LONG TERM AND REPEATED ELECTRON MICROSCOPY AND PCR DETECTION OF BORRELLIA BURGDORFERI SENSU LATO AFTER AN ANTIBIOTIC TREATMENT

Honegr, K.¹, Hulínská, D.², Beran, J.¹, Dostál, V.¹, Havlasová, J.³, Čermáková, Z.⁴
¹ Department of Infectious diseases, University Hospital, Hradec Králové
² National Institute of Public Health, Prague
³ Institute of Clinical Immunology and Allergology, University Hospital, Hradec Králové
⁴ Department of Clinical Microbiology, University Hospital, Hradec Králové, Czech Republic

SUMMARY

The diagnosis of Lyme disease in 18 patients has been proved by detection of Borrelia burgdorferi sensu lato when using immunoelectron microscopy or detecting its nucleic acid by PCR in the plasma or the cerebrospinal fluid. The positive results occurred in the plasma or in the cerebrospinal fluid in the period of 4-68 months after an antibiotic treatment. The typical clinical manifestations of Lyme disease were observed in 9 patients and non-specific symptoms in another 9 patients. According to presented results we can recommend repeated examination using PCR of the plasma and other biological specimens in the individuals with persistent or recurring complaints after an acute form of Lyme disease and its antibiotic treatment. Also examination of the cerebrospinal fluid with non-specific symptoms and simultaneously displayed pathology electroencephalogram and/or magnetic resonance imaging findings can be advantageous.

Key words: Borrelia burgdorferi, persistence, polymerase chain reaction (PCR), immunoelectron microscopy (IEM), therapy

Address for correspondence: J. Beran, Department of Infectious Diseases, University Hospital, Sokolská 581, 500 05 Hradec Králové.
E-mail: jiri.beran@vakcinace.cz