

Epidemiological survey of Gastro-intestinal Parasites of Non-descript dogs in Nagpur City

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Abstract

This study was conducted on gastrointestinal parasitic infestation in 1180 non-descript dogs in Nagpur using fecal examination during the months of January and February 2008 at SPCA center Nagpur, under an Animals Birth Control and anti Rabies Vaccination programme run by the Nagpur Municipal Corporation. All the animals were divided into two groups adult and puppy, each comprises of 590 animals. Of the 590 animals in adults 391 (66.2%) were found to be infected with at least one species of intestinal parasites and in puppy group out of 590 animals 496 (84.06%) were positive for parasitic infestation. *Toxocara canis* and *Anchylostoma caninum* (hook worm) are predominant one followed by the other species of parasites like *Dyphylidium caninum*, *Diphyllobothrium latum* and *Fasciola hepatica* are rarely found.

Key Words: Incidence, Gastrointestinal Parasites, Dogs, Fecal, Epidemiology, Survey, City.

Introduction

Dogs are associated with more than 60 zoonotic diseases among which parasite in particular, helminthosis, can pose serious public health concerns worldwide. Many canine gastrointestinal parasites eliminate their dispersion elements (eggs, larvae, oocysts) by the faecal route (Rinaldi *et al.*, 2006). *Ascarids* (*Toxocara canis*, *T.cat*) and hookworms (*Anchylostoma* species) are common intestinal parasites of dogs. Hookworms, which causes serious blood loss due to its blood sucking activity, acute gastrointestinal hemorrhages and anemia due to rapidly developing blood loss, especially in pups, may result in death if present with ascardia (Kagira and Kanyari, 2000). Not only *Ascarids* and hookworms causes diseases in their respective hosts, but also causes migrans syndrome in humans especially in children. This two was mostly diagnosed in puppies because of the occurrences of both trans placental and trans mammary transmission of *T. canis*. Puppies are usually born with or acquire ascarid infection early in life (Hendrix *et al.*, 1996).

Materials and Methods

In this study prevalence of endoparasites in 1180 non-descript dogs of Nagpur city was studied at SPCA center Nagpur, under an Animals Birth Control and anti

Rabies Vaccination programme run by the Nagpur Municipal Corporations during the month of January and February 2008. The animals were divided into adult and puppy group, consisting of 590 animals in each group.

Faecal samples were obtained directly from the rectum and were examined immediately by standard technique (Silverman, 1965). The clinical observations in all the animals were recorded meticulously as to define generalized symptoms like paler of conjunctiva, pot bellied appearance, anemia, skin lesions and diarrhoea.

Results and discussion

In adult group out of 590 animals, 391 (66.2%) were found positive for the parasitic infestation, where as in puppy group out of 590 animals, 496 (84.06%) were positive for parasitic infestation

In adult group *Toxocara canis* was the predominating one (38.13%) followed by *Anchylostoma caninum* (20%), where as in puppy group it is 45.76% and 25.10% respectively. The findings of the present study are in partial accordance with that of Das Gupta *et al.*, (1973) and Dakshinkar *et al.*, (1982 and 1994). Roberson and Cornelius (1980) observed that *Ascarid* nematodes are the most common parasites of dogs. Herd (1979) was of the view that nearly 100% pups

are born with prenatal infection of *Toxocara canis*. In this investigation *Dyphylidium caninum* was found to be 6.6% in adults and in puppies it was 11.4%. These results are partial accordance with Barua and Gogi (1989). Where as *Dyphylolobothrium latum* in present investigation was found in adults (1.5%) as well as in puppies (1%). It is the common parasite of fish and occasionally seen in the dogs. In our investigation this much incidence may be due to the stray dogs which feed near fish market and these results are in partial accordance with Pulola *et. al*, (2006). *Fasciola hepatica* is a liver fluke but in our investigation we found 0.1% in adult group and 0.2% in puppy group.

Table-1 Adult Group

No.of animals	590
Positive animals	391
<i>Toxocara canis</i>	38.13%
<i>Anchylostoma caninum</i>	20%
<i>Dyphylidium caninum</i>	6.6%
<i>Diphylobothrium latum</i>	1.5%
<i>Fasciola hepatica</i>	0.1%

Table-2 Puppy Group

No.of animals	590
Positive animals	496
<i>Toxocara canis</i>	45.76%
<i>Anchylostoma caninum</i>	25.10%
<i>Dyphylidium caninum</i>	11.4%
<i>Diphylobothrium latum</i>	1.00%
<i>Fasciola hepatica</i>	0.2%

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