C1876 SEROLOGIC DIAGNOSIS OF LEISHMANIASIS IN COMMUNITY CATS FROM AN URBAN AREA IN BRAZIL - PRELIMINARY RESULTS.


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1 Background
Dogs are widely recognized as main domestic reservoir of Leishmania infantum, former etiologic agent of visceral leishmaniasis in Brazil. These parasites can be found in other mammals with no significant importance in surveillance and control. However, case reports in cats have increased in the past years, as the number of domestic cats also raised in urban areas. In addition, the importance of domestic cats as reservoirs in urban areas is yet to be determined.

2 Methods
A transversal study was made using sera of 106 stray cats from an urban park of Belo Horizonte city, state of Minas Gerais, Brazil. One single sample was collected from each cat from December (2015) to September (2016). Samples were tested by two different methods of ELISA using a crude antigen or a recombinant repetitive antigen of Leishmania infantum (kDDR). Biopsies from ear skin were collected for histology and conventional PCR. Additionally sera of 20 and 33 domestic cats, respectively, from a veterinary hospital and a non-endemic city were used as negative controls.

3 Results
The optic density (O.D.) of the cat's population in both ELISA started to increase from May to July and gradually decreased until September. From December to April, lower levels of specific anti-Leishmania IgG were detected. Ear skin sample of 36 cats were negative in PCR. Interestingly, samples from cats of the veterinary hospital had lower levels of specific IgG in both ELISA. However, cats from a non-endemic area had a high dispersion of O.D. values, some of them higher than the positive control.

4 Conclusions
These results suggest a seasonal distribution of seroreactivity in the cat's population. However, the lack of parasites in the skin suggests a different pattern of the infection, comparing to infected dogs. In addition, this can suggest a lesser importance of cats in the natural transmission of leishmaniasis. Besides that, kDDR-ELISA apparently showed better results than conventional ELISA, in detecting infected cats, however more data is needed to better understand the fate of the infection in cats.