In 1989 MacDonald asked a Question of Transfusion Medicine Experts about Borrelia in the Blood and its Potential to cause problems in Blood Transfusions. In the year 2006, the question was answered in a Research Paper.

The Year Was 1989

THE DOCTOR'S WORLD: Lyme Disease From a Transfusion? It's Unlikely, but Experts...

instance, the tell-tale rash may not develop. Instead, the microbe may travel directly to the joints or brain, and the first symptoms may be arthritis or meningitis. Confusion could also result from the common practice of treating transfusion recipients with antibiotics for their underlying condition. While some antibiotics kill the Lyme spirochete, others are less effective. The Lyme microbe is most likely to circulate in the blood during the first week after the onset of symptoms. But it is not known when, or if, the organism is present thereafter.

Some scientists, like Dr. Alan C. Steere of the Tufts Medical School in Boston, believe that the spirochete is present in blood for only a short phase of the disease. In 1975, when he was at Yale University, Dr. Steere headed the team credited with detecting Lyme disease. But Dr. Willy Burgdorfer, who discovered the Lyme spirochete at the Public Health Service's Rocky Mountain Laboratory in Hamilton, Mont., said, "We know nothing about how long the spirochete is present in the bloodstream, and that problem has to be addressed."

Because the low rate of detection of the Lyme spirochete in blood may simply reflect an inability to isolate the organism with current techniques, researchers need to improve the ways of growing the organisms in the laboratory, said Dr. Burgdorfer, who is now a scientist emeritus at the Montana laboratory. Researchers are also seeking to adapt a new laboratory technique called polymerase chain reaction so that the sensitive technique can detect Lyme spirochetes when they are present in tiny numbers. Critics are urging more research to follow the medical course of individuals who receive blood from donors who tested positive for Lyme disease. Such medical surveillance could determine the frequency with which healthy carriers spread the Lyme spirochete in transfusions.

In addition, critics say many of the health officials who publicly say there is little risk of transmitting Lyme disease through transfusions are being hypocritical. At a recent meeting, Dr. Alan B. MacDonald asked a panel of health officials whether they would accept a transfusion from someone who had tested positive. Dr.
MacDonald, who does Lyme research at Southampton Hospital in Southampton, L.I., said all of them answered no, although no one recommended discarding blood from such donors.

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FAST FORWARD TO YEAR 2006

> Transfer of Borrelia burgdorferi s.s. infection via blood transfusion in a murine model.
> Gabitzsch ES,
> Piesman J,
> Dolan MC,
> Sykes CM,
> Zeidner NS.
> Centers for Disease Control and Prevention, Division of Vector-Borne Infectious Diseases, Bacterial Zoonoses Branch, Foothills Campus, Fort Collins, Colorado 80522, USA.
> Without antibiotic treatment, the Lyme-disease-causing bacterium, Borrelia burgdorferi can be cultured from the peripheral blood of human patients nearly 6 wk post-tick bite. To determine if Lyme disease spirochetes can be transmitted from a spirochetic donor mouse to a naive recipient during blood transfusion, blood taken from immunocompetent infected mice was transfused into either immunodeficient (SCID) mice, inbred immunocompetent animals (C3H/HeJ), or outbred mice. Nine of 19 (47.7%) immunodeficient mice, 7 of 15 (46.8%) inbred immunocompetent mice, and 6 of 10 (60.0%) outbred mice became infected with B. burgdorferi after transfusion. Our results indicate that it is possible to acquire B. burgdorferi infection via transfused blood in a mouse model of Lyme borreliosis.
> PMID: 16995409 [PubMed - in process]