Powassan (POW)

Powassan (POW) is caused by a flavivirus. There are two virus types. One virus type is transmitted by the deer tick/blacklegged tick (*Ixodes scapularis*): lineage 2 POW virus (“deer tick virus”). The other virus type is transmitted by other *Ixodes* ticks – *Ixodes marxi* (squirrel tick), and *Ixodes cookei* (woodchuck tick—found E. of Rockies into New England & Canada): lineage 1 POW virus. The Rocky Mountain Wood tick (*Dermacentor andersoni*) and *Ixodes spinipalpus* can also transmit the virus.

Humans are “dead end” hosts (ticks can’t pick up disease from them).

Transmission time can be within minutes of the bite. Incubation period is 1 week to 1 month after a bite.

Symptoms include headache, fever, nausea, vomiting, stiff neck, and sleepiness, breathing distress, confusion, tremors, seizures, paralysis, and possible coma. Encephalitis and meningitis can occur – 10% of encephalitis cases result in death.

Survivors of POW: 50% have permanent neurologic problems – Headaches, muscle wasting, memory problems

Supportive treatment is the only available treatment.

Tests for POW: Serum or CSF to detect virus-specific IgM & neutralizing antibodies

“Powassan could become epidemic like Lyme disease. Because it can be a serious disease causing fatalities and there is no treatment for it, Powassan has the potential to become a greater of a public health threat than Lyme disease.” –
Professor Emeritus of Epidemiology at the Yale School of Public Health, Durland Fish, PhD.

Powassan Virus photo: Canad. Med Assn. J. 5-2-64

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