

Concomitant infestation of *Toxocara cati* and *Ancylostoma tubaeforme* in a mongrel cat

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Abstract A 3½ years old mongrel female cat was brought with the history of inappetence, seizure and lateral recumbency since 4 days and motion sickness since 2 days. Faecal examination confirmed *Toxocara cati* and *Ancylostoma tubaeforme* along with un-hatched live *Toxocara cati* larvae. Treatment has been initiated with Pyrantel pamoate and along with supportive therapy.

Keywords *Ancylostoma tubaeforme* · Cat · *Toxocara cati* · Zoonosis

Introduction

Roundworms (*Toxocara cati*) and hook worms (*Ancylostoma tubaeforme*) are common intestinal parasites of

cats. The adult *T. cati* lives in the small intestine and morphologically similar to *Ascaris lumbricoides* (Sadjjadi et al. 2001). *T. cati* is a most common parasite of cats and it is one of the helminthic zoonosis which causes visceral larva migrant in human beings (Buijs 1993) and *A. tubaeforme* is the second common parasite of which could penetrate the skin (feet) and it cause cutaneous larva migrants or creeping eruption. The presented case had both *T. cati* and *A. tubaeforme* infestation.

History and clinical observation

A 3½ years old Mongrel female cat was brought to the Referral Veterinary Poly Clinic IVRI, Izatnagar with the history of inappetence, seizure and lateral recumbency since 4 days and not voided motion since 2 days. No history of previous vaccination, deworming and animal was kitten 1 month back. On clinical examination revealed dull, pale conjunctiva mucus membrane, ocular discharge, rough hair coat, dehydrated (8–10 %) (Fig. 1) and 101.4 °F temperature. On abdominal palpation intestinal wall thickened with gas filled structure and creeping sound was noticed. Faecal examination revealed eggs of *Toxocara cati* (Fig. 2) and *Ancylostoma tubaeforme* (Fig. 3) along with un-hatched live *Toxocara cati* larvae (Fig. 2) were noticed. Haematological examination revealed 16.54 g/dl Hb, 52 % PCV, 3.85 mill/cmm TEC, 12,560 cells/cmm TLC, 65 % N, 21 % L, 1 % M, 5 % E, 1 % B. Serum biochemistry values are 4.6 g/dl TP and 1.56 g/dl albumin. Oxidative parameters are LPO 1.167 nmol MDA/mg Hb and GSH 0.373 mmol/ml. The case was diagnosed as concomitant infection of *T. cati* and *A. tubaeforme*.

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Fig. 1 Infected cat

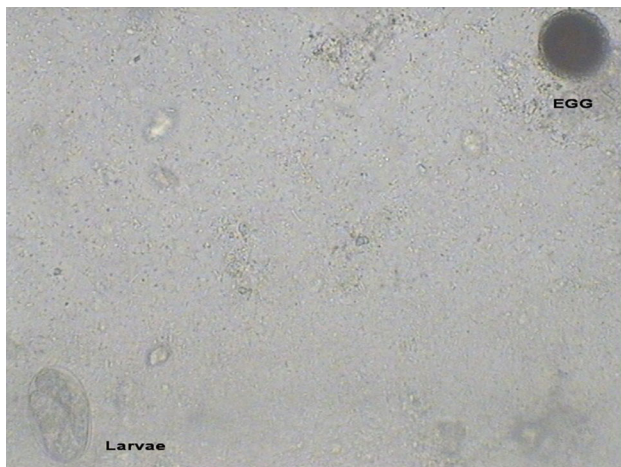


Fig. 2 *Toxocara cati* egg and larvae

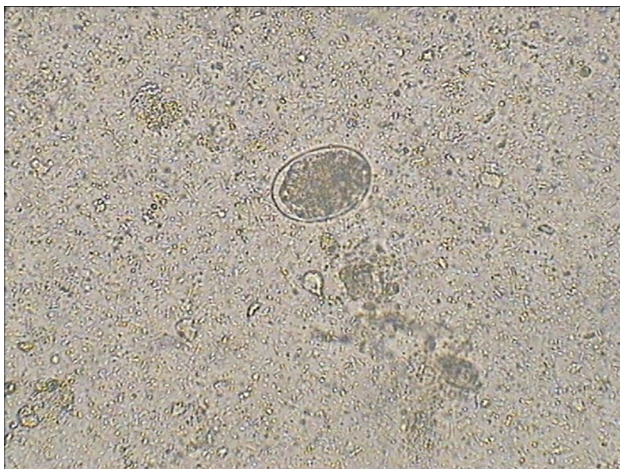


Fig. 3 *Ancylostoma tubaeforme* egg

Treatment

Treatment has been initiated with Pyrantel pamoate @ 5 mg/kg PO, repeated in 2 weeks and along with supportive treatment were given: Day 1: To correct the dehydration administered dextrose normal saline and ringers lactate @ 45 ml/kg/day iv + Vitamin B complex @ 1 ml iv + Avil @0.25 ml im + Cremaffin @ 2 ml/day for constipation. Day 2 and 3: Fluid therapy + Vitamin B complex @ 1 ml iv + Avil @0.25 ml im. Day 4: Fluid therapy + Vitamin B complex @ 1 ml iv + Avil @0.25 ml im + diazepam @ 0.5–1.0 mg/kg iv. Day 5: cat was died (reported by the cat owner after 2 days).

Discussion

Stray cats are known to be frequently infected with parasitic infestations. Cats may act carrier for some parasitic zoonosis (Spain et al. 2001). *Toxocara cati* is a common gastrointestinal nematode in cats, which is not only infects young kittens but also cause human toxocariasis (Dubinsky 1999). It is mostly prevalent throughout tropical, subtropical and temperate regions (Mizgajska-Wiktor and Uga 2006), where visceral larva migrans is one of the most important parasitic disease of man transmitted by carnivores (Dalimi and Mobedi 1992; Fisher 2003). The most likely reason for the increased prevalence of gastrointestinal helminthes in pets due to the natural predator–prey relationship, poor hygiene and lack of anthelmintics drug used (Dryden 2007). The major pathogenesis of severe parasitic infestations is mechanical damage to tissues (due to the migration of the larvae through the organism e.g.: *A. tubaeforme*). Occlusion of GI tract caused by massive roundworm infestation (e.g.: *T. cati*), Anaemia, deprivation of vitamins and interference with the immune system. Loss of body condition due to release of such substances as enzymes and toxins (Behnke 1991; Loukas and Prociw 2001; Bowman et al. 2003). This may be the reason for the presented case had constipation, anorexia, severe dehydration and epilepsy. Increased Hb, PCV and decreased total protein and albumin may be due to severe parasitic infestation. Hookworms cause anaemia because blood loss is greatest 10–15 days after onset of the infection and *A. tubaeforme* may cause fatal in heavily infested kittens. Even though the cat was treated with specific and along with supportive therapy, cat was died this may be due to the delayed hospital presentation by the owner and thus lead to severity of the concomitant helminthic infestation.

Prevention of parasitic infestation is possible by the institution of appropriate health care for pets including regular anthelmintic treatments, preventing contamination

of the environment with faeces and promoting responsible pet ownership (Overgaauw 1997; Schantz 2006).

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