

Lyme Borreliosis and *Borrelia spielmanii*

To the Editor: A report on erythema migrans (EM) caused by *Borrelia spielmanii* in a recent issue of Emerging Infectious Diseases (1) was a stimulus for a review of data on this *Borrelia* species in patients with early Lyme borreliosis (LB). We report a patient with EM, examined at our LB outpatient clinic, from whom *B. spielmanii* was isolated from the skin lesion. The presence of this species was ascertained by using a 5S–23S spacer amplicon after digestion with *Mse*I and demonstration of fragments having sizes typical for *B. spielmanii* (106, 68, and 51 bp) (2).

A 69-year-old woman was examined on October 30, 1996, for a skin lesion on her left thigh. Her medical history indicated arterial hypertension, intermittent pain in the cervical and lumbar region due to spondylosis, frequent headaches and myalgias, and treatment of typical EM skin lesions at our LB outpatient clinic in 1992 and 1994; the latter lesions were culture positive for *Borrelia*. Fourteen days before examination, she noticed a small area of redness, accompanied by mild local itching, burning, and pain on her left knee. On examination, a 24 × 20-cm ringlike lesion was found on her left thigh. Basic blood tests did not show abnormal results, and a serum sample was negative for borrelial antibodies (immunofluorescence test using a *B. afzelii* skin isolate as antigen) (3). However, *B. spielmanii* was isolated from an EM skin biopsy specimen. The patient was treated with amoxicillin, 500 mg 3 times a day for 15 days. The skin lesion disappeared within 3 weeks, and a culture of a repeat skin biopsy specimen was negative for *Borrelia* 2 months after the first biopsy. Her clinical course during a 1-year follow-up was uneventful.

B. spielmanii was detected in the patient by a general approach we have used for several years. In all consenting patients, a skin specimen from an EM lesion is cultured for borreliae in modified Kelly medium before and, in case of a positive result, ≈2 months after antimicrobial drug treatment is started. Isolated strains are typed by using the 5S–23S spacer amplicon.

The findings in this report are generally consistent with those in other reports of adult patients with EM (4–8). One difference was that the patient did not report a tick bite at the site of the EM. Approximately two thirds of our patients with EM recalled a tick bite and ≈10% of patients treated for early LB had previously had EM (4–8).

Previous reports indicate several differences in patients with EM caused by *B. burgdorferi* and *B. afzelii* (7) and patients with EM caused by *B. afzelii* and *B. garinii* (8,9). Some of the findings in our patient are unusual and rarely found in those with early LB. However, the small number of patients infected with *B. spielmanii* (1 reported herein and 4 previously reported) does not allow any reliable conclusion to be made on differences in clinical manifestations of LB caused by *B. spielmanii* compared with those of other species.

Our results corroborate previous findings that *B. spielmanii* is a cause of LB in Europe. Thus, in addition to the Netherlands (2), Germany (10), and Hungary (1), LB caused by *B. spielmanii* is also present in Slovenia.

Vera Maraspin,*
Eva Ruzic-Sabljić,†
and Franc Strle*

*University Medical Centre Ljubljana, Ljubljana, Slovenia; and †University of Ljubljana, Ljubljana, Slovenia

References

1. Földvári G, Farkas R, Lakos A. *Borrelia spielmanii* erythema migrans, Hungary. Emerg Infect Dis. 2005;11:1794–5.

2. Wang G, van Dam AP, Dankert J. Phenotypic and genetic characterization of a novel *Borrelia burgdorferi* sensu lato isolate from a patient with Lyme borreliosis. J Clin Microbiol. 1999;37:3025–8.
3. Ruzic-Sabljić E, Maraspin V, Cimperman J, Lotric-Furlan S, Strle F. Evaluation of immunofluorescence test (IFT) and immuno (Western) blot (WB) test in patients with erythema migrans. Wien Klin Wochenschr. 2002;114:586–90.
4. Strle F, Nelson JA, Ruzic-Sabljić E, Cimperman J, Maraspin V, Lotric-Furlan S, et al. European Lyme borreliosis. 231 culture-confirmed cases involving patients with erythema migrans. Clin Infect Dis. 1996;23:61–5.
5. Logar M, Lotric-Furlan S, Maraspin V, Cimperman J, Jurca T, Ruzic-Sabljić E, et al. Has the presence or absence of *Borrelia burgdorferi* sensu lato as detected by skin culture any influence on the course of erythema migrans. Wien Klin Wochenschr. 1999;111:945–50.
6. Strle F, Videcnik J, Zorman P, Cimperman J, Lotric-Furlan S, Maraspin V. Clinical and epidemiological findings for patients with erythema migrans: comparison of the cohorts from the years 1993 and 2000. Wien Klin Wochenschr. 2002;114:493–7.
7. Strle F, Nadelman RB, Cimperman J, Nowakowski J, Picken RN, Schwartz I, et al. Comparison of culture-confirmed erythema migrans caused by *Borrelia burgdorferi* sensu stricto in New York State and by *Borrelia afzelii* in Slovenia. Ann Intern Med. 1999;130:32–6.
8. Logar M, Ruzic-Sabljić E, Maraspin V, Lotric-Furlan S, Cimperman J, Jurca T, et al. Comparison of erythema migrans caused by *Borrelia afzelii* and *Borrelia garinii*. Infection. 2004;32:15–9.
9. Carlsson SA, Granlund H, Jansson C, Nyman D, Wahlberg P. Characteristics of erythema migrans in *Borrelia afzelii* and *Borrelia garinii* infections. Scand J Infect Dis. 2003;35:31–3.
10. Fingerle V, Michel H, Schulte-Spechtel U, Göttnert G, Hizo-Teufel C, Hofmann H, et al. A14S—a new *Borrelia burgdorferi* sensu lato genospecies as relevant cause of human disease [abstract]. Int J Med Microbiol. 2004;294(Suppl 1):207.

Address for correspondence: Franc Strle, Department of Infectious Diseases, University Medical Centre Ljubljana, Japljeva 2, 1525 Ljubljana, Slovenia; email: franc.strle@kclj.si

EID
Online
www.cdc.gov/eid