Prevalence of Toxoplasma gondii in pet and stray cats in Klang Valley, Malaysia

ABSTRACT

Toxoplasma gondii, a zoonotic protozoan that has a worldwide distribution, is known to infect many warm-blooded vertebrates. The feline species including domestic cats are the definitive hosts for Toxoplama gondii and shed the infective oocyst. There is lack of information on the prevalence of Toxoplasma gondii in cats in Malaysia. The objective of this study was to determine both the seroprevalence of T. gondii and the prevalence of T. gondii DNA in cats' feces in Klang Valley, Malaysia. 198 blood and 201 fecal samples were collected from pet and stray cats from the local council, Dewan Bandaraya Kuala Lumpur (DBKL) and University Veterinary Hospital, Universiti Putra Malaysia respectively. The overall seroprevalence of Toxoplasma gondii in cats in the Klang Valley was found to be 5.5%. There was a high prevalence (10.5%) of T. gondii DNA detected in the cat fecal samples in both pet and stray cats suggestive of T. gondii oocyst shedding. Stray cats showed a higher seroprevalence and molecular prevalence of T. gondii than the pet cats. However, comparative analysis using Chi-square test showed no significant difference between both groups ($P>0.05$). Higher prevalence (10.5%) of cats shedding T. gondii DNA as compared to the seroprevalence (5.5%) was found in the cat population in the Klang Valley. The high prevalence of cats shedding T. gondii DNA is alarming as this may directly reflect the number of oocysts excreted into the environment posing a significant public health hazard.