
A Preliminary Study to Identify Possible Mammalian Reservoirs of Cutaneous Leishmaniasis Parasites in Selected Sites of Hambantota District, Sri Lanka

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Cutaneous leishmaniasis (CL) is an established disease in Sri Lanka transmitted by sand flies. Hambantota is one of the endemic areas for the disease. *Leishmania donovani* the causative agent of CL needs a mammalian host and an arthropod vector, sand fly in its life cycle. Present study was conducted to investigate on whether domestic or peri-domestic animals of CL infected patients are reservoir hosts in Hambantota district. CL positive patients were identified by examining their Giemsa-stained thin smears of lesions which were collected from patients who presented themselves to either Tangalle or Hambantota hospital from March, 2014 to February, 2017. Blood samples were collected from dogs (n= 56), a cat and rats (n=8) found from households of selected CL positive patients of the same profile. Buffy coat was separated from blood sample with Histopaque by centrifugation and PCR was performed with two primers kDNA and ITS1, LITS1 separately. Secondly, two smears were prepared from each buffy coat sample and tissues of spleen and liver of each rat. These smears were stained with Giemsa and prepared smears were examined under the oil immersion lens of light microscope to detect amastigote form of *Leishmania donovani*. Ethical approval for the study was obtained from the Ethics review Committee of Faculty of Medicine, University of Ruhuna. All caught rats were identified as *Mus mayori* species. PCR samples prepared from buffy coat of dog blood were negative for the parasite. It was unable to find amastigote form of *L.donovani* from each smear. Findings of the present study may indicate that the examined animals do not participate in transmitting of *L.donovani* parasite. Anthroponotic transmission cycle of *Leishmania* parasites may be persisting in study sites of Hambantota district.

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