RESUMO - PROTOZOOLOGIA E PATÓGENOS TRANSMITIDOS POR VETORES

MOLECULAR SURVEY OF HEMOPATHOGENS IN DOGS, INCLUDING BLOOD DONORS, FROM CENTRAL-WESTERN BRAZIL

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In Veterinary Medicine, blood transfusions are an important tool, contributing to the therapeutic support of patients affected by hematological disorders. Several pathogens may be responsible for the development of disease or for the worsening of the clinical condition of immunocompromised dogs or dogs in clinical conditions requiring blood transfusion. In this context, the present study investigated the molecular occurrence of hemopathogens (Bartonella spp., Ehrlichia spp., Anaplasma spp., piroplasmids, and hemoplasmas) in blood donor

dogs and dogs attended at veterinary clinics, using samples obtained from a clinical veterinary laboratory in Brazil. A total of 100 blood samples were collected from each group. All dogs tested negative for Bartonella spp. in qPCR assays performed from blood samples and blood subjected to Bartonella AlphaProteobacteria Growth Medium (BAPGM) followed by isolation onto chocolate agar. Among the 100 dogs attended at veterinary clinics, 15% (95% CI: 9.3–23.3) tested positive for Ehrlichia spp., 6% (95% CI: 2.8–12.5) for Anaplasma spp., 3% (95% CI: 1.0–8.5) for Babesia spp., and 2% (95% CI: 0.6–7.0) for hemoplasmas. Among blood donor dogs, 5% tested positive for hemoplasmas (95% CI: 2.2–11.2). Additional conventional PCR and real-time PCR assays followed by sequencing confirmed the presence of Ehrlichia canis, Anaplasma platys, Babesia vogeli, 'Candidatus Mycoplasma haematoparvum', and Mycoplasma haemocanis. The molecular detection of E. canis, A. platys, 'Ca. M. haematoparvum', and M. haemocanis in dogs from the Midwest region of Brazil highlights the relevance of molecular tools for the diagnosis of hemopathogens. This is the first molecular detection of hemoplasmas in canine blood donors in Brazil. These results suggest a silent circulation of these agents and highlight the importance of molecular screening to prevent the worsening of clinical conditions and the potential transmission to transfusion recipients.

Palavras-chave: babesia vogeli; bartonella spp; 'candidatus mycoplasma haematoparvum'; canine blood donation; ehrlichia canis; mycoplasma haemocanis.