



Evaluation of hematological disorders in dogs diagnosed with canine monocytic ehrlichiosis

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Abstract

Thousands of dogs worldwide are diagnosed with canine monocytic ehrlichiosis (CME), an infectious disease with global incidence caused by a bacterium of the genus *Ehrlichia*. The disease is transmitted by the tick vector *Rhipicephalus sanguineus*, and how the disease manifests itself varies according to its stage and the time of diagnosis. The hemogram associated with serological tests are the main resources in the diagnosis and clinical monitoring of the pathogenic process. This study aimed to identify the most frequent hematological disorders in dogs diagnosed with CME. For this, 60 medical records and hemograms were evaluated in dogs with a diagnosis of CME between the last quarter of 2018 and the first four months of 2019 in two veterinary clinics, located in the municipalities of Campo Limpo Paulista-SP and Jundiaí-SP. Hematological alterations observed indicates a high prevalence of thrombocytopenia, normocytic normocytic anemia and neutropenia with a left shift among patients, as well as a correlation between the number of infections with the hot weather. The bibliography shows that hematologic changes as fall of erythrocytes, platelets and neutrophils are frequent in the hemograms of patients with CME. The present study emphasizes the importance of clinical diagnosis associated with serological tests, as well as continuous patient monitoring through hemograms, with the aim of monitoring the pathogenic process.

Key words:

Ehrlichiae, *Rhipicephalus sanguineus*, Canine Hemoparasitosis.

Introduction

Thousands of dogs worldwide are diagnosed with canine monocytic ehrlichiosis (CME), an infectious disease with global incidence caused by a bacterium of the genus *Ehrlichia*. The disease is transmitted by the tick vector *Rhipicephalus sanguineus*, and how the disease manifests itself varies according to its stage and the time of diagnosis¹. The hemogram associated with serological tests are the main resources in the diagnosis and clinical monitoring of the pathogenic process. This study aimed to identify the most frequent hematological disorders in dogs diagnosed with CME.

Results and Discussion

60 medical records and hemograms were evaluated in dogs with a diagnosis of CME between the last quarter of 2018 and the first four months of 2019 in two veterinary clinics, located in the municipalities of Campo Limpo Paulista-SP and Jundiaí-SP. Hematological alterations observed indicates a high prevalence of thrombocytopenia, normocytic normocytic anemia and neutropenia with a left shift among patients, as well as a correlation between the number of infections with the hot weather.

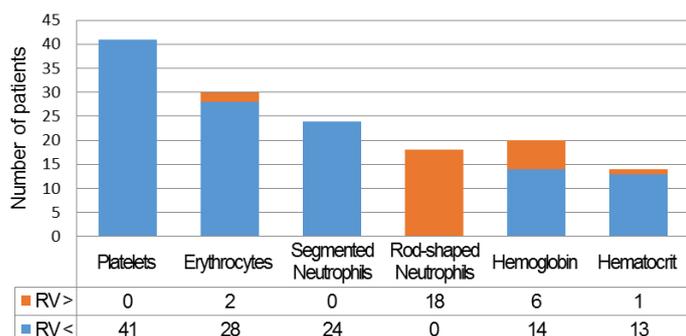


Image 1. Main hematological alterations observed in medical records and hemograms.

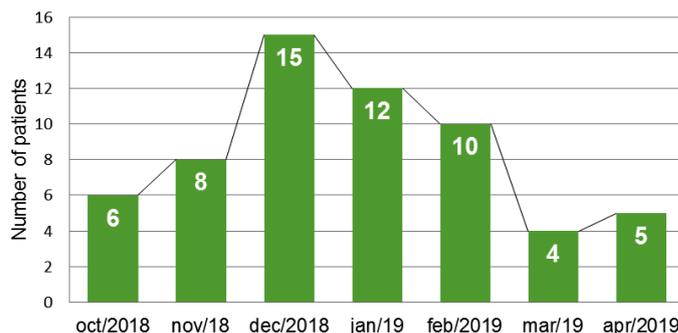


Image 2. Infections by month.

The bibliography shows that hematologic changes as fall of erythrocytes, platelets and neutrophils are frequent in the hemograms of patients with CME², and that in Brazil CME occurs most frequently in the summer, since ticks requires conditions such as heat and humidity to reproduce³.

Conclusions

The present study emphasizes the importance of clinical diagnosis associated with serological tests, as well as continuous patient monitoring through hemograms, with the aim of monitoring the pathogenic process. Awareness about the importance of vector control is needed, since it transmits not only CME, but also other diseases such as babesiosis and spotted fever.

¹ Isola JGMP, Cadioli FA, Canesin APMN. Erliquiose canina: revisão de literatura. *Rev Cient Eletr Med Vet.* **2012**;9(18):1-11.

² Moreira SM, Bastos CV, Araújo RB, Santos M, Passos LMF: Retrospective study (1998–2001) on canine ehrlichiosis in Belo Horizonte, MG, Brazil. *Arq Bras Med Vet Zootec.* **2003**;55:141-147.

³ Souza DMB et al. Erliquiose Transmitida aos Cães pelo Carrapato Marrom (*Rhipicephalus sanguineus*): revisão de literatura. *Rev Ciênc Vet Tróp.* **2012**; 15(1/2/3):21-31.