

SEROEPIZOOTIC SURVEY OF TICK-BORNE ENCEPHALITIS IN ANIMALS

Jonas Bagdonas*, Natalija Nekrošienė**, Irina Bulsienė**

* Lietuvos veterinarijos akademija, Užkrečiamųjų ligų katedra, Tilžės g. 18, LT – 3022 Kaunas; tel. 8 686 9 40 08

** Kauno visuomenės sveikatos centras, K. Petrausko g. 34, LT – 3005, Kaunas; el. paštas: irena@kvsc.lt

Summary. Tick-borne encephalitis (TBE) – a viral human disease of the central nervous system, caused by arbovirus which persists in natural foci. TBE. It is the transmission disease, when in the most cases the man is infected with TBE virus by tick bites. However, 10-20% of persons were infected by TBE virus following the ingestion of raw milk from goats and cows. The aims of work were the determination of spreading and seasonal prevalence of *I. ricinus* in the regions of country and serological examination of infection by TBE virus in different species of animals. In the stationaries of country and in Kaunas district 1411 *I. ricinus* ticks were collected. In 21 regions the blood samples of horses, cattle, sheep, goats, dogs were collected and 3329 serological reactions by HI and ELISA methods were done. By parasitological examinations the increasing of tick's plenty 9.3% per year ($p < 0.05$) was established in according of changes in biocoenosis. The duration of activity of ticks (till 8 months) and dynamics of quantity are directly dependent on the meteorological conditions. The highest activity of ticks was registered in the end of May – the first ten-day period of June and in the end of August – the beginning of September. By ELISA method was established that 8.6% ($p > 0.05$) of animals were infected by TBE virus. The most part of infected were cattle (10.1%) and goats (8.9%). By ELISA method with antigen of TBE virus were detected 66.9% more positive than by HI test. By ELISA test the ruminant animals had 57.7% more antibodies ($p < 0.05$) than by HI. Test of blood serum of milch animals by ELISA method was 55.2% more sensitive than HI.

Keywords: tick-borne encephalitis, virus, animals, diagnostics, epidemiological analyses.