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EPIDEMIOLOGICAL ASPECTS OF *Rickettsia parkeri* STRAIN ATLANTIC RAINFOREST RICKETTSIOSIS IN ESPÍRITO SANTO STATE, BRAZIL

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Considering the recent description of *Amblyomma ovale* in Espírito Santo state, the current study aimed to describe epidemiological aspects of its vectored agent, *Rickettsia parkeri* strain Atlantic rainforest (RAF) in this state. For this purpose, between June 2016 and June 2017, ticks and blood samples of dogs with free access to the forest and their respective owners were sampled in 28 towns belonging to eight municipalities (Cariacica, Domingos Martins, Ibiraçu, Marechal Floriano, Santa Leopoldina, Santa Maria de Jetibá, Santa Teresa and Venda Nova do Imigrante). Adults of *Amblyomma* genus were PCR-analyzed for spotted fever group rickettsiae (SFG-R), and a serological screening against SFG-R was performed through immunofluorescence assay (IFA) in samples from dogs and humans. Inquiries on clinical cases of rickettsiosis with possible eschar-associated signs were performed as well. A total of 181 adult ticks were collected and taxonomically classified as *Amblyomma ovale* (n= 104), *Amblyomma aureolatum* (n= 76) and *Amblyomma sculptum* (n=1). Seroprevalence against SFG-R in sampled dogs (n = 38) was 44.7% (17/38) or 55.7% (21/38), depending on the tested rickettsial antigen (*Rickettsia rickettsii* or RAF, respectively). In seven of eight municipalities, RAF was the probable homologous antigen in the IFA reaction for at least one dog from these municipalities. From a total of 18 human samples, only one reacted with a maximum titer of 1:128 against *R. rickettsii*, without cross-reaction with RAF, resulting in a seroprevalence of 5.5% against SFG-R. Upon a total of 167 ticks submitted to PCR, only one male of *A. aureolatum* was positive to rickettsial DNA (0.6%). The retrieved sequences from amplified products were 100% identical with corresponding sequences of *Rickettsia parkeri* Atlantic rainforest available in GenBank. Finally, during the study period, suspected eschar-associated rickettsiosis were not reported. Our preliminary findings confirm the presence of *Rickettsia parkeri* strain Atlantic rainforest in the assessed municipalities from Espírito Santo state, and in consequence, the occurrence of human clinical cases is plausible, however, probably under-diagnosed.

Palavras-chave: Riquétsia, Carrapatos, Epidemiologia, Brasil.
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