

9th WORLD CONGRESS ON IMMUNOLOGY AND CANCER

December 09-10, 2019 | Barcelona, Spain

Lyme neuroborreliosis in children: Etiology and comparison of clinical findings of Lyme neuroborreliosis caused by *B. garinii* and *B. afzelii*

Mojca Rožič

University of Ljubljana, Slovenia

Statement of the problem: Information on the etiology of Lyme Neuroborreliosis (LNB) in children in Europe and the influence of *B. burgdorferi* sensu lato species isolated from Cerebrospinal Fluid (CSF) on clinical presentation of LNB in children are limited.

Methodology: The study was monocentric. During its 17-year period, children younger than 15 years with presentation suggestive of LNB or confirmed Lyme borreliosis that had *B. burgdorferi* sensu lato isolated from CSF and had species of *B. burgdorferi* sensu lato identified by pulsed-field gel electrophoresis were included. Demographic and medical data were compared for children infected with *B. garinii* to those infected with *B. afzelii*.

Findings: 153 children had *Borrelia burgdorferi* sensu lato isolated from CSF. In 71/113 (62.8%) *B. garinii* and in 42/113 (37.2%) *B. afzelii* were identified. Patients infected with *B. garinii* did not report symptoms suggestive of CNS involvement or any other symptoms more often than patients infected with *B. afzelii*. Compared with children infected with *B. afzelii*, children infected with *B. garinii* had erythema migrans less often (18.3% vs. 45.2%), but had positive meningeal signs (69.0% vs. 38.1%), CSF lymphocytic predominance (97.1% vs. 75.0%), and elevated albumin CSF/serum quotient (80.6% vs. 50.0%) more often.

Conclusion & Significance: In Slovenia, LNB in children is more often caused by *B. garinii*, followed by *B. afzelii*. The clinical picture of LNB in children caused by *B. garinii* is not more often suggestive of CNS involvement, but CNS inflammation is more pronounced in children infected with *B. garinii*, compared with children infected with *B. afzelii*.

Biography

Mojca Rožič, M.D., is Assistant of Infectious Diseases at Department of Infectious Diseases and Epidemiology, Faculty of Medicine, University of Ljubljana and Consultant of Pediatrics at Department of Infectious Diseases, University Medical Centre Ljubljana, Slovenia. She has great interest in pediatric infectious diseases and clinical research. Since the beginning of her clinical work she has been involved in research of Lyme borreliosis in children. Currently she is PhD candidate working on her dissertation on Lyme neuroborreliosis in children.

mojca.rozic@kclj.si