

# Meningoencephalitis due to *Borrelia miyamotoi*

Tuesday, August 23, 2022

<https://danielcameronmd.com/meningoencephalitis-borrelia-miyamotoi/>

A 73-year-old man was admitted to the hospital with a 16-day history of confusion and intermittent headaches. He was an avid gardener and reportedly had tick bites in the past but none that he noticed in the weeks prior to his symptoms.

Initially, he developed “right-sided facial droop and associated numbness, confusion, and word-finding difficulties,” the authors write in the article [“\*Borrelia miyamotoi\* Meningoencephalitis in an Immunocompetent Patient.”](#)<sup>1</sup>

His symptoms, which had improved, were attributed to a mini-stroke.

**However, “Over the next 2 weeks, he continued to feel numbness in his right face and developed worsening confusion, intermittent headaches, and excessive fatigue; he was afebrile throughout this time.”**<sup>1</sup>

The patient tested positive for Lyme disease by EIA but negative by Western blot.

He was “empirically treated with intravenous ceftriaxone for treatment of presumed Lyme meningoencephalitis, and his mental status rapidly improved,” the authors write.

## [READ MORE: What is \*Borrelia miyamotoi\*?](#)

When repeat testing for Lyme disease was negative by Western blot, clinicians considered another tick-borne infection – *Borrelia miyamotoi*.

The man tested positive for *B. miyamotoi* and made a “nearly full neurological recovery with only residual intermittent right facial numbness” after anti-*Borrelia* antibiotic treatment.

### **The authors conclude:**

- “Our case therefore highlights the need to include *B. miyamotoi* disease in the differential diagnosis for any patient who presents with acute onset, progressive encephalopathy with culture-negative CSF in *B. miyamotoi*-endemic regions, not just those who are immunocompromised.”
- “Our case highlights the importance of considering *B. miyamotoi* in clinically suspicious cases of meningoencephalitis, including when *B. burgdorferi* EIA results are positive but the WB is negative.”

### **Related Articles:**

[Could \*Borrelia miyamotoi\* infections explain persistent symptoms in Lyme disease patients?](#)

[Blood smear not reliable in diagnosing \*Borrelia miyamotoi\* disease](#)

[Doctors face challenges in diagnosing \*Borrelia miyamotoi\*](#)

**References:**

1. Gandhi S, Narasimhan S, Workineh A, Mamula M, Yoon J, Krause PJ, Farhadian SF. *Borrelia miyamotoi* Meningoencephalitis in an Immunocompetent Patient. *Open Forum Infect Dis.* 2022 Jun 13;9(7):ofac295. doi: 10.1093/ofid/ofac295. PMID: 35873293; PMCID: PMC9301576.

---

Meningoencephalitis due to *Borrelia miyamotoi* - <https://danielcameronmd.com/meningoencephalitis-borrelia-miyamotoi/>