

Five cases of Lyme carditis in Canada: multiple hospital visits to diagnose

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Lyme carditis with heart block can cause non-specific symptoms and be challenging to diagnose. But, “recognizing this early would curtail the progression of conduction disorders and potentially avoid permanent pacemaker implantation,” [states lead author Wan from Queen’s University in Ontario, Canada.](#)

The majority of patients (3 out of 5) visited the emergency room multiple times before they were correctly diagnosed. Two patients were diagnosed on their second visit. One was recognized on their fourth visit.

According to Wan, “Three patients presented complete AVB whereas the other 2 developed second-degree atrioventricular block with 2:1 conduction.”

None of the five patients required a permanent pacemaker. But, two individuals did receive a temporary pacemaker. “Temporary pacing was indicated according to hemodynamic tolerance to bradycardias,” explains Wan. “Echocardiograms were performed showing alterations in 2 patients: 1 mild right ventricular dilation and 1 focal myocarditis and diastolic dysfunction.”

Heart problems disappear completely in all 5 patients after 1 to 2 weeks of antibiotics.

Four of the cases were prescribed intravenous ceftriaxone until their block resolved. Therapy was continued with oral. The remaining patient was prescribed doxycycline. The conduction issues resolved in all of the patients within 1 to 2 weeks after starting antibiotics.

Interestingly, all of the cases involved males, younger than 35 years of age. A 14-year-old boy was the youngest patient. All were engaged in outdoor activities in an endemic region. But only three patients remembered a tick bite, and only one 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.

The authors warn physicians that “the absence of pathognomonic EM, presentation with nonspecific symptoms and involvement of various systems, all can potentially distract a physician from making the correct diagnosis at initial presentation.”

“The correct diagnosis,” they point out, “may save patients from the inherent risks of pacemaker implantation, possible late complications, a lifetime of multiple pulse generator changes, and the burden of associated cumulative health care costs.”

Related Articles:

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

[Temporary pacemaker effective in acute Lyme carditis patient with severe heart block](#)

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

References:

1. 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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