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Dhivya Bharathi R
M.V.Sc. Scholar
Department of Veterinary Parasitology, College of Veterinary and Animal Sciences, Mannuthy, Thrissur, Kerala, India

Shameem H
Assistant Professor
Department of Veterinary Parasitology, College of Veterinary and Animal Sciences, Mannuthy, Thrissur, Kerala, India

Syamala K
Assistant Professor
Department of Veterinary Parasitology, College of Veterinary and Animal Sciences, Mannuthy, Thrissur, Kerala, India

Devada K
Professor and Head
Department of Veterinary Parasitology, College of Veterinary and Animal Sciences, Mannuthy, Thrissur, Kerala, India

Correspondence
Dhivya Bharathi R
M.V.Sc. Scholar
Department of Veterinary Parasitology, College of Veterinary and Animal Sciences, Mannuthy, Thrissur, Kerala, India

A study on the occurrence of Amphistomiasis and Schistosomiasis in dairy cattle of Thrissur district, Kerala

Dhivya Bharathi R, Shameem H, Syamala K and Devada K

Abstract
A study was conducted to assess the occurrence of Amphistomiasis and Schistosomiasis in cattle of Thrissur district, Kerala during the period of April 2017- May 2018. A total of 250 faecal samples were collected and screened for parasite infection which revealed 91 (36.4 percent) samples were positive for parasitic infection among that 71 (28.4 percent) animals were infected with amphistomes and ten with schistosomes. Ten samples were found to be positive for ova of *Strongyles*, *Eimeria* and *Moneizia* infection.

Keywords: Parasitic infection, Amphistome, schistosomes

Introduction
Among the important helminth infections, Amphistomiasis and Schistosomiasis are the two common fluke diseases prevalent in dairy cattle of Kerala. Cattle exposed to wet and swampy grazing areas with snail habitats shows higher incidence of disease. Both the diseases lead to morbidity, reduced milk production, lowered feed conversion and mortality in young stock. The present work was undertaken to study the occurrence of Amphistomiasis and Schistosomiasis in dairy cattle of Thrissur district.

Materials and methods
A total of 250 faecal samples were collected from different regions of Thrissur district during April 2017- May 2018. Fresh dung samples were collected from rectum of adult dairy cattle. Collected samples were transferred to polypropylene sample containers and stored at 4°C for further processing. The samples were prepared by addition of water to five gram of faecal sample and mixed properly and filtered using strainer, then the filtered material were subjected to centrifugation for five minutes, for schistosomes 10 percent potassium hydroxide was added for processing. The samples were examined under 10X and 40X for confirmation through direct microscopic method and sedimentation methods, Identification of eggs were made based on their morphology (Soulsby, 1982) [2].

Result and discussion:
Out of 250 samples examined 91 (36.4 percent) were positive for parasitic ova, among that 71 (28.4 percent) were positive for Amphistome ova and ten for schistosomes ova. Other parasitic ova like *Strongyles*, *Moneizia* and *Eimeria* could be seen in ten samples. (Table)

Areas of collection	Faecal samples collected	Number of positive samples			
		Amphistome		Schistosomes	
		Ova positive	Percent positive	Ova positive	Percent positive
UVH, Mannuthy	30	20	66	0	0
Pattikad	60	7	11	0	0
Venginissery	65	20	30	5	7
Nadathara	35	00	0	0	0
UVH, Kokkalai	30	16	68	3	12
Anthikadu	30	8	32	2	8
Total	250	71	28.4	10	4.0

The overall infection rate of dairy cattle in Thrissur district for helminth parasites was found to 36.4 percent (91/250) with 28.4 percent of Amphistome infection and 4.0 percent of schistosomes infection. Shameem *et al*. (2016) [4] reported a prevalence percentage of 33 percent Amphistomiasis in dairy cattle in central Kerala. The results of present study showed higher positive cases than Abraham *et al*. (2017) [1] who recorded 11.6 percent Amphistome infection in dairy cattle in Wayanad. This might be due to the increased snail intermediate hosts in the study area. Favourable climate conditions for snail intermediate host in Kerala results in the occurrence of fluke diseases throughout the year. Dairy cattle are found to be infected with Amphistome and schistosomes which affects the health and milk production leading to economic loss in dairy farming. The prevalence of Amphistome infection throughout the year is due to the infection of adult Amphistome releasing eggs and the metacercariae can remain viable for 2- 3 months (Soulsby, 1982) [2]. The increased infection of Amphistome in present study compared to Sreedhar *et al*. (2009) [3] might be due to the onset of South west monsoon earlier than other regions of South India.

Conclusion

Poor management, increased humidity and rainfall favours the increased incidence of parasitic diseases. Earlier diagnosis and accurate treatment of animals is necessary for increased production and economic benefits for farmers.

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