

Leishmaniasis in the Municipality of Diamantina (MG): Spatial and Epidemiological Analysis from 2022 to 2024

Fernanda Batista Santos¹, Lilianny Mara Silva Carvalho², Lays Fernanda Nunes Dourado², Wallison Silva Gonçalves², Diogo Antonio do Nascimento Doria², Cinara de Cássia Sousa Santos², Warlen Ferreira Cristianismo², Narciso Marques Soares², Ricardo Andrade Barata³, Stefan Michael Geiger¹

¹Universidade Federal de Minas Gerais, Belo Horizonte, Minas Gerais, Brasil. ²Prefeitura Municipal de Diamantina, Diamantina, Minas Gerais, Brasil. ³Universidade Federal dos Vales do Jequitinhonha e Mucuri, Diamantina, Minas Gerais, Brasil.

Abstract

Leishmaniasis are endemic zoonotic parasitic diseases in Brazil, caused by *Leishmania* protozoa. They manifest as American cutaneous leishmaniasis (ACL), with cutaneous and mucosal lesions, and visceral leishmaniasis (VL), affecting internal organs such as the liver and spleen. VL also impacts dogs (*Canis familiaris*), causing a chronic, systemic disease. The prevalence of these diseases in both urban and rural areas is linked to factors like population density, environmental degradation, lack of sanitation, and vector adaptation to urbanized areas. This descriptive study aimed to analyze the epidemiological profile and georeference cases of ACL, human VL, and canine VL in Diamantina between 2022 and 2024. Secondary data from the Diamantina Municipal Health Department and the Notifiable Diseases Information System (SINAN) were examined, focusing on age range, sex, area of residence, case status, and disease progression. Georeferencing was conducted using QGIS® software. Ten cases of ACL were confirmed, with no human VL cases reported, and 292 dogs were seropositive for canine VL, yielding a prevalence rate of 12.19%. Canine serological testing is done on demand, which may lead to overreporting. ACL primarily affected individuals aged 50-59, with 80% of cases in men and 70% in rural areas. Most cases (70%) were new, and 90% recovered after treatment. These findings suggest ongoing transmission of both ACL and VL in Diamantina. Dogs, as main reservoirs, play a crucial role in maintaining the transmission cycle. Despite the rural prevalence of ACL, the presence of canine VL and ACL in urban areas highlights issues such as lack of sanitation. The coexistence of ACL and canine VL, despite the lack of recent human VL cases, emphasizes the importance of continuous surveillance and integrated monitoring of these diseases. Spatial analysis identified priority areas for intervention, underscoring the need for further research on environmental and ecological factors.

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