

Visceral leishmaniasis in southern Rio de Janeiro State and the risk of propagation to São Paulo State, Brazil.

Mauro Celio de A. Marzochi, Aline Fagundes, Maria Ines F. Pimentel & Keyla Belizia F. Marzochi [1]

[1]. Instituto Nacional de Infectologia Evandro Chagas, Fundação Oswaldo Cruz, Rio de Janeiro. Avenida Brasil, 4365, Manguinhos, RJ, CEP21040-900, email: mauro.marzochi@ini.fiocruz.br

Cases of human and canine visceral leishmaniasis (VL), were initially detected in Rio de Janeiro City since August 1977. By August 2006 there were 87 confirmed cases with 9 deaths and 2 of the deceased individuals were co-infected with HIV. More recently, both asymptomatic and symptomatic canine infection have been detected in urban neighborhoods of the city. In Rio de Janeiro State, the trend towards propagation of human and canine VL to new municipalities in the Vale do Médio Paraíba (Middle Paraíba Valley) and Costa Verde (Green Coast).

Human LV emerged in Barra Mansa in 2010, with 9 cases reported (7 adults and 2 children). Four of this infected individuals died, the first of which diagnosed *post mortem* in Volta Redonda. Of the remaining 3 cases, 2 adults were treated and cured, and one child died. Since 2014, at least 4 additional human cases have been diagnosed in Paraty and Angra dos Reis, with one death in the latter municipality.

This region requires the urgent implementation of a VL Epidemiological Surveillance and Control Program. In this areas, canine infection is also associated with presence of *Lu. longipalpis*, and renders the region vulnerable to VL. Likewise, great attention should be focused on the Vale do Paraíba (Paraíba Valley) and Litoral Norte (North Coast) in São Paulo State. Of particular importance, these regions are extensions of the same ecosystem connected to Southern Rio de Janeiro State by the President Dutra Highway and the Central Brazilian Railway.

The current complexity of urban VL transmission poses new challenges and calls for new strategies and approaches to control the infection, considering the increasingly rapid circulation of human populations and infected dogs (sources of the infection) and the greater dispersal of the sand fly vector, also influenced by human action.

Keywords: Visceral Leishmaniasis; Epidemiology; Geographic propagation; São Paulo State

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