

Leish014- Identification of risk factors associated to canine visceral leishmaniasis in an endemic area of Bahia

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At urban areas, the dog is the main reservoir for *Leishmania infantum* (syn *chagasi*). Identify risk factors for *L. chagasi* infection is essential to plan effective actions to control visceral leishmaniasis. The present study aimed to perform a serological surveillance in dogs from an endemic area for visceral leishmaniasis. A cross-sectional study was performed including 22 neighborhoods in the municipality of Camaçari, Bahia, Brazil. The houses included in this study were chosen randomly. Five hundred dogs living in 348 households were included, evaluated clinically and an epidemiological questionnaire was done with their owners. The diagnosis of visceral leishmaniasis was determined by both ELISA and culture positivity in splenic aspirates. The chi-square test ($P < 0.05$) was used to evaluate the association between risk factors and canine visceral leishmaniasis diagnosis. *Leishmania* infection was diagnosed in 27% of animals evaluated. According to the report of the owners, dogs presenting some signals of canine visceral leishmaniasis in the last month correlated with the diagnosis of the disease. The signs included apathy 37% (OR1.7; IC1.1-2.8), weight loss 36% (OR1.7; IC1.1-2.5) and loss of appetite 35% (OR1.6; IC1.0-2.6). In addition, the owner report their dogs have been sick 63% (OR5.9; IC2.9-11.4) or convalescent 35% (OR1.8; IC1.0-3.4) in the last month. In the households, presence of vegetation 32% (OR3.4; IC1.9-6.0), other dogs 39% (OR2.1; IC1.3-3.2), and birds in the backyard 37% (OR2.0; IC1.2-3.2) were identified as potential risk factors for canine visceral leishmaniasis. The positive diagnosis of dogs with visceral leishmaniasis was higher in houses where the animals were guard dogs 37% (OR1.9; IC1.2-2.8) and exclusively remained in the backyard 28% (OR3.2; IC1.2-8.2) Potential protective factors against *Leishmania* infection were also identified: dogs living in household located on paved streets 20% (OR0.5; IC0.3-0.7), as well as the use of protective methods in dogs 42% (OR0.5; IC0.3-0.8). A positive correlation was found between detection of dogs infected with *Leishmania* in either homes (OR4.6; IC2.6-7.9) or neighborhoods (OR3.3; IC2.0-5.6) where dogs have been previously diagnosed with leishmaniasis. These findings indicate that new cases appear more often in areas where disease in dogs has been previously diagnosed. In sum, the data presented herein open the possibility of implementation of more adequate control actions in areas where factors of greatest risk of canine visceral leishmaniasis have been identified. Furthermore, this may help targeting effective measures to control this illness in human population. **Support by** FAPESB, INCT-CNPq, PDTIS, PST Veras' grant (CNPq:306672/2008-1). **E-mail:** dmfraga@hotmail.com