RESUMO SIMPLES - PROTOZOÁRIOS E AGENTES TRANSMITIDOS POR VETORES DE IMPORTÂNCIA EM SAÚDE

DETECTION OF PATHOGENS IN FELIS CATUS AND CTENOCEPHALIDES FELIS FELIS FROM SAMPLES COLLECTED IN THE METROPOLITAN REGION OF RIO DE JANEIRO

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Domestic cats, Felis catus, especially those that roam freely in outdoor environments, are considerably vulnerable to infestations by various arthropods such as fleas, ticks, mites, and mosquitoes, and consequently are exposed to pathogens carried and harbored by these vectors. Fleas represent one of the most important ectoparasites in veterinary medicine, mainly Ctenocephalides felis felis, the most common subspecies in domestic animals in Brazil and in

various parts of the world. Vector-borne diseases have been a growing concern in feline medicine due to their wide geographic distribution, zoonotic potential, and association with hematological and systemic alterations. In Brazil, studies including cats as hosts and interactions with fleas as protagonists are scarce, especially those correlating findings in both species. The objective of this study was to determine the occurrence of pathogens in C. felis felis and in blood samples from cats, infested or not, from the Metropolitan Region of Rio de Janeiro. Blood samples from 400 cats were evaluated, 89 of which were parasitized by fleas, and 664 fleas. In the present study, molecular screening for pathogens in cat blood detected Mycoplasma spp. in 18.5% of the samples (74/400), Bartonella spp. in 6.5% (26/400), Rickettsia spp. in 2.75% (11/400), and Babesia spp. 0.75% (3/400), Cytauxzoon spp. 0.5% (2/400), Ehrlichia spp. 0.25% (1/400), and no samples tested positive for Anaplasma spp. However, no suggestive structures were observed in direct blood smear examination for any of the agents sought. In the readings of the buffy coats, structures compatible with morulae and/or inclusions suggestive of the Anaplasmataceae family were observed in 9% (36/400) of the slides, of which only 3.5% (14/400) were concomitantly positive in the qPCR for any pathogen. Mycoplasma spp. species were detected, the most frequent was M. haemominutum with 71.60% (53/74), followed by M. turecensis and M. haemofelis with 20.30% (15/74) and 12.20% (9/74), respectively. Regarding retroviruses, 20.3% (81/400) were positive for FeLV and 3.5% (14/400) for FIV, with 1.5% (6/400) animals positive for both. When analyzing the fleas of the 89 naturally infested animals, Rickettsia felis was the most frequently detected microorganism, with positivity in 69.28% (460/664) of the samples, followed by Bartonella spp. with 12.90% (16/124), FeLV with 10.48% (13/124), and Mycoplasma spp. with 1.61% (2/124) and FIV with less than 1% (1/124) of the samples. No sample showed detection of Babesia spp., Cytauxzoon spp., Anaplasma spp., or Ehrlichia spp. Therefore, the occurrence of pathogens in fleas and cats in the Metropolitan Region of Rio de Janeiro, mostly zoonotic, implies the need to implement control measures for these insects and the prevention of infection in cats and humans, focusing on Rickettsia felis due to its high frequency in fleas, considered an emerging disease.

Palavras-chave: domestic cat; cat flea; molecular biology.