



Department of Health and Social Services
Joel Gilbertson, Commissioner

Division of Public Health
Doug Bruce, Director

Section of Epidemiology
John Middaugh, MD, Editor

3601 C Street, Suite 540, P.O. Box 240249, Anchorage, Alaska 99524-0249 (907) 269-8000
24-Hour Emergency Number 1-800-478-0084

<http://www.akepi.org>

Bulletin No. 22 August 14, 2003

Possible West Nile Virus in an Alaskan Traveler to the Eastern United States, August 2003

Background

In 1999, West Nile virus (WNV) first appeared on the North American continent. Since then, reports of illness and death among humans and other mammals have increased steadily each year, with over 4,000 human cases reported in 2002. In 2002, a record number of U.S. states, Canadian provinces, animal and mosquito species were affected by WNV. So far in 2003, cases of WNV in both humans and animals appear to be on par with 2002. Because the vast majority of human cases seem to occur in late August and early September, it is too early in the season to predict the full impact of WNV for 2003. **To date, Alaska has yet to record a human or animal case of locally-acquired WNV.**

WNV in an Alaskan Traveler

Summary. On August 14, 2003, the Alaska State Virology Laboratory (ASVL) in Fairbanks reported a positive WNV IgM antibody result for a Juneau resident. Confirmatory results are pending. Although diagnosed in Alaska, the patient became ill while vacationing in Florida, representing an imported case of WNV that does **not** reflect the risk of acquiring WNV in Alaska.

Symptoms. The 44-year-old case-patient began to experience stiff neck, tender lymph nodes, visual disturbances and low grade fever on August 1, 2003 while on vacation in Florida. Additional symptoms included nausea and vertigo, myalgias, pressure behind the eyes, and neck rigidity. On August 11, he presented to an urgent care clinic in Juneau for evaluation. He was not hospitalized and is now recovering.

Laboratory diagnosis. Serum collected on August 12 was sent to ASVL and tested positive on August 14 using the PanBIO ELISA test kit to detect WNV IgM antibody. Confirmatory testing via the WNV plaque reduction neutralization test is pending at the Centers for Disease Control and Prevention (CDC) in Fort Collins, CO. IgM antibody levels can remain high for over a year after initial exposure to WNV. Aside from this 2003 trip, the case-patient has not visited another WNV endemic area in the past year.

Travel and mosquito exposure history. On July 23, the case-patient traveled from Alaska to New York. He later drove to Florida, spending 11 days there including 3 nights of camping in the Key West area. While camping, he received >200 insect bites despite using multiple mosquito repellants. Following the known WNV incubation period of 2-14 days, the case-patient's symptoms began 2-3 days after the camping trip.

Discussion

Illness of persons who acquire WNV while visiting endemic areas (with subsequent diagnosis elsewhere) are expected, as happened in 2002 to an Illinois resident diagnosed in AK (http://www.akepi.org/bulletins/docs/b2002_23.pdf). Unlike the 2002 case, this 2003 one, if confirmed, will be recorded as an Alaska case because of the case-patient's residency. Imported human cases of WNV are not directly infectious to other humans or animals and do **not** change the likelihood that WNV will be detected or established in Alaska.

Ongoing Surveillance in Alaska

Surveillance for WNV in Alaska will continue throughout the summer and early fall as outlined in a previous Bulletin – "2003 Guidelines for West Nile Virus Surveillance in Alaska" (http://www.akepi.org/bulletins/docs/b2003_09.pdf). WNV testing began in early July at the Blood Bank of Alaska.

Human surveillance. ASVL developed WNV testing capacity this year; serum from the current case-patient was the first diagnostic specimen evaluated by ASVL since achieving WNV proficiency. Healthcare providers are requested to contact Epidemiology for consultation about persons suspected to have WNV. In the absence of a patient's travel history to a WNV endemic area, specimens will only be accepted if patients are hospitalized with one of the following diagnoses:

- Viral encephalitis
- Viral meningoencephalitis
- Guillain Barré syndrome
- Acute flaccid paralysis

For patients with a travel history to a WNV endemic area, specimens will be accepted on a case-by-case basis only after consultation with Epidemiology staff.

Dead bird surveillance. As of August 14, 2003, ASVL has tested 14 dead corvids (i.e., ravens, gray jays, magpies) and raptors (i.e., eagles) using PCR (polymerase chain reaction) methods to detect presence of WNV in brain tissue. **None** have tested positive.

Testing of dead birds meeting species (i.e., corvids or raptors) and freshness criteria (i.e., dead within 24 hours, no evidence of decomposition) outlined in the above-mentioned Bulletin are ongoing. Contact Alaska Department of Fish and Game (ADFG) in Juneau at 907-465-6197, in Fairbanks at 907-459-7206, or in Anchorage at 907-267-2347; or the Section of Epidemiology at 907-269-8000, for more information.

Blood bank surveillance. To date, no units of blood donated at the Blood Bank of Alaska have tested positive for WNV.

Recommendations

1. Travelers to any area with mosquito-borne disease should take bite avoidance precautions, e.g., wearing clothing barriers or using mosquito repellent. More information about prevention can be found on CDC's website: http://www.cdc.gov/ncidod/dvbid/westnile/prevention_info.htm. More information about DEET (N,N-diethyl-toluamide) repellents can be found in a recent Bulletin http://www.akepi.org/bulletins/docs/b2003_17.pdf.
2. Healthcare providers should report cases of suspected WNV to the Section of Epidemiology at 907-269-8000 (8AM-5PM) or 1-800-478-0084 (after-hours).

Additional Internet Resources:

Epidemiology: <http://www.akepi.org/id/dod/wnileinfo.stm>

CDC: <http://www.cdc.gov/ncidod/dvbid/westnile/index.htm>

Alaska Department of Fish and Game:

http://www.state.ak.us/local/akpages/FISH_GAME/wildlife/geninfo/disease/wnv.htm

Blood Bank of Alaska: <http://www.bloodbankofalaska.org/>