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STUDY OF ENDOPARASITIC INFECTION IN DONKEYS – A REPORT

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Abstract: The donkey is playing the important in many rural parts of India as a pack animal and transport material. Parasitic infections are commonly affect donkeys causing considerable mortality and morbidity. Freshly 35 faecal samples were collected from apparently healthy donkeys for that 27 males and 8 females aged between 1-7 years in hilly areas of Theni district, Tamil Nadu. Faecal samples were subjected to coprological examination in that 27 (77.14 %) samples were found positive. Coprological examination revealed with 20(74.07 %) *Parascaris* sp, 11(40.70 %) *Strongyles* sp, 7(25.92 %) *Oxyuris* sp and mixed parasitic infection 9(33.33 %). Risk factors were assessed that age, sex. More prevalence parasitic infection observed in less than 2.5 year aged donkeys and male donkeys.

Keywords: Donkey, Endoparasitic infection, *Parascaris* sp, Faecal sample.

INTRODUCTION

A donkey acts to transport of goods. The donkeys are used in theni to work in farms, transporting farm products and manure. They are also used to carry rice, vegetables, coffee etc to Kerala. [1] 19th livestock census of India conducted in 2012 indicates the donkeys population in India 3.18 lacks and Tamil Nadu 2533 donkeys. The Lack of proper management and by their wandering habits, the donkeys are exposed to a wide range of parasitic infections especially gastro – intestinal nematodes by their frequent access to the contaminated pasture. Limited literature is available regarding the prevalence of donkey parasitism in India [2,3,4]. Parasitic infestation is a major cause of illness. Documentation of parasitic infestation of donkeys is rare [5].

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METERIALS AND METHODS

Thirty-five donkeys consisting of 27 males and 8 females aged between 1-7 years in hilly area of four villages Periyakulam, Bodi, Devaram and Kombai, Theni district, Tamil Nadu formed the source material for the present study. Fresh faecal samples were directly collected from rectum and were subjected to coprological examination by direct smear, sedimentation and floatation method. The identification of parasitic eggs was done by morphological characters as described by [6].

RESULTS

In current study 35 donkeys were thoroughly examined for the presence of different gastrointestinal nematode. From the examined animals 27(77.14%) were found to endoparasitic egg. Most of the donkeys were having more than one type of parasitic infestation simultaneously.

The highest percentage of parasite was recorded 20(74.07 %) *Parascaris* sp (fig.1) followed by 11(40.74 %) *Strongyles* sp (fig.2), 7(25.92 %) *Oxyuris* sp (Table 1). Mixed parasitic infections were found 9(33.33) faecal samples were positive to more than one parasitic infection.

Significantly higher positivity was observed in males 23(85.18 %) when compared with female 4 (50 %) donkeys. Highest positivity of 11(78.56 %) was observed in the age group of less than 2.5 years followed by 16 (76.19%) in more than 2.5 years aged donkeys (Table 2).

DISCUSSION

Coprological examination was done by direct smear, sedimentation and floatation method revealed 67.74 % of parasitic infection in donkeys. Observed rate of prevalence was lower than [4, 5] who observed prevalence 82.9 and 79.10 per cent in Tamil Nadu. The study showed 20(74.07 %) *Parascaris* sp was found to be a predominant parasite followed by 11(40.74 %) *Strongyles* sp and 7(25.92 %) *Oxyuris* sp also [7,8,9,10,11] reported high prevalence of *Parascaris* sp. in donkeys. Mixed parasitic infections were found 9(33.33 %) faecal samples were positive to more than one parasitic infection [11] who were also found mixed parasitic egg in donkey.

More prevalence parasitic infection noticed less than 2.5 year aged donkeys. [11, 12] This might be associated with apparent inability of the younger age groups to develop adequate acquired immunity predisposing them to high risks of severe infection with gastrointestinal nematode parasite when compared with adult donkeys. Higher infection rates and more severe infections indicate a lack of immunity in younger population. Significantly more

prevalence of infection observed in male than female donkeys. [13] It could also result from decreased infection resistance at the time of parturition and during early lactation. The periparturient relaxation of resistance to gastrointestinal nematode infection has been reported in the female donkeys.

From that prevalence of endoparasitic infection recommended to donkey owners proper deworming, sufficient feed supply and minimizing extensive open grazing of donkeys is important. Balancing of the workload and duration should be managed.

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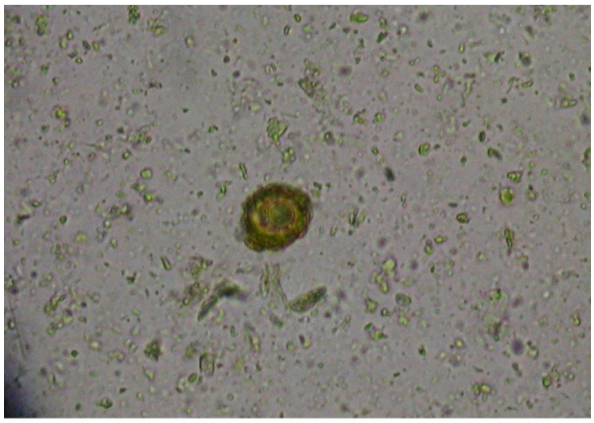

Fig.1: Appearence of *Parascaris* sp parasitic egg

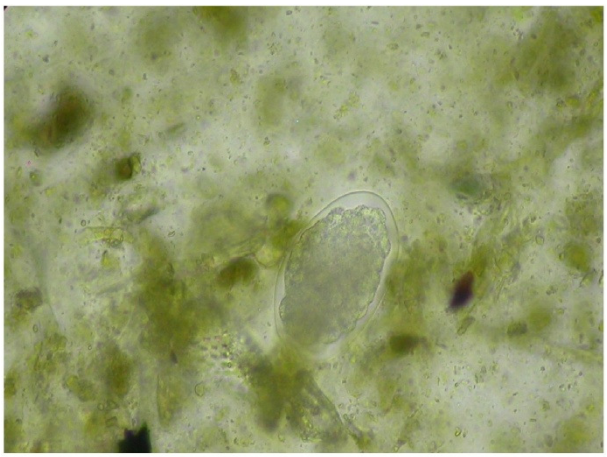

Fig. 2: Appearance of *Strongyles* sp. Parasitic egg.

Table 1: Endoparasites in donkeys

S.No	Parasite	Number of positive	Relative percentage
1.	Parascaris sp	20	74.07 %
2.	Strongyle sp	11	40.70 %
3.	Oxyuris sp	7	25.92 %

Table 2: Risk factor associated occurrence of Endoparasitic infection in donkeys

S. No.	Risk factors	Categories	No. tested	No. positive	Per cent positive
1.	Sex	Male	27	23	85.18 %
		Female	8	4	50 %
2.	Age	< 2.5 years	14	11	78.56 %
		> 2 years	21	16	76.19 %