Clinical Evaluation & Disease

Modes of Transmission

Zika virus is a single-stranded RNA virus of the *Flaviviridae* family, genus *Flavivirus*. Zika virus is transmitted to humans primarily through the bite of an infected *Aedes* species mosquito. The mosquito vectors typically breed in domestic water-holding containers; they are aggressive daytime biters and feed both indoors and outdoors near dwellings. Nonhuman and human primates are likely the main reservoirs of the virus, and anthroponotic (human-to-vector-to-human) transmission occurs during outbreaks.

Perinatal, in utero, and possible sexual and transfusion transmission events have also been reported. Zika virus RNA has been identified in asymptomatic blood donors during an ongoing outbreak.

Clinical Signs & Symptoms

About 1 in 5 people infected with Zika virus become symptomatic. Characteristic clinical findings are acute onset of fever with maculopapular rash, arthralgia, or conjunctivitis. Other commonly reported symptoms include myalgia and headache. Clinical illness is usually mild with symptoms lasting for several days to a week. Severe disease requiring hospitalization is uncommon and case fatality is low. However, there have been cases of Guillain-Barre syndrome reported in patients following suspected Zika virus infection. The Brazil Ministry of Health is also investigating the possible association between Zika virus and a reported increase in the number of babies born with microcephaly. Due to concerns of microcephaly associated with maternal Zika virus infection, fetuses and infants of women infected with Zika virus during pregnancy should be evaluated for possible congenital infection and neurologic abnormalities (http://www.cdc.gov/mmwr/volumes/65/wr/mm6502e1er.htm?s_cid=mm6502e1er_e).

Diagnosis & Reporting

Based on the typical clinical features, the differential diagnosis for Zika virus infection is broad. In addition to dengue, other considerations include leptospirosis, malaria, rickettsia, group A streptococcus, rubella, measles, and parvovirus, enterovirus, adenovirus, and alphavirus infections (e.g., Chikungunya, Mayaro, Ross River, Barmah Forest, O'nyong-nyong, and Sindbis viruses).

Preliminary diagnosis is based on the patient's clinical features, places and dates of travel, and activities. Laboratory diagnosis is generally accomplished by testing serum or plasma to detect virus, viral nucleic acid, or virus-specific immunoglobulin M and neutralizing antibodies. Click for more information about diagnostic testing.

In 2016, Zika virus disease became a nationally notifiable condition. Healthcare providers are encouraged to report suspected cases to their state or local health departments to facilitate diagnosis and mitigate the risk of local transmission. State health departments are encouraged to report laboratory-confirmed cases to CDC through ArboNET, the national surveillance system for arboviral disease..

Treatment

No specific antiviral treatment is available for Zika virus disease. Treatment is generally supportive and can include rest, fluids, and use of analgesics and antipyretics. Because of similar geographic distribution and symptoms, patients with suspected Zika virus infections also should be evaluated and managed for possible dengue or chikungunya virus infection. Aspirin and other non-steroidal anti-inflammatory drugs (NSAIDs) should be avoided until dengue can be ruled out to reduce the risk of hemorrhage. People infected with Zika, chikungunya, or dengue virus should be protected from further mosquito exposure during the first few days of illness to prevent other mosquitoes from becoming infected and reduce the risk of local transmission.

Page last reviewed: June 1, 2015

Page last updated: January 24, 2016

Content source: Centers for Disease Control and Prevention (http://www.cdc.gov/)

National Center for Emerging and Zoonotic Infectious Diseases (NCEZID) (http://www.cdc.gov/ncezid)

Division of Vector-Borne Diseases (DVBD) (http://www.cdc.gov/ncezid/dvbd/index.html)