

**TITLE:** MOLECULAR DETECTION OF *Paracoccidioides brasiliensis* IN DOGS WITH VISCERAL LEISHMANIASIS

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Paracoccidioidomycosis is a systemic mycosis endemic in Brazil and several Latin American countries, caused by *Paracoccidioides brasiliensis* and *Paracoccidioides lutzii*. The infection is probably acquired by inhalation of infective propagules present in the environment. Due to the difficulty to isolate fungus from the soil, dogs have been used as indicators of *Paracoccidioides* spp presence in endemic areas. Visceral leishmaniasis is endemic in 62 countries, with 200 million persons under the risk of infection, being 90% of the cases occurring in Bangladesh, Brazil, Índia, Nepal, Sudão and Etiopia. Visceral leishmaniasis, caused by *Leishmania (L.) infantum chagasi* is a zoonotic disease, and domestic dogs are the main reservoir hosts. In previous seroepidemiological studies performed by our group, we observed a significant high frequency of positivity to *P. brasiliensis* antigens in dogs seropositive for leishmaniasis. Taking into account that Rio Grande do Sul state is an endemic area for paracoccidioidomycosis and leishmaniasis, the objective of this study was to evaluate the infection by *P. brasiliensis* in dogs diagnosed with visceral leishmaniasis of the municipality of Uruguaiana-RS. The lymph nodes samples (n=44) from dogs diagnosed with visceral leishmaniasis were assayed by conventional PCR using specific primers for *Leishmania* spp (13A and 13B) and Nested-PCR using specific primers for *P. brasiliensis* (ITS4-ITS5/ PbitSE/ R) and seven lymph nodes samples (15.9%) were positive for *P. brasiliensis* and *Leishmania* spp. The PCR positive samples for *P. brasiliensis* were confirmed by sequencing. The positivity was similar in male (n=4) and female (n=3) animals, suggesting that male and female dogs are equally exposed to infection. These data reinforce that co-infection by *Leishmania* sp. and *Paracoccidioides* sp. is occurring in dogs.

**Key words:** Paracoccidioidomycosis. Visceral leishmaniasis. Canine

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