

5 things to know about Lyme carditis

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Lyme carditis occurs when Lyme spirochete enter the tissues of the heart, causing blockage. Symptoms, which may include lightheadedness, fainting, shortness of breath, heart palpitations, or chest pain, can begin as early as one week after a tick bite. A high-degree atrioventricular block can lead to the need for a permanent pacemaker or [in some cases, death](#).

In the *American Journal of Cardiology*, Wan, from Queen's University in Ontario, Canada, lists [“5 things to know about Lyme carditis and atrioventricular block.”](#) [1] Having an awareness of these, Wan says, may help prevent pacemakers from unnecessarily being implanted in patients with heart problems caused by Lyme disease.

Lyme carditis occurs when *Borrelia burgdorferi*, the agent causing Lyme disease, infiltrates the heart tissue.

The listing follows an article published earlier by Wan and colleagues in which they describe [five cases of Lyme carditis](#) with high-degree atrioventricular block. The patients were all admitted to Kingston General Hospital in Ontario, [Canada](#). [2]

“5 things to know about Lyme carditis”

1. Lyme carditis can be an early manifestation of Lyme disease.
2. Lyme carditis should be considered when younger patients present with severe conduction abnormalities.
3. Atrial ventricular block in Lyme carditis can progress rapidly and be fatal.
4. Early treatment with antibiotics may prevent irreversible conduction disease in Lyme carditis.
5. Before considering implantation of a permanent pacemaker, clinicians should wait for a response to antibiotic treatment for atrioventricular block requiring temporary pacing.

If these points had been considered by the clinicians, 2 of the 5 patients with Lyme carditis may have avoided having a [temporary pacemaker](#) implanted. “Temporary pacing was indicated according to hemodynamic tolerance to bradycardias,” explains Wan. [2] Fortunately, none of the patients required a permanent pacemaker.

In addition, treatment delays may have been avoided for 3 of the 5 patients. “The majority of patients (3 out of 5) visited the emergency room multiple times before they were correctly diagnosed,” Wan explains. “Two patients were diagnosed on their second visit. One was recognized on their fourth visit.” [2]

Treatment delays may have been avoided if the doctors had made a clinical diagnosis of Lyme carditis in the absence of a tick bite or rash. Only 3 patients remembered a tick bite, and only 1 out of the 5 had an

erythema migrans (EM) rash.

All of the patients presented with classic symptoms of Lyme disease including fatigue, fever, headache, neck stiffness, flu-like symptoms, nausea, arthralgia, and/or myalgia.

[Clinicians treating children](#) should also be aware of these key points, as 2 of the 5 Lyme carditis cases reviewed by Wan and colleagues involved a 14-year-old and 19-year-old adolescent.

Related Articles:

[Another cardiac manifestation of Lyme myocarditis](#)

[When Lyme disease mimics a heart attack](#)

[Lyme carditis causes complete heart block in 26-year-old man](#)

References:

1. Wan D, Baranchuk A. Lyme carditis and atrioventricular block. Cmaj. 2018;190(20):E622.
2. Wan D, Blakely C, Branscombe P, Suarez-Fuster L, Glover B, Baranchuk A. Lyme Carditis and High-Degree Atrioventricular Block. Am J Cardiol. 2018.

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