

Babesia duncani emerges in Eastern U.S. and poses treatment challenges

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New research indicates, however, there may no longer be a division of babesial strains between the East Coast and the West Coast. In their article “*Babesia microti* - *Borrelia burgdorferi* Co-infection,” [Parveen reports](#) that *B. duncani* has now been identified in eastern USA and Canada.¹

“Since *B. duncani* is widespread in Canada, its southern spread into northeastern U.S., an area already endemic for Lyme disease, makes co-infections with *B. duncani* and *B. burgdorferi* [Lyme disease] a possibility that needs to be carefully investigated.”

“While this review focuses on co-infection with *B. microti* and *B. burgdorferi*, there is some evidence that co-infections with a different Babesia species, *B. duncani*, and *B. burgdorferi* may be more common than previously suspected,” writes Parveen.

The authors raise concerns regarding treatment given that, “Antibiotics used against *B. microti* are less effective against *B. duncani*, making treatment of *B. duncani* potentially more challenging.”

“Clinical cases caused by *Babesia duncani* have been associated with high parasite burden, severe pathology, and death,” [writes Abraham in *The Journal of Biological Chemistry*](#).²

Animals fared worse. “In both mice and hamsters, the parasite causes uncontrolled fulminant infections, which ultimately lead to death,” writes Abraham.

Treatment for *B. microti* was not as effective for *B. duncani* in vitro culture, explains Abraham.

“Using this in vitro culture assay, we found that *B. duncani* has low susceptibility to the four drugs recommended for treatment of human babesiosis, atovaquone, azithromycin, clindamycin, and quinine.”

“These data suggest that current practices are of limited effect in treating the disease [*B. duncani*],” writes Abraham.

Editor’s note: I have diagnostic concerns. *B. duncani* is not routinely tested for in Canada and the Eastern USA. Individuals with *B. duncani* may go undiagnosed.

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References:

1. Parveen N, Bhanot P. Babesia microti-Borrelia Burgdorferi Coinfection. Pathogens. 2019 Jul 31;8(3). pii: E117. doi: 10.3390/pathogens8030117. Review.
2. Abraham A, Brasov I, Thekkiniath J, Kilian N, Lawres L, Gao R, DeBus K, He L, Yu X, Zhu G, Graham MM, Liu X, Molestina R, Ben Mamoun C. Establishment of a continuous in vitro culture of Babesia duncani in human erythrocytes reveals unusually high tolerance to recommended therapies. J Biol Chem. 2018 Dec 28;293(52):19974-19981.

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