



West Nile Virus

In August/September of 1999, West Nile Virology and Epidemiology Virus (WNV) was recognized in the Western Hemisphere for the first time when it caused an epidemic of encephalitis and aseptic meningitis in the New York City metropolitan area. During the outbreak, 62 human cases were identified resulting in seven deaths. Virus was detected in crowds in Connecticut, New Jersey, and as far south as Maryland last year.

In March 2000, viable WNV was recovered from mosquitoes over wintering in New York City, foreboding a likely recurrence of disease during the summer of 2000.

The virus is a member of the Japanese Encephalitis Antigenic Complex include Kunjin, Murray Valley, St. Louis, and Japanese Encephalitis Virus. WNV is the most widespread of the flaviviruses, with geographic distributing including Africa, West Asia, Europe, and the Middle East. Infection causes both sporadic and epidemic disease in human and equine populations.

Mosquitoes, especially bird-feeding species, are the primary vectors of WNV. Mosquitoes become infected following a blood meal from infected birds. The principal hosts for WNV are wild birds; however WNV is transmitted to humans only through the bite of an infected mosquito. The infection cannot be transmitted person-to-person, animal to person, or bird to person.

Symptoms

The incubation period for WNV infection is usually 5 to 15 days. The disease is characterized by the abrupt onset of a febrile, influenza-like illness. Mild infections are common and include fever, headache, body aches, lymphadenopathy, and roseolar rash (50% of cases). More severe infections may result in aseptic meningitis or encephalitis, characterized by high fever, neck stiffness, stupor, disorientation, tremors, coma, paralysis, and occasional seizures. Historically, the case fatality rate for WNV infection ranges from 3 to 15%.

Diagnosis

Confirmation of a diagnosis of WNV requires specialized laboratory testing.

Treatment

There is no specific antiviral treatment for infections caused by WNV. Care of patients suspected of having WNV should be supportive, with attention to ruling out causes of encephalitis and meningitis that are treatable.

Patients can be counseled to decrease their risk of mosquito exposure around the home by reducing the amount of standing water available for mosquito breeding. The likely vector for WNV in a container breeder, so tin cans, ceramic pots, and old tires that can collect water should be discarded. Wading pools and wheelbarrows should be overturned when not in use. Roof gutters should be kept clear of debris and stagnant water. Patients should also be counseled to avoid being bitten by mosquitoes by staying indoors when mosquitoes are most active (dusk, after rainfall), by keeping their arms and legs covered if outdoors at those times, and by applying mosquito repellents.

TRAVEL VACCINATION CENTER

Somerset Professional Plaza • 1527 Rt. 27 South • Suite 1600 • Somerset NJ 08873
Dayton Professional Center, 401 Ridge Rd., Suite 2, Dayton, NJ 08810
(732) 418-1700 • Fax (732) 249 9599



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If you would like more information on the West Nile Virus, you can visit the Centers of Disease Control and Prevention's Web Site at www.cdc.gov.

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