



Spatial Analysis of American Visceral Leishmaniasis in the Municipality of Presidente Prudente: A Geographical Approach to Environmental Health
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Introduction: American Visceral Leishmaniasis (AVL) is a serious zoonosis. It affects both animals and humans and can prove fatal. Increased mortality occurs principally due to the uncertain conditions of diagnosis and treatment of the disease and it is therefore characterized as a neglected disease. Since 1990, AVL has been spreading to new areas and its frequency is increasing in the state of São Paulo. In Presidente Prudente, a municipality in western São Paulo, the disease appeared in mid-2009 and has been spreading rapidly through the canine population, which has been a precondition for its occurrence among humans. Considering the AVL problem in this municipality, the purpose of this research is to analyze the spatial distribution of cases of canine AVL, identifying the spatial patterns of the disease. Sites where there have been confirmed cases of AVL will be noted, it is also intended to analyze the environs to make correlations between the disease and the environment. **Methodology and development:** A geo-referenced database was constructed in order to analyze the spatial distribution of cases of canine AVL in the municipality of Presidente Prudente. Mapping was done by means of geo-coding addresses, which was a matter of combining the details that needed to be mapped with the database of addresses already geo-referenced. This tool makes associations by comparing addresses and marks points in streets according to occurrences by time. The mapping of data having been done, it is intended to apply spatial analysis techniques in order to identify patterns of the disease in the municipality. It is also intended to apply geo-statistics to a canine census which is being registered. After the identification and mapping of areas affected with AVL, a bio-geographical survey will be carried out with the intention of identifying the environmental correlations that characterize the disease. The environmental review will make it possible to identify the natural and social conditions giving rise to the disease, showing whether AVL can be regarded as a neglected disease. **Final thoughts:** Although the research is still in progress, it is already possible to identify certain results. There are clusters of AVL cases in dogs in the municipality. These are dispersed, forming small focal points in separate neighbour hoods. The work of the municipality's Zoonosis Control Centre may be contributing to the reduced spread of the disease and low frequency of cases, bearing in mind that the institution works with targeted interventions when a case is identified, insisting on obligatory euthanasia after clear confirmation of the disease has been reinforced by tests. Following analysis, we expect to give an overview of the distribution of the disease across the municipality and its inter-relationship with the environment, which is expected to be a valuable contribution to health geography and those interested in the mapping of disease.

Key words: American Visceral Leishmaniasis; mapping; spatial analysis.