

# SEROPREVALENCE OF LEISHMANIASIS INFECTION IN HIV-INFECTED PATIENTS IN A BRAZILIAN URBAN AREA

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## BACKGROUND

Visceral Leishmaniasis (VL) is a severe systemic disease, with a worldwide distribution and Brazil being one of the six countries with highest prevalence of the disease. There are few information about the frequency of *Leishmania* infection in asymptomatic HIV infected individuals and about the performance of laboratory diagnostic methods for leishmaniasis in coinfecting patients in Latin America. The main objective of this study is to evaluate the frequency of *Leishmania* spp. infection in HIV infected patients in an urban area from Brazil.

## METHODS

It is a cross-sectional study including HIV infected patients followed in an infectious diseases reference hospital in Sao Paulo, Brazil. Two hundred and forty patients were submitted to peripheral blood collection. The following diagnostic tests were performed: ELISA using *L. major*-like antigens; ELISA using *Leptomonas seymouri* antigens; ELISA using rk39 antigens; ELISA using rk28 antigens; indirect fluorescent-antibody test (IFAT). Demographical and epidemiologic data were obtained through hospital records analysis.

## RESULTS

Overall, 68.8% were males and 34.6% were from endemic visceral leishmaniasis area. Sixty patients (25%) were positive by ELISA using *L. major*-like antigens; nine (3.8%) by ELISA using *Leptomonas* antigens; three (1.3%) by ELISA using rk39 antigens; six (2.5%) by ELISA using rk28 antigens; eleven (4.6%) by IFAT (Table 1).

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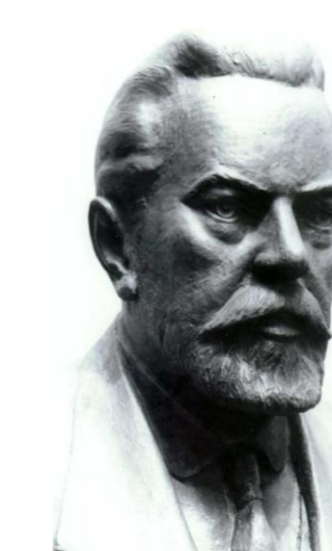
Table 1 - Positivity of diagnostic tests for detection of *Leishmania* spp. infection in 240 patients included at the study

	Total n (%)	95%CI
ELISA <i>L. major</i> -like	60 (25.0)	19.9 – 30.8
ELISA <i>Leptomonas</i>	9 (3.8)	2.0 – 7.0
ELISA rk39	3 (1.3)	0.4 – 3.6
ELISA rk28	6 (2.5)	1.2 – 5.3
IFAT	11 (4.6)	2.6 – 8.0

## CONCLUSION

- ELISA *L. major*-like had the highest positivity, probably due to the detection of a wider variety of antibodies directed against soluble antigen components, differently of IFAT, that detects mainly antibodies against surface antigens. Furthermore, the *L. major*-like antigen has characteristically worst specificity than other ELISA antigens, especially related to presence of Chagas disease. Due to discrepancy of this test in relation to the others, it is possible that its positivity can be related to other antigens present in the context of HIV infection. As expected because it seems to be associated with active disease, ELISA-rk39 had a lower yield. Some studies have been demonstrating better sensitivity of rk28 antigen compared to rk39 antigen, but no studies evaluate this fact in HIV-infected patients. The highest positivity of ELISA rk28 in relation to ELISA rk39 in this study could indicate that, in this group of individuals, the rk28 can present a good performance, as in immunocompetent patients. ELISA *Leptomonas* have performance similar to *L. infantum* antigen for visceral leishmaniasis diagnosis, but this antigen has never been studied in HIV-infected patients. The prevalence of *Leishmania* spp. infection is high among HIV patients in Brazil suggesting that they should be routinely investigated for coinfection, even in area with no autochthonous transmission reported.

APOIO



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