

## Which Lyme disease guidelines should you follow for Lyme Carditis?

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<https://danielcameronmd.com/which-lyme-disease-guidelines-should-you-follow-for-lyme-carditis/>

In their article [\*Lyme Carditis: A Rare Presentation of Sinus Bradycardia Without Any Conduction Defects\*](#), [Grella and colleagues](#) present “a unique case of Lyme carditis, without the classical findings of Lyme disease [such as a rash] or common EKG findings of AV conduction abnormalities.”<sup>1</sup> The case highlights the differences in Lyme disease guidelines.

A 56-year-old man was admitted to the emergency department with lightheadedness and chest pain. An EKG revealed sinus bradycardias. Western blot test results for Lyme disease were positive and included IgG bands 18, 28, 39, 41, 45, 58, 66, 93 and negative for IgM (band 23 was positive). The patient was given a 7-day course of IV ceftriaxone.

However, “he continued to have persistent bradycardia with his heart rate dropping to 20 to 30 beats per minute throughout the night,” writes Grella. “Additionally, he had several sinus pauses while sleeping, with the longest lasting for 6.1 seconds.”

The man required further treatment with a pacemaker and a 3-week course of IV ceftriaxone.

At his one-month follow-up appointment, he was symptom-free.

The authors note that **Lyme disease patients’ presentations may differ**. “A gray zone exists in regards to the treatment of Lyme disease because every patient does not present with the characteristic rash and symptoms of Lyme disease.”

Furthermore, as Grella points out, there are **different treatment guidelines for Lyme disease**.

“The Infectious Diseases Society of America (IDSA) recommends that patients be started on a short course of antibiotics as the persistent infection is infrequent or non-existent.”

“The [International Lyme and Associated Diseases Society \(ILADS\)](#) recommends the Grading of Recommendations, Assessment, Development, and Evaluation (GRADE) system. This system emphasizes that a prolonged course of antibiotics may be required, keeping in mind the high failure rates from a short course of antibiotics and the high prevalence of disseminated disease in a large number of cases.”

Meanwhile, **Lyme carditis treatment** varies between patients, as well.

“Patients with Lyme carditis who do not have high-grade heart block are managed conservatively with oral antibiotics.”

“Patients with a high-grade heart block should be hospitalized, closely monitored, and treated with IV ceftriaxone 2 grams or IV penicillins for second/third-degree AV block or prolonged for PR interval > 300 ms.”

Other institutions offer different approaches. “The European Federation of Neurological Societies (EFNS) recommends ceftriaxone or cefotaxime for 2 weeks as the standard of care in acute Lyme carditis.”

**The authors conclude:** “A high clinical suspicion of Lyme carditis is required when someone from a Lyme endemic region presents with unexplained cardiac symptoms and has EKG findings suggestive of carditis.”

Editor’s note: The length of treatment for this patient was consistent with the ILADS guidelines, as the man had failed the initial treatment.

Editor’s disclosure: I am co-author of the ILADS treatment guidelines.

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**References:**

1. Grella BA, Patel M, Tadepalli S, Bader CW, Kronhaus K. Lyme Carditis: A Rare Presentation of Sinus Bradycardia Without Any Conduction Defects. Cureus. 2019 Sep 2;11(9):e5554

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