

Better blood screening process needed to prevent babesiosis transmission

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Babesiosis is a potentially dangerous parasitic disease transmitted by ticks and is common in the Northeast and the upper Midwest. Babesia lives inside of red blood cells, meaning it can also be transmitted through a blood transfusion from an infected but otherwise asymptomatic blood donor.

Now a new study led by researchers at Rhode Island and The Miriam hospitals finds a dramatic increase in the number of transfusion-transmitted babesiosis cases (TTB), leading the investigators to call for a better screening test in blood donors living in areas of the country where babesiosis is prevalent.

Their paper is published in an upcoming edition of the journal *Transfusion*, and is now available online in advance of print.

Infectious diseases specialist Leonard Mermel, DO, is the medical director of infection control for Rhode Island Hospital and corresponding author of the paper. He and his colleagues, Shadaba Asad, MD, a hospitalist at The Miriam Hospital (sister hospital to Rhode Island and also a Lifespan partner), and Joseph Sweeney, MD, director of transfusion services at Rhode Island and The Miriam hospitals, observed an increase in the number of TTB cases, and initiated a retrospective study to gauge the extent of TTB in Rhode Island.

Babesiosis became a reportable disease in Rhode Island in 1994. For the purpose of this study, cases of babesiosis reported to the Rhode Island

Department of Health (RIDOH) between January 1999 and December 2007 were reviewed, along with information on blood donors from the Rhode Island Blood Center.

People who are infected with the parasite may go undiagnosed as symptoms may not occur. In others, however, the disease can cause severe illness that may include fever, fatigue, jaundice, and anemia. Mermel, who is also a professor of medicine at The Warren Alpert Medical School of Brown University and a member of the University Medicine Foundation, says, “At present, the only means of screening blood donors is a questionnaire that includes a query regarding a known history of babesiosis. Because many babesiosis cases are minimally symptomatic or asymptomatic in otherwise healthy people, the questionnaire may not effectively exclude all donors who may transmit the disease by donating blood.”

Mermel and his colleagues found that a total of 346 cases of babesiosis were reported to the RIDOH between 1999 and 2007. Of these, 21 cases appear to have been transmitted by blood transfusion rather than from a tick. During this time period, the number of TTB cases per number of units of blood transfused increased annually. On average, there was at least one case of TTB per 15,000 units of red [blood](#) cells transfused during the entire period. However, from 2005 to 2007, the incidence approached one case per 9,000 units. In 2007, TTB accounted for 10 percent of the total babesiosis cases reported in Rhode Island.

Based on their findings, Mermel suggests, “The diagnosis of babesiosis in winter and early spring in northern latitudes, when deer ticks are less prevalent, should raise suspicion of Babesia transmission due to a [blood transfusion](#).”

Source: Lifespan ([news](#) : [web](#))

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