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

MOLECULAR DETECTION OF EHRLICHIA SPP. IN DOMESTIC CATS (FELIS CATUS) IN THE STATE OF RIO DE JANEIRO, BRAZIL: PRELIMINARY RESULTS

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Vector-borne diseases are extensively debated and addressed in terms of epidemiology and clinical presentation in dogs. In contrast, felines, especially domestic cats, show a marked lack of updated data on such conditions, encompassing the geographic distribution of the agents, clinical signs, and risks to the animal and human population. This scarcity can be illustrated by the common misconception that cats are not parasitized by vectors such as ticks,

being only hosts to fleas. The genus Ehrlichia belongs to the order Rickettsiales, family Anaplasmataceae, and are classified as obligate intracellular bacteria. These agents are known to infect leukocytes, possessing great relevance in veterinary and human medicine. Ehrlichia canis is the etiological agent of Canine Monocytic Ehrlichiosis (CME), which is transmitted by ticks; however, in felines, there are still few reports of animals parasitized by Ehrlichia spp. The objective of this study was to detect the presence of hemoparasites of the genus Ehrlichia in domestic cats (Felis catus) in the state of Rio de Janeiro, using molecular techniques. 398 blood samples in EDTA, provided by a veterinary laboratory, were analyzed. DNA extraction was performed using the Wizard Genomic DNA Purification kit (Promega®), according to the manufacturer's instructions. After extraction, the viability of the samples for biomolecular tests was evaluated by amplifying a 400 base pair (bp) fragment of the endogenous gapdh gene. For the detection of agents of the genus Ehrlichia, the conventional PCR technique was employed, using the DSB330/DSB728 primer pairs with partial amplification of 409 base pairs of the dsb gene. All samples were amplified for the gapdh gene. In the dsb gene for Ehrlichia spp., one sample (0.25%) was amplified and subsequently sequenced using the Sanger method. The obtained sequence showed, by BLASTn analysis, 100% identity (Query coverage: 100%) with Ehrlichia canis described in Rhipicephalus sanguineus from Rio de Janeiro, Brazil (repository: MT005831; MT005830). The results obtained demonstrate the occurrence of Ehrlichia spp. in domestic cats in the state of Rio de Janeiro. In subsequent steps, the positive sample will be submitted to further molecular tests targeting different genes, with the aim of expanding the characterization of the parasite. This work highlights the importance of continuing molecular investigations to elucidate the circulation of the agent in the region and to define, more precisely, the role of domestic cats in the associated epidemiological chain.

Palavras-chave: feline ehrlichiosis; domestic cats; hemoparasites; pcr; molecular biology.