

Abstract

Author: Mgr. Lucie Kohoutová

Title: Lyme borreliosis, clinical and laboratory diagnosis

University: Charles University in Prague, Faculty of Pharmacy in Hradec Kralove

Field of study: Pharmacy

Background: We investigated the situation at laboratory and clinical diagnosis in the area of Havlíčkův Brod from 2011 to 2012. We focused on how the suggested laboratory methods were respected in the first half of our paper. Also one of our main interests was the number of patients with positive results of serology and liquor tests. The next aim was to point out how complex was the process of all tests evaluation to neuroborreliosis.

The second part of our rigorous work was dedicated to the real state of diagnosis and therapy of the lyme disease in the area that belongs to Havlíčkův Brod's Hospital. Our aim was to verify if the recommended rules of diagnosing and therapy published by Czech Society of Infectology were respected. And of course if there's sufficient knowledge of the disease.

Methods: The data were gained from the laboratory of immunology (Department of Collective Laboratories of Havlíčkův Brod's Hospital). Patients were judged in several categories: the result of particular exams (ELISA, westernblot, immunoblot) in time, the sex, the date of sampling (alternatively other samplings), the doctor who ordered the exam and in the case of neuroborreliosis the cytology. In the second part we send out questionnaires to the doctors in the area of our hospital's influence. They answered questions about the knowledge, the way of diagnosing and therapy of the lyme borreliosis.

Results: The highest incidence of positive cases were found out in 2011. Women were tested more often, however the number of positive cases were approximately the same in both sex. We suspected neuroborreliosis in 138 patients while we investigated liquor, but only twenty of them really had it. The most successful doctors in diagnostics were orthopedists, dermatologists and general practitioners. From questionnaires we knew that almost all the doctors were educated in lyme disease problematics, but only a few of them knew the internet page of Czech Society of Infectology. Doctors said that patients with borreliosis appeared ten times at maximum in one month. The most common symptom was erythema migrans. Doctors relied on laboratory staff in test evaluation, only some of them knew basic laboratory terms at least. If they sent patients to re-testing antibodies in the blood, they did it in 7 to 9 weeks from the beginning of the disease. Antibiotics were used before results were known.

This pointed out that doctors respected the suggested methods of Czech Society of Infectology.

Conclusions: We observed laboratory diagnosis retrospectively in years 2011 and 2012. We proved higher number of positive borreliosis tests in women despite the incidence was nearly the same in both men and women. The fully automatic method called immunoblot was introduced. It served as confirmation to the screening method ELISA. We showed the complex evaluation of patients suspected of neuroborreliosis. MVDr. Fejt and the whole Department of Collective Laboratories had a great educational influence, which can be seen both in hospital and in field (outer doctors' offices). Despite the fact that most of the doctors didn't know about Czech society of Infectology, where the suggested methods were posted, they followed them. Most of the doctors were working out on their knowledge.