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Title page

Zika virus: epidemiology, pathogenesis, and human disease

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Running title-Zika virus infection

Key words-arbovirus, Zika virus, mosquitoes, Guillain-Barre, microcephaly

Conflicts-none

Abstract

The Zika virus is a positive sense, single stranded RNA arbovirus in the *Flaviviridae* family, genus *Flavivirus*. This virus was initially isolated in Africa and is transmitted to non-human primates and humans by mosquitoes. Initial reports describe sporadic mild viral infection with fever, arthralgias, myalgias, and conjunctivitis in Africa and Asia. However, its geographic distribution has significantly increased, and it has caused large outbreaks in the Yap Islands in 2007, in French Polynesia in 2013, and in Brazil in 2015. Multiple cases of Guillain-Barre´ syndrome occurred in French Polynesia and Columbia during outbreaks, and infections in pregnant women in Brazil have been associated with microcephaly and fetal loss. The viremic phase in humans is short, and diagnosis usually depends on positive IgM titers with serum neutralization tests for confirmation. Treatment is directed at symptoms; there are no antiviral drugs available. Transmission can also occur through sexual contact with infected men and

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