

SEROLOGICAL SURVEY OF ANTI- *Rickettsia* ANTIBODIES IN DOGS IN THE MUNICIPALITIES OF CANANÉIA AND ITAPEVA, STATE OF SÃO PAULO, BRAZIL

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The Brazilian spotted fever is an acute infectious disease caused by bacteria of the genus *Rickettsia*, being *R. rickettsii* the most pathogenic species. In South America it is mainly transmitted by *Amblyomma cajennense* tick complex. In Brazil, *A. sculptum* is considered the main vector of *R. rickettsii* for humans. In the southeastern region, recent cases of a new rickettsiosis in humans have been reported. The etiologic agent is *Rickettsia* sp. strain Atlantic rainforest, genetically related to *R. parkeri*, and the tick of the species *A. ovale* seems to be the presumed vector of this pathogen. The aim of this study was to investigate the seroprevalence of two *Rickettsia* species in dogs in the municipalities of Cananéia and Itapeva, SP, and its relation with the fragmentation of vegetation in the proximities of urban areas. With the owner's consent, blood was withdrawn from dogs that were castrated in sterilization campaigns that were held in both municipalities. Serum obtained from these blood samples were tested for *R. rickettsii* and *R. parkeri* by indirect immunofluorescence assay (IFA). A total of 186 serum samples, 81 from Cananéia and 105 from Itapeva, of both males and females, were analyzed. In the municipality of Cananéia, five samples showed a positive reaction to the *R. parkeri* antigen, one of which was also positive for *R. rickettsii*, but with a title at least four times lower than for the first species, indicating circulation in this area of some *Rickettsia* of the spotted fever group with probable homologous reaction to *R. parkeri*. In Itapeva, none of the samples tested reacted to both *Rickettsia*, and all of them were considered negative. Although the samples seroreagent to the *R. parkeri* antigen were not tested for *Rickettsia* sp. strain Atlantic rainforest, the fact that the areas of this study are located in the biome where this strain occurs and where the occurrence of *A. ovale* is frequent, raises the suspicion that *Rickettsia* sp. strain Atlantic rainforest may be the agent that is circulating in the municipality of Cananéia. This demonstrates the need for further investigation to confirm which *Rickettsia* is circulating in the area and the tick species responsible for its transmission, since this pathogen is one of the agents that cause human rickettsial disease. A probable explanation for the occurrence of seropositivity for the *R. parkeri* antigen in dogs of Cananéia is the close contact between forested areas and human dwellings, which allows animals to have free access to the forest and to become infested with ticks infected with *Rickettsia*.

Keywords: *Rickettsia*, ticks, serological survey, Atlantic Forest, Brazil.