Natural Reservoirs of *Babesia microti* in Poland

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Abstract

Babesiosis is as one of the emerging human and animal diseases transmitted by ticks. It is caused intraerythrocytic parasites of the genus *Babesia*. Current evidence of human babesiosis suggests that the majority of cases are involved by *Babesia divergens* and *Babesia microti* piroplasms.

As zoonotic reservoir of *B. microti* serve small mammals - insectivores and rodents. The occurrence of this parasite in natural environment in Poland is documented from various regions, in the wide range of mammal hosts. The most important role as *Babesia* reservoir play *Microtus* voles. The prevalence of infection in *Microtus arvalis* studied in Mazurian Lakeland is 9-33%; in *Microtus agrestis* in Katowice agglomeration reach almost 50%, *Microtus oeconomus* in Białowieża 7.7 - 50 %. The lesser role as zoonotic reservoir play *Clethrionomys* voles, *Apodemus* mice and shrews; the prevalence of infections in these mammals don't exceed 2 %. The vectors for *B. microti* piroplasms in middle-European conditions are *Ixodes ricinus*, *I. trianguliceps* and *Dermacentor reticulatus*. There were recorded the infections of *I. ricinus* ticks with *B. microti* in Szczecin, the rate was 6.2 - 13.3%.

The variation in *B. microti* prevalence in rodents and ticks is very changeable and determined by season, the interaction with other hemoparasites, host's age and local conditions.

Key words: babesiosis, *Babesia* spp. reservoirs in Poland