazil’s and Colombia’s outbreaks were beginning to fade” (p. 139). In fact, two months after the book was published, Colombia declared the end to the epidemic after having confirmed 6,504 cases in pregnant women with a total of 34 microcephalies and, surprisingly, 619 cases of neurologic syndromes (Guillain-Barré included). Mexico, in turn, reports 2,338 confirmed

Zika infections, 1,140 in pregnant women, 104 of which have terminated their pregnancy with no cases of microcephaly. Several cases of probable Guillian-Barré syndrome are still under investigation.

At the beginning of September, WHO formally acknowledged the lack of confirmed cases of Zika virus during and after the Olympic Games, and considered that there should be no general restrictions on travel and trade with countries with Zika virus transmission. In spite of this, the organization still considers that the Zika virus infection to be continuing and a *Public Health Emergency of International Concern*.

By reading *Zika, the Emerging Epidemic* we learn about the origins, expansion and initial stages of the infection and efforts to control the epidemic, including the early developments of specific drugs and vaccines. However, one is left uncertain about the real magnitude of the epidemic in view of the striking differences, so far, in the outcomes of the Zika infection in Brazil, in comparison to all other countries affected, not mentioned in the book. Adding to our uncertainties, three months after his book was released, McNeil wrote his *New York Times* article on the terrifying effects of the polio epidemic of one hundred years ago, concluding: “All of which may happen with Zika – although it can’t happen soon”. Does he really mean that?

Adolfo Martínez-Palomo

Mexico City, Mexico

E-mail: amartine@cinvestav.mx