

Babesiosis in Lower Hudson Valley, New York

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[Reginald Tucker] Hello, I'm Reginald Tucker. I'm talking by phone today with Dr. Julie Joseph, Assistant Professor of Medicine, of the Division of Infectious Diseases at New York Medical College. We're talking today about a paper in the May 2011 issue of CDC's journal, *Emerging Infectious Diseases*. This study looks at an increase in babesiosis cases in the Lower Hudson Valley of New York. Welcome Dr. Joseph.

[Julie Joseph] Thank you for having me.

[Reginald Tucker] Dr. Joseph, what is babesiosis and how do people get it?

[Julie Joseph] Babesiosis is an infectious disease caused by a parasite that destroys red blood cells. Symptoms are generally non-specific and include fever, chills, and muscle aches. *Babesiosis microti* is the most common cause of babesiosis in North America. It is typically transmitted through a tick bite but it can also be transmitted through blood transfusions. The tick that serves as the vector for *Babesia microti* is called *Ixodes scapularis*. This tick also transmits *Borrelia burgdorferi*, the cause of Lyme disease, and *Anaplasma phagocytophilum*, the cause of human granulocytic anaplasmosis.

[Reginald Tucker] Briefly, tell us what this study is about.

[Julie Joseph] Until 2001 in New York State, babesiosis was only found in Eastern Long Island. However, since 2001 there's been a growing number of cases of babesiosis in the Lower Hudson Valley region of New York State. To better characterize this recent emergence, we reviewed data between 2001 and 2008 on *Ixodes scapularis* tick-transmitted infections in the seven counties making up the Lower Hudson Valley region. We also reviewed the medical records of patients with babesiosis who were hospitalized at the regional tertiary care medical center.

[Reginald Tucker] What did you find?

[Julie Joseph] Between 2001 and 2008, we found that babesiosis cases increased 20-fold in the Lower Hudson Valley region, from six per year to 119 per year. The number of cases increased 12 times faster in the Lower Hudson Valley than in the rest of New York State. Cases occurred as a result of tick bites or receipt of contaminated blood products. We also found that individuals over the age of 50, those with weakened immune systems, such as cancer patients, and those without spleens were at highest risk for more severe illness.

[Reginald Tucker] Dr. Joseph, please give us a short history of babesiosis cases.

[Julie Joseph] Babesiosis is named after Viktor Babes, a Hungarian pathologist who first described the microorganism while investigating the cause of febrile hemoglobinuria in cattle in

1888. The first North American case of human babesiosis was recognized in 1969. The cause was identified as *Babesia microti* and the disease became known as “Nantucket fever.” *Babesia microti* cases cluster mainly along the coastal northeastern region and the upper midwestern regions of the United States.

[Reginald Tucker] This sounds pretty serious. Should everyone be concerned about babesiosis?

[Julie Joseph] We are expecting the number of babesiosis cases to continue to rise. Babesiosis is a potentially deadly disease. However, the disease is treatable and the diagnosis is not difficult if the proper tests are requested. Fever and anemia are the hallmarks. There’s no reason to panic, just to be aware.

[Reginald Tucker] Thanks, Dr. Joseph. I’ve been talking with Dr. Julie Joseph about a paper that appears in the May 2011 issue of CDC's journal, Emerging Infectious Diseases. You can see the entire article online at www.cdc.gov/eid. If you’d like to comment on this podcast, send an email to eeditor@cdc.gov. That’s eeditor – one word - at cdc.gov. I’m Reginald Tucker, for Emerging Infectious Diseases.

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