PARTICULAR ASPECTS OF LYME DISEASE IN BIHOR COUNTY

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Abstract
Our goal was to describe the epidemiological, clinical and paraclinical aspects of the patients diagnosed with Lyme disease in Bihor county between 01.01.2012-01.10.2014. Most of them came from different locations in Bihor county like, Hidisel, Ceica, Alesd, Sacueni, Salonta and Oradea. 15% of patients with tick bites were diagnosed with Lyme disease, without significant differences in terms of rural/urban distribution. Most patients were diagnosed in the summer month (June - July - August), perilesional erythema being the most common sign, in 23% accompanied by fatigue, myalgia and arthralgia.

Borrelia IgM antibodies negative results were more frequently noted after 6 months from starting antibiotherapy.

Key words: Borrelia burgdorferi, Western Blot, Borrelia garini, ELISA, tick

INTRODUCTION
Lyme disease is an emerging infectious disease caused by at least three species of bacteria belonging to the genus Borrelia: Borrelia burgdorferi sensu stricto, Borrelia afzeli and Borrelia garini. It is transmitted to humans by the bite of infected ticks belonging to a few species of the genus Ixodes. (Hess A, Buchmann J, Zettl UK, et al. 1999), (Hu MD, Linden 2009), (Mullegger RR, 2004), (Rapini, Ronald P. Bolognia et al. 2007), (Puius YA, Kalish RA, June 2008), (Ryan KJ, Ray CG (editors), 2004).

Typical symptoms includes headache, fever and fatigue and a skin rush called erythema migrans. (Stanek G, Strle F, 2008). Other discrete symptoms include migrating pain in muscles, joints, and tendons, and heart palpitations and dizziness caused by changes in heartbeat. In some cases the infection can spread to heart, joints and nervous system. (Samuels DS; Radolf, JD (editors), 2010), (Seltzer EG, Gerber MA, Cartter ML et al, 2000).

Various acute neurological problems, termed neuroborreliosis, appear in 10–15% of untreated patients. These include facial palsy, which is the loss of muscle tone on one or both sides of the face, as well as meningitis, which involves severe headaches, neck stiffness, and sensitivity to light. Radiculoneuritis causes shooting pains that may interfere with sleep, as well as abnormal skin sensations. (Wang G, van Dam AP, Schwartz I et al, 1999). Mild encephalitis may lead to memory loss, sleep
disturbances, or mood changes. (Steere AC, Sikand VK, Schoen RT et al, 2003).


MATERIAL AND METHOD

Our goal was to describe the epidemiological, clinical and paraclinical aspects of the patients diagnosed with Lyme disease in Bihor county between 01.01.2012-01.10.2014. The positive diagnosis was made with the serological tests (ELISA for the detection and after that Western Blot for confirmation of Lyme disease).

The study included 615 patients, who presented at the outpatient of Infectious diseases from the Emergency Clinical Hospital in Oradea for a tick bite. Most of them came from different locations in Bihor county like, Hidisel, Ceica, Alesd, Sacueni, Salonta and Oradea.

RESULTS AND DISCUSSION

15% of patients with tick bites were diagnosed with Lyme disease (Fig. 1.), without significant differences in terms of rural/urban distribution (Fig. 2).

![Fig. 1 Distribution of cases depending on the occurrence of Lyme disease](image)

Fig. 1 Distribution of cases depending on the occurrence of Lyme disease
Fig. 2. The rural/urban distribution of the patients with Lyme disease

Fig. 3. The localisation of the tick bite
Fig. 4. Monthly distribution of patients with Lyme diseases

The distribution on age groups shows that the most frequent period to contact Lyme disease was between 30-35 years old. The perilesional erythema disappeared after 2 weeks (19 cases-20%) after 3 weeks (63 cases-67%) and after 4 weeks (12 cases-13%) of starting Doxycycline 200 mg/day or Amoxicillin 3g/day for 21 days. (Fig. 5) Borrelia IgM antibodies negative results were more frequently noted after 6 months from starting antibiotherapy. (Fig. 6.)

Fig. 5. The disappearance of perilesional erythema

Fig. 6. The negative level of IgM Borrelia antibodies
CONCLUSIONS

15% of 615 patients with tick bites were diagnosed with Lyme disease.

The most frequent tick bite localisation was in the abdomen and after that in the inferior legs.

Most patients were diagnosed in the summer month (June - July - August).

The perilesional erythema disappeared more frequently after 3 weeks in 54% of cases.

REFERENCES
