



PAR J. MARC GIRARD, MD, FRCPC*

An example of pseudoscience

CHRONIC LYME DISEASE

No matter what some American politicians say, climate change is real and has consequences that we can all observe. This warming provokes upheavals in our ecosystems which encourage the arrival of formerly unknown infections.

The emergence of chikungunya, of the Zika virus and of dengue fever in North America is, of course, one important consequence.

It is also undeniable that Canada, and especially Quebec, will be increasingly affected by bacteria of the *Borrelia* family that are responsible for Lyme disease. It is essential that the medical corps be better informed about this disease, especially its acute form, which is characterized by specific signs and symptoms. A simple antibiotic treatment ensures rapid control of the disease in its acute phase.

For some years now, we have been seeing the emergence of a movement in defense of the concept of chronic Lyme disease. This movement, originating in the United States, claims that *Borrelia* can cause a chronic infection with multiple systemic manifestations, that it can partner with other bacteria, that the serological tests used in Canada for diagnostic purposes are inadequate and that the infection must be treated with combination antibiotics administered over the long term. This lobby made itself known in Quebec through the publication of articles in newspapers and notices on electronic media. It constantly repeats that Quebec physicians are not competent when it comes to identifying and treating Lyme disease and that infected people are forced to travel to the United States for appropriate, but costly treatments. The efforts of this special interest group resulted in the adoption in 2014 of Bill C-442, An Act respecting a Federal Framework on Lyme

Disease¹, proposed by the head of the Green party, Ms Elizabeth May. This law led to a round of consultations, followed by a summit in Ottawa in May 2016, the conclusions of which are still awaited.

But, contrary to what this lobby wants us to believe, factual scientific data do not support their claims regarding the existence of a chronic form of Lyme disease. Indeed, the diagnostic guidelines published by the International Lyme and Associated Diseases Society (ILADS) include numerous non specific symptoms that do not allow us to arrive at a clinical diagnosis, contrary to what is involved in the acute form. Those who uphold the existence of the chronic form of the disease base their diagnosis entirely on positive results from private screening tests offered in the United States and considered by the lobby to be more reliable than those performed in Canada. And yet, the official screening tests recommended by the American Centers for Disease Control (CDC) are the same ones that are used in Canada!

In fact, the American tests recommended by the ILADS are offered by independent laboratories that are known, not for more sensitive tests, but rather for a high level of false-positives that can reach up to 57%². The CDC do not recognize the value of these tests to diagnose Lyme disease and are even planning in coming years to verify the quality of the laboratories that offer them³.

In addition, the extended antibiotic treatments proposed by physicians defending the chronic form of the disease do not rest on any scientific proof. Already, in 2001, two randomized studies of patients suffering from chronic fatigue after having been infected by the acute form of Lyme disease showed that the prolonged administration of antibiotics⁴ was no better than a placebo. In 2016, a study in the Netherlands arrived at the same conclusions in the case of a population of patients presenting with non specific symptoms and positive serology results for Lyme disease⁵. The physicians who offer this treatment are therefore exposing their patients to undue risks for their health while the latter do not draw any real benefits from it.

We recognize that people who claim a diagnosis of chronic Lyme disease have real physical problems. However, we have serious doubts about such a diagnosis because of the scientific unreliability of the methods used to confirm it. Several of these individuals probably suffer from conditions like chronic fatigue syndrome or fibromyalgia, two real and frequent conditions for which there are still no biomarkers to confirm the diagnosis nor any treatment. We are also very worried about the increase in the number of people suffering from other substantiated conditions, like multiple sclerosis, who question their diagnosis and their treatment on the basis of screening tests for Lyme disease that are falsely positive.

Appel d'intérêt

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX

Le ministère de la Santé et des Services sociaux est à la recherche de médecins afin de constituer une banque de candidatures pour la fonction de médecin examinateur dans le réseau de la santé et des services sociaux.

Vos fonctions:

À titre de médecin examinateur, vous êtes un acteur clé dans l'application du régime d'examen des plaintes.

Vos fonctions incluent, notamment:

Le traitement des plaintes des usagers concernant un médecin, un dentiste, un pharmacien ou un résident en médecine.

Votre profil:

Vous devez être membre du Collège des médecins et correspondre au profil suivant:

- Niveau élevé de professionnalisme;
- Capacité de discernement;
- Excellent jugement;
- Excellentes connaissances du monde médical et de la santé;
- Compétences et expérience reconnues à tous les paliers de l'organisation et par ses pairs;
- Habiletés de communication;
- Capacité à établir un lien de confiance entre le plaignant et le professionnel qui fait l'objet de la plainte;
- À l'aise dans un rôle de médiateur-conciliateur-arbitre devant la plainte à traiter.

Cette banque sera valable pour une durée de deux ans. Pour déposer votre candidature, remplissez le formulaire disponible au www.msss.gouv.qc.ca/professionnels/medecin-examinateur et transmettez-le au plus tard le 31 juillet 2017 à deq@msss.gouv.qc.ca.

Québec 

IN THE WORLD OF MEDICINE

The lobby that is defending the notion of chronic Lyme disease claims, not only that Quebec physicians do not have the skills to handle it, but that they could expect reprisals if they offered treatment. In the code of ethics of the *Collège des médecins du Québec*, there are indeed provisions concerning health conditions that are not confirmed in a scientific manner:

- *Section 47. A physician must avoid omissions, procedures or acts which are unsuitable or contrary to the current information in medical science.*
- *Section 48. A physician must not resort to insufficiently tested examinations, investigations or treatments, unless they are part of a recognized research project and carried out in a recognized scientific milieu.*
- *Section 49. A physician must, with regard to a patient who wishes to resort to insufficiently tested treatments, inform him of the lack of scientific evidence relative to such treatments, of the risks or disadvantages that could result from them, as well as the advantages he may derive from the usual care, if any.⁶*

These three sections aim at protecting the population of Quebec from acts that are not medically recognized. If the tests and treatments demanded by people claiming to be suffering from Lyme disease are not offered in Quebec, it is not because Quebec physicians are incompetent or ill-trained, but rather because they provide quality medical care that meets scientifically recognized criteria and this for the benefit of the entire population.

Finally, it is also false to claim that chronic Lyme disease is universally recognized and treated in the United States. The ILADS recommendations are in fact contested by the Infectious Diseases Society of America, an association of physicians and scientists interested by infectious diseases in the United States. This association issued guidelines in 2006, confirmed in 2009, that do not recognize the diagnosis nor the antibiotic treatment for a chronic form of Lyme disease⁷.

In May 2016, some of our microbiologist colleagues in Quebec, including Dr Karl Weiss, President of the *Association des médecins microbiologistes-infectiologues du Québec*, sounded the alarm by signing a letter of opinion entitled *Lyme Disease: the New Bastion of Antiscience*⁸. This issue is a remarkable example of the important place that science will have to take in public debates from now on.

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