

## **Czynność narządu przedsionkowego u osób z boreliozą**

Activity of vestibular organs by persons with boreliosis

Ireneusz Rzewnicki, Sławomir Pancewicz, Jalal Othman, Joanna Zajkowska, Maciej Kondrusik, Justyna Kuśmierczyk, Piotr Czupryna, Ireneusz Wojciechowski

### **SUMMARY**

Lyme borreliosis is a tick-bore disease, transmitted by Ixodes tick, most frequently diagnosed in the USA and in many European countries. Its etiologic agent is a spirochete *Borrelia burgdorferi sensu lato*. One of the forms of Lyme borreliosis is neuroborreliosis. This disease attacking the central and peripheral nervous systems causes many diagnostic and therapeutic difficulties. It is the most prevalent form of *B. burgdorferi* infection in Europe, less frequently observed in the United States. Neurological disorders accompanying *B. burgdorferi* infections are caused by direct influence of the *Borrelia* and their products on nervous cells.

**Aim of work:** Lesions of the central and peripheral nervous systems associated with neuroborreliosis that may affect the function of the vestibular organ have incited the authors to carry out research assessing the function of the labyrinth in a group of infected patients and to compare the results with a control group of healthy subjects.

**Research materials:** The research covered 32 patients with the infection, aged 21-64 ( $\bar{x}=42.3$  years) including 13 (40%) woman and 19 (60%) men hospitalized due to Lyme borreliosis.

**Research methods:** The following factors were taken into consideration: character and intensity of dizziness, results of static and dynamic test, electronystagmography (ENG), caloric test, hearing test.

**Results:** In 56% of subjects with neuroborreliosis, vertigo and balance disorders were observed (in over 25% regular, and in 22% - very intense). Spontaneous nystagmus was found in 16% of subjects, directional in 25%. The caloric tests showed, statistically more frequent than in the control group, disorders in the regularity of nystagmus, directional preponderance and canal paresis.

**Conclusion:** Disorders of: vestibulospinal reflexes, time and regularity of caloric nystagmus occur in the neuroborreliosis.

**Hasła indeksowe:** neuroborelioza, narząd przedsionkowy

**Key words:** neuroborreliosis, vestibular organs