

## **Powassan virus infection causes polio-like illness**

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While vacationing in rural Newfoundland, the man developed nausea, vomiting, abdominal pain, double vision (diplopia) and impaired coordination (ataxia). He was admitted to a hospital where his symptoms worsened. The man became febrile and experienced slurred and slow speech (dysarthria), weakness, and respiratory distress.

“Cerebrospinal fluid analysis showed pleocytosis ( $159 \times 10^6$  total nucleated cells: 42% neutrophils, 43% lymphocytes) and elevated protein levels (0.79 g/L),” states [Picheca and colleagues, from the University of Ottawa in Ontario, Canada. \[1\]](#)

The man was empirically treated with ceftriaxone, ampicillin, acyclovir, and dexamethasone.

Test results for Lyme disease and arthropod-borne viruses, which included the Powassan virus, were negative.

“The patient worsened, requiring intubation and transfer to an intensive care unit,” the authors write. “He had flaccid tone and absent power in his upper extremities and reduced strength in his lower extremities.”

Re-testing one month after symptom onset revealed an infection with the Powassan virus.

Electrodiagnostic (or EMG) testing 6 months after symptom onset revealed “diffuse denervation in all cervical myotomes including the paraspinal muscles, confirming a motor neuronopathy consistent with a poliomyelitis-like presentation of POWV,” the authors write.

Initial testing was performed too early, Picheca explains, “because paired serology 4 weeks later demonstrated seroconversion and confirmed diagnosis.”

“Our findings emphasize the need to include POWV infection in the differential diagnosis for patients with polio-like symptoms in tick-endemic regions.”

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[Case report: Fatal Powassan virus infection](#)

[No neurologic damage in three children with Lyme disease and Powassan virus](#)

[Relying on a negative Lyme disease test can prove deadly](#)

**References:**

1. Picheca C, Yogendrakumar V, Brooks JI, Torres C, Pringle E, Zwicker J. Polio-like manifestation of Powassan virus infection with anterior horn cell involvement, Canada. *Emerg Infect Dis*. 2019 Aug [date cited]. <https://doi.org/10.3201/eid2508.190399>.

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