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

DETECTION OF ANTI-TOXOPLASMA GONDII ANTIBODIES IN FREE-LIVING SAPAJUS NIGRITUS

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Toxoplasma gondii is a globally spread obligatory intracellular protozoan, causative agent of toxoplasmosis, and known for sometimes causing acute and fatal manifestations of the disease in neotropical primates, considered intermediate hosts. The association between these primates and the agent varies according to the environment and behavioral pattern of the species, also influenced by immunological factors. Sapajus spp. have greater chances of contact with T. gondii oocysts due to their terrestrial habits, while primates such

as Callithrix spp. undergo less exposure and consequently have greater clinical vulnerability, therefore present lower antibody detection, since most die before adequate seroconversion. Studies comparing overall seroreactivity between wild and captive primates show greater numbers in the latter, raising hypotheses of an association between greater exposure and human care related factors. The goal of this study was to relate the detection of anti-Toxoplama gondii antibodies in a free-living neotropical primate and explore how environmental and ecological factors may influence exposure to the parasite in free-living conditions. An adult capuchin monkey, Sapajus nigritus, from the São Lourenço Natural Park, in Espírito Santo, Brazil, was rescued after suffering accidental electrocution and taken to the Instituto Nacional da Mata Atlântica (INMA), receiving veterinary care. A blood sample was collected via femoral venipuncture, during clinical evaluation. After initial care, the primate was sent to the local CETAS (Wildlife Rehabilitation Center) and euthanized due to the severity of its condition. The blood sample was kept refrigerated and then properly stored in a thermal container and sent to the Veterinary Clinical Pathology Laboratory of Universidade Federal Rural do Rio de Janeiro, where it was centrifuged at 2500 rpm for 5 minutes, so that the serum could be obtained. The serum was analyzed using the Modified Agglutination Test (MAT) as described by Dubey & Desmonts (1987), including positive and negative controls and the sample was considered reactive at the 1:25 titer. This indicates previous exposure, and in this case's context, highlights the importance of conservation and ecological considerations, since although classified as a protected area, the São Lourenço Natural Park suffers relevant anthropogenic influence. There are documented instances of extraction activities, hunting and intense human presence in the park's vicinity, including agricultural areas, households and proximity to domestic animals, increasing the odds of contact between wildlife and sources of environmental contamination. These features indicate that even protected areas can act as points of pathogen spread under disturbances mediated by human presence. To the authors' knowledge, this is the first report of T. gondii exposure in a primate from this conservation unit, providing an early insight of the parasite's presence in an area with limited epidemiological data concerning this matter. Thus, demonstrating the importance of developing continuous health surveillance programs for wildlife conservation in protected areas, given that infection patterns may provide insight on how human activities influence pathogen dynamics in areas with greater intersection between wildlife, domestic animals and human activity. Gathering data through more samplings will be critical to determine whether the

seroreactivity in this individual is an isolated event or part of a wider transmission process that has gone unnoticed in the local population. As there is no prior evidence of seroreactivity in a primate from this conservation unit, the detection reported in this study reinforces the need of continuous wildlife health surveillance within the park, to support informed management and conservation strategies in an area with multiple environmental and anthropogenic influences.

Palavras-chave: toxoplasmosis; primate; serology; conservation; environment.