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Short communication

Prevalence of gastrointestinal parasites in *Felis catus*

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Abstract

Study was conducted to record prevalence of gastrointestinal parasites of cat. A total of 100 fecal samples from cat (50 from male and 50 from female) were collected and examined for the presence of GIT parasites. Samples were collected and transported for the laboratory diagnosis. Animal data such as age, sex, and breed were recorded. Results of the present study revealed that 24% cats found positive for the gastrointestinal parasites. The percentage of infection was found higher in female cats (28%) than males (20%). The prevalence in adults and kitten was recorded as 21.42% and 30% respectively. *Dipylidium caninum* was found more prevalent with the infection rate of 9% followed by *Toxocara cati*, *Aeluroslonglun obstrusus*, *Taenia taeniaeformis* and *Paragonimus kellikotti* with the infection rate of 5, 5, 3 and 2% respectively.

Key words: Cat, *Felus catus*, GIT parasites, Prevalence

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Introduction

The cat (*Felis catus*), also known as the domestic cat or house cat to distinguish it from other felines and felids, is a small domesticated carnivorous mammal that is valued by humans for its companionship and its ability to hunt vermin and household pests. Cats have been associated with humans for at least 9,500 years. Several years ago the domestic cat arrived in North America accompanied with European colonist. Domestic cats originated from an ancestral wild species of the European and African wild cat (Felis silvestris). The domestic cat is now considered a separate species, named *Felis catus*. Physically the domestic cats are similar to their wild ancestor and most of their behavior such as hunting and other activity patterns remain unchanged from their ancestors. Domestication of cat in Egypt was introduced in 2000 BC. However, the Greeks had acquired domestic cats in 500 BC and they spread cats throughout their sphere of influence [1].

Cats can suffer from a wide range of health problems, including infectious diseases, parasites, injuries and chronic disease. Vaccinations are available for many of these diseases, and domestic cats are regularly given treatments to eliminate parasites such as worms and fleas [2].

The parasites that your cat can get are externals and internals. The external cat parasites are most commonly fleas and ticks. However, cat can get and other external parasites like ear mites and lice. The internal parasites are primarily in the form of a worm. Unfortunately for cats, these worms come in a variety of shapes and sizes as well as bring a number of different health issues too [3]. Giardia is a common cat parasite. Symptoms may include foul-smelling stools that may contain mucus, loss of appetite and weight loss. Hookworms, tapeworms, roundworms and whip worms attach to the intestinal wall of the cat and can cause serious illness if not treated [4].

The internal parasites can be metazoan (e.g., cestode, nematode and trematode) or protozaon (e.g., Isospora, Giardia, Toxoplasma) organisms. The clinical signs associated with parasitism are fairly nonspecific, such as a dull hair coat, coughing, vomiting, diarrhea, dehydration, mucoid or bloody feces, anorexia, anemia. Furthermore, some parasites have the zoonotic importance and can infect the human beings [5-7]. The frequency of the parasite species can be affected by several factors including geographical region, prophylactic measures, season, veterinary care and cat population. It is reported by different workers that cats have a high frequency of parasites [8-11].

The present study was conducted to evaluate the prevalence of the GIT Helminthes in cats

Materials and Methods

A total of 100 fecal samples from cat (50 each from male and female) were collected and examined for the presence of intestinal parasites. Samples were appropriately collected and transported to the Department of Veterinary Parasitology, Faculty of

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Animal Husbandry, Sindh Agriculture University, Tandojam for Laboratory diagnosis. Animal data such as age, sex, and breed were also being recorded. Direct microscopic examination, centrifugation floatation technique and sedimentation technique [12] were used to investigate faecal samples. Identification of the eggs or cysts made on the basis of morphology and size of eggs and the result was considered as positive when at least one parasite egg or cyst was observed in one of each employed technique.

Results and Discussion

A total of hundred faecal samples were collected from both male and female cats, including 50 faecal samples from male and 50 faecal samples from female. The results of the present study revealed that 24 samples were detected positive for the endoparasites. Prevalence of the helminthiasis was higher in the female cats as (28%) as compared to male (10%) (Table 1).

Table 1: Overall and sex wise prevalence of gastrointestinal parasites

Sex	Examined	Infected	Infection
Female	50	14	28
Male	50	10	20
Total	100	24	24

Nine (30%) out of 30 kittens were found infected with the GIT parasites and in case of the adult cats 15 (21.42%) out of 70 samples were detected as positive (Table-2).

Table 2: Prevalence of gastrointestinal parasites with reference to age

Sex	Examined	Infected	Infection
Adult	70	15	21.42
Kitten	30	9	30

The highest percentage of infections recorded was that of *Dipylidium caninum* (9%) and 5, 5, 3 and 2% cats were found positive for the presence of *Toxocara cati*, *Aeluroslonglun obstrusus*, *Taenia taeniaeformis* and *Paragonimus kellikotti* respectively (Table-3).

In parallel to results of present study Mircean et al. [13] reported that overall prevalence of endoparasites in household cats was (34.3%) and *Toxocara cati* (20.3%) were detected as most prevalent parasites. Arbabi and Hossein [14] reported that infection of gastrointestinal parasites were higher in the male cats (59.3%) than female (40.7%). Zibaei et al. [15] reported that *Toxocara cati* was more prevalent in stray cats in shiraz. Changizi et al. [16] conducted a study on the gastrointestinal helminthic Parasites in Stray Cats (*Felis catus*) from North of Iran and prevalence of infection was reported as 90%.

Table 3: Prevalence of gastrointestinal parasites with reference to species

Species	Infection (%)
Dipylidium canimum	9
Aellurostronglun obstrusus	5
Toxocara cati	5
Taenia taeniaeformis	3
Pargonimus kellikotti	2

In the light of the above findings, it was concluded and suggested that little care is being taken by the owners for the health of their animals, particularly of cats. It was observed during the survey that cats usually harbor different types of the parasites because of unhygienic condition and improper care by the owners. Such cats act as a reservoir of the infection for the healthy cats. Therefore, it is very necessary that pets, especially cats should be kept under hygienic conditions and should be regularly and properly tested for the presence of any type of the parasites.

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