The clinical course of babesiosis in 76 dogs infected with protozoan parasites

*Babesia canis canis*

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Abstract

The aim of the study was to trace the clinical course of babesiosis in 76 dogs infected with *Babesia canis* protozoa and to assess the usefulness of PCR method in the routine diagnosis of the disease. The investigations were conducted in three successive seasons of the biological activity of ticks on dogs displaying possible clinical signs of babesiosis, the latter assigned individual numbers from 001 to 076. All the animals underwent routine clinical examinations and blood was collected for haematological, biochemical, parasitological and molecular tests for babesiosis. The most frequent clinical signs observed in the course of the disease were changes in urine colour and xanthosis or paleness of mucous membranes, whereas in the haematological and biochemical examinations, the most frequent laboratory findings were thrombocytopenia, leucopenia, anaemia and an increase in levels of urea and bilirubin. In all blood smears stained with the May-Grunwald and Giemsa methods, from the 76 dogs, the presence of *Babesia canis* protozoa was observed in erythrocytes, and their DNA was detected in 69 blood samples by means of PCR technique. The course of the disease and the results of molecular examinations suggested the haemolytic form of babesiosis. The previous genetic analysis of isolates of *Babesia canis canis* from the eastern areas of Poland helped to distinguish two specific groups, A and B, within the species (Adaszek and Winiarczyk 2008a). The present study revealed a certain interrelation between the intensification of thrombocytopenia and the fact that protozoa belong to either group A or B. The mean number of thrombocytes in dogs infected with protozoa from group A was 61.11 thousand/mm³, whereas the mean number of thrombocytes in the blood of dogs infected with protozoa from group B was 27.47 thousand/mm³. A strong correlation was also observed between the low level of thrombocytes and the increase in the internal body temperature (p=0.02), accelerated pulse rate (p=0.01) and discoloration of urine (p=0.04).

As a result of the treatment of dogs with imidocarb, recovery was observed in 73 out of the 76 dogs brought to the clinic.

Key words: Babesia canis, thrombocytopenia, dogs

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