

VIII ANNUAL SCIENTIFIC CONFERENCE ON LYME BORRELIOSIS

Call For Abstracts

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Category (check one):

Microbiology
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EXPERIMENTAL AND NATURAL INFECTION OF DAIRY CATTLE WITH Borrelia burgdorferi

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Two studies will be discussed. In the first study, 4 neonatal Holstein calves were experimentally inoculated with 2×10^6 low passage B. burgdorferi (Bb) by a combination ip, im, sc, and id route; 2 control calves were inoculated with sterile BSK media in a similar manner. Infected calves developed a specific serological response to Bb, as measured by IFA and Western blot analysis. They also developed an erythematous rash near the injection site 2-3 weeks following infection from which Bb could be cultured. The rash resolved spontaneously in 1-2 weeks. All calves remained otherwise clinically normal. Infected calves shed Bb in urine intermittently over the 7 week course of the experiment; organisms were detected by both culture and PCR. Bb were also recovered occasionally from synovial fluid and blood of infected calves. Necropsy (week 7-8 post infection) revealed no significant gross lesions. Histologic lesions were minor and included lymphocytic infiltrates in various organs. Bb were cultured from kidney and bladder of one infected calf and spleen and synovial tissue of another. Results indicate that calves experimentally infected with Bb develop an erythematous rash from which Bb can be cultured, shed live organisms in urine, and demonstrate disseminated infection at necropsy.

The second study involves the study of urine shedding and transplacental transmission of Bb in naturally infected dairy heifers. Preliminary results will be presented.

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