

DOG REPLACEMENT AND SUSCEPTIBILITY TO CANINE VISCERAL LEISHMANIASIS IN AN ENDEMIC AREA OF BRAZIL

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As they have been considered the main natural reservoir of the infection, euthanasia of serologically positive dogs is a current control measure for visceral leishmaniasis in Brazil. However, due to cultural and socio-economic needs, replacement of dogs by their owners is a common feature. In this study, we aimed at estimating the dog replacement and seroconversion to canine visceral leishmaniasis (CVL) rates in a Brazilian endemic area (Araçatuba County, São Paulo State, Southeast Brazil). We did this by applying a standardized questionnaire and measuring antibodies anti-*Leishmania* sp. in a cohort of owners who had their previous dog euthanized between August 2002 and July 2004. During the 2 years follow up period, 578 dogs were euthanized either because of CVL positive diagnosis or due to their owners' decision. Replacement was observed in 35% of those cases, within a median time of 2.4 months. Median age of replaced dogs was 4 months old, of which 46.3% were female and 53.7% were male. One hundred and seventeen of the replaced dogs have been followed up and the most frequent reason for replacement was the willing of having another pet (59%) followed by the necessity of having it as a guardian (40.2%), although only 59.8% were kept confined by their owners. Presence of anti-*Leishmania* antibodies measured every three months by ELISA, was observed in 33.3% (39/117) of the followed dogs, 12% of which (14/117) were already positive at the first evaluation. The median time for the 25 previously negative dogs to become positive during the follow up period was 6.2 months. Euthanasia of dogs as a control measure for visceral leishmaniasis should be reevaluated since replacement rate is high, replacement by a positive dog is common and, finally, the period of time needed for seroconversion of negative dogs is short. These features suggest that euthanasia alone is a measure of poor efficacy for the control of CVL in endemic areas such as this one.

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