

Name: Mohammed Mahmoud Abdel-Rahim.

Birth date: 28/11/1988.

Degree: Master degree.

Address: Faculty of Veterinary Medicine, Beni-Suef University

Major Field: Zoonoses

Title: Public health importance of enteric parasites of pet dogs and cats.

Abstract

This study was performed in the period May 2013 through May 2015 in order to determine the prevalence of zoonotic intestinal parasites of pet dogs and cats as well as their owners in Cairo, Giza, and Beni-Suef Governorates, Egypt. A total number of 720 fecal samples (395 from pet dogs, 180 from pet cats, and 145 from humans) were collected then investigated in the Department of Hygiene, Management and Zoonoses, Faculty of Veterinary Medicine, Beni-Suef University. Pet animals under investigation were divided according to the origin of animal rearing into; household pets, and outdoor pets. Macroscopic and microscopic examination using different flotation and sedimentation techniques were applied to extract eggs, cysts and oocysts of different helminths and protozoa, as well as staining using MZN to identify *Cryptosporidium* spp. The overall prevalence of enteric parasites in the examined dogs was 25.82%. Higher occurrence 34.55% was shown in outdoor dogs than 14.86% in household ones. Helminthic eggs of *T. canis* (0.25%), *T. vulpis* (2.53%), *T. leonina* (7.34%), plus protozoal cysts and oocysts of *Giardia* spp. (0.5%), *E. histolytica/dispar* (5.06%), and *Cryptosporidium* spp. (10.13%) were the main canine parasitic recovery. Positive *Cryptosporidium* spp. samples for MZN were further subjected to molecular analysis. Two step-nested PCR using COWP gene that followed by RFLP analysis exhibited the presence of *C. parvum*. Young ages (<6 months), female gender, undercooked feeding, outdoor housing and irregular de-worming were significantly associated with increased prevalence of the identified parasites in dogs; 57.14, 29.02, 82.5, 34.55, and 57.14% respectively. Shifting to feline samples, the overall rate of infection was 21.11%. *Cryptosporidium* was the most frequent parasite detected in the examined cats (6.67%), whereas *T. gondii* was the lowest one (0.56%). Regarding stool samples, the overall occurrence of intestinal parasites was 31.03%, with the highest prevalence of enteric parasites found in the age group between 5-10 years old (60%). Males harbored higher rate of infection (35.40%) than females (15.63%). On conclusion, parasitological results in this study clearly highlight the significant role of pet dogs and cats as a host for several species of zoonotic enteric parasites; therefore, preventive measures should be taken to avoid the environmental contamination and infection of both animals and humans.

Key words: *Pet, dogs, cats, parasites, feces, humans, PCP-RFLP.*