

## Sandf024- **Spatial distribution of canine visceral leishmaniasis is correlated to the presence of *Lutzomyia longipalpis* in an endemic area of Bahia – Brazil**

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During the 20th century, the geographical distribution of visceral leishmaniasis (VL) in Brazil was limited to rural areas. The growth of urban centers, leading to environmental and population problems, allowed the disease expansion, as well as Canine Visceral Leishmaniasis (CVL) establishment in some urban areas. In urban areas, dog is considered the main reservoir of *Leishmania* and is reputed as the source of parasite infection to *Lutzomyia longipalpis*, the vector of CVL in Brazil. The present study aimed to identify the prevalence of CVL, map and analyze the distribution of infected dogs, as well as correlating CVL prevalence with the population density of captured *L. longipalpis* in the municipality of Camaçari, an endemic area of VL in Bahia, Brazil. In order to determine CVL prevalence, a cross-sectional study was conducted in 8 neighborhoods of Camaçari. The dog sampling of each location was defined along with the Center of Zoonosis Control (CZC) of Camaçari, using the census of vaccination campaign against rabies. The dogs were clinically evaluated. Blood samples and splenic aspirates were collected for serological and parasitological diagnosis of CVL, respectively. In the same areas, sandflies were captured, using CDC light traps. The collection sites were chosen based on previously vector detection or reported cases of canine or human leishmaniasis in the area. Evaluation of spatial distribution was performed georeferencing the cases' addresses. Data were plotted on a digitalized base map of the municipality, using the program ArcGIS 9.3. Seventy-six dogs were evaluated in the urban area, showing a positivity rate of 18.42%, 214 dogs were examined in the coast area with a positivity rate of 40.65%. A total of 174 sandflies were captured in the urban area and 4321 in the coast area. In all 8 neighborhoods evaluated, a correlation between a higher prevalence of positive dogs and a greater density of sandflies was found. These findings support the notion that spatial distribution of CVL is correlated with the highest density of *L. longipalpis* in Camaçari. Furthermore, these data highlight the need for identification of areas with a large concentration of reservoirs and vectors. These findings can help to prioritize governmental actions to favor control of CVL spreading. **Support by** FAPESB, INCT-CNPq, PDTIS, PST Veras' grant (CNPq:306672/2008-1). **E-mail:** dmfraga@hotmail.com