

Prevalence of Parasitic Infestation in Donkeys



Veterinary Science

KEYWORDS : Donkeys, Jhunjhunu, Gastro-intestinal parasites, Faecal sample, Prevalence.

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ABSTRACT

A year round study (from august 2013 to may 2014) was conducted to identify the gastrointestinal parasites of donkeys and found out their prevalence rates. A total of 80 faecal samples were collected randomly for qualitative and quantitative faecal examination. Prevalence of *Strongylus* infection and mixed infection were 43.75% and 20% respectively. The parasites encountered were *Strongyle* (43.75%), *Parascaris equorum* (12.50%), *Oxuris equi* (3%), *Strongyle westeri* (2.5%) and mixed infections were detected in 20% of the donkeys. Key words: Donkeys, Jhunjhunu, Gastro-intestinal parasites, Faecal sample, Prevalence.

Introduction

Donkey are still well deserving of the name "beasts of burden". They have a prominent position in the agricultural system of many developing countries (Pearson *et al.*, 1999). In Underdeveloped countries, donkeys are used principally as draught or pack animals. In villages of hilly areas, donkeys are used for carriage purpose and a saddle animal (Uslu and Guclu, 2007). In India many donkeys work long hours on building sites and in brick kilns to help their owners earn a basic living.

Helminthes parasites, particularly strongyle nematodes are the common inhabitants of the gastro-intestinal tract of equines and can cause infections with clinical signs from ill-thrift to sudden death (Umur and Acici, 2009). Internal parasites cause significant clinico- pathological changes in donkeys (Lewa *et al.*, 1999). Some parasitic infections even prove fatal if control measures are neglected (Hayat *et al.*, 1987). The present study was undertaken to identify and assess the prevalence of helminthes infection in and around Jhunjhunu district (Rajasthan), India.

Materials and Methods

Total eighty faecal samples of donkeys were collected randomly from different localities of Jhunjhunu, its adjoining villages and to individual holdings in this study, irrespective of their age, sex and breed. Faecal samples were collected directly from the rectum and on ground when the animal was seen defecating. Samples were collected in separate self-sealing polythene bags and labeled properly for parasitic ova and eggs identification. The faecal samples were examined by direct smear method, sedimentation and floatation method as described by Soulbly (1982) for detection of any parasitic infestation.

Microscopic examination of samples was performed in District Diagnostic Laboratory Jhunjhunu (Rajasthan) for determining the prevalence of gastro-intestinal parasites in donkeys. Parasitic ova were examined following direct smear method. In Direct smear method a small quantity of faecal material was placed on a labeled, clean, grease free glass slide and few drops of water were added and stirred to form a homogenous mixture taking out fecal debris. A cover slip was applied on the faecal smear and examined under the 10-X objective of microscope to detect and identify the parasitic ova.

Results and Discussion

The study was conducted during the year 2013-14 (August 2013 to May 2014) in district diagnostic laboratory Jhunjhunu in Rajasthan. The results obtained in this study are depict in Table.1

Table-1 Prevalence of parasitic infection:-

Number of samples examined	Species	Number of positive sample (66)	Prevalence (%)
80	Strongyle type	35	43.75
	Parascaris equorum	10	12.50
	Oxyuris equi	3	3.75
	Strongyloides westeri	2	2.50
	Strongyle /parascaris/	16	20.0

In out of 80 randomly collected samples, 66 samples were positive for different species of parasites and an overall prevalence was 82.50%. Out of 66 positive samples, the spp. of parasite found were *Strongyles spp.* 43.75%, *Parascaris equorum* 12.50%, *Oxyuris equi* 3.75% and *Strongyloides westeri* 2.50% while 20% mixed infection of the gastrointestinal parasite was seen in faecal sample of donkeys. The present 82.50% prevalence in Donkeys was lower than reports of Ayele *et al.*, (2006) who have reported 100%. Shrikhande *et al.*, (2009) also reported high prevalence of *Parascaris spp.*, *Strongyloides spp.*, *Trichonema spp.*, *Oxyuris spp.*, *Gastrodiscus spp.* This variation could arise due to climatic condition and management system of the studied area. The observed higher parasitism in donkeys could be attributed to the fact that less attention is given to these animals that is by far lower than their workload (Alemayehu and Etaferahu 2013). The prevalence is different in different parts of the world which may be due to variations in ecological conditions and access to worms control program. The prevalence of *Parascaris equorum* was 12.50% is slightly similar with work of Yoseph *et al.*, (2001). *O. equi* with prevalence rate of 3.75 % was very low compared with the work of Ayele *et al.*, (2006) and Yoseph *et al.*, (2001) reported 6% and 32.4%, respectively. The low prevalence in this study might be the effect of relative higher temperature in the present study area which desiccates the highly susceptible *O. equi* eggs. The parasite is ubiquitous but greater prevalence in areas of high rainfall (Radosits *et al.*, 2007). In this study parasitic finding are relatively lower. This could be because of smaller sample size of donkey population was used.

Conclusion

During this study found that most of the donkeys were having both endo- ecto parasitic burdens. It can be concluded that the prevalence of GIT parasites in donkey was high because of poor plane of nutrition and irregular deworming practices.

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