

PREVALENCE OF AMPHISTOMOSIS IN MUVATTUPUZHA TALUK

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Introduction

Animal Husbandry activity with various domesticated species of livestock is an important sector in the rural economy of India. It plays an important role in augmenting the income and employment for the weaker sections of the society and in improving the nutritional status of our population. The livestock sector faces numerous problems like low genetic potential, low productivity, poor nutritional status and diseases. Though animal health care has been receiving considerable attention diseases continue to be a real problem. Parasitic diseases deserve special attention because of their wide prevalence and ability to affect production even in sub clinical infestations as early diagnosis and treatment is difficult. Untreated sub clinical parasitic infestations lead to chronic infestations. The net result is an unhealthy livestock with poor growth and production leading to heavy economic loss. Here lies the importance of regular laboratory examination of faecal samples to detect parasitic burden. Many factors such as micro and macroclimate, systems of rearing, extent of grazing, nutritional and immunological status of the animal, presence of intermediate hosts or vectors contribute to the occurrence of parasitism.

Muvattupuzha is the most important taluk in the mid land region of Kerala with abundant water and extensively irrigated areas conducive for intensive agricultural practices. The geographical and animal rearing conditions in this area are quite suitable for the proliferation and transmission of helminths. The Muvattupuzha Valley Irrigation Project irrigates a lot of areas through its canals creating waterlogged areas and subsequently increased parasitic loads and more

chances of spread. The paddy fields here are often left uncultivated thereby transforming them to marshy lands. These marshy lands become breeding ground for parasites and their intermediate hosts. Also cultivating fodder along with pineapple, which requires irrigation during summer, creates moist areas in dry lands. The practice of the farmers to graze their livestock in these water logged areas leads to parasitic infestation thereby causing production losses, which are often unnoticed.

Taking into consideration all these factors, an attempt has been made to study the prevalence of Amphistomosis in domestic livestock of Muvattupuzha Taluk.

Review of Literature

In a systematic survey conducted by K.P.Jithendran and T.K.Bhat during two spells of 5 years each (1986-1990 and 1993-1997) to study the prevalence of parasitoses in dairy animals belonging to 12 villages in the Kangra valley (Himachal Pradesh) Flukes and Strongyles were the most important parasitic infections.

The epidemiological study conducted by Raman *et al.* (1996) in and around Madras revealed high intensity of strongyle infection in non descript cattle, strongyloides infection being moderately prevalent and very low levels of fluke infection.

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Spence *et al.* (1996) conducted a field trial in Australia and found that gastro intestinal nematodes and paramphistomes are able to cause a decrease in milk yield.

In a study conducted by Hirani *et al.* (1999) the prevalence of gastro intestinal infections in cattle and buffaloes of Kheda District in Gujarat by examination of 929 faecal samples of cattle and buffaloes was 38.83 percent. Amphistome infestation was highest with 21.85 percent followed by Strongyles with 7.53 percent.

Sarode *et al.* (1999) conducted a survey involving 1122 rural cattle over a three year period (1993-1995) in a village of Nagpur, India. Helminth infection were diagnosed in 62 percent animals, 40 percent were mixed infections and 21 percent different organism were found in these infections.

According to Dhanchand *et al.* (2000) the incidence of various gastro intestinal parasites in 190 animals of dairy farms of Manipur was 80 percent with various species of Trichuris, Oesophagostomum, Strongyloides and Fasciola.

In a study conducted by Forbes *et al.* (2000) it was reported that cattle affected with nematodiasis showed a decrease in quantity of dry matter and herbage intake.

Radostits *et al.* (2000) reported that planorbid snails multiply very rapidly in warm watery environment but can subsequently survive dry condition and that all ages of cattle, sheep, goat and wild ruminants grazing near water or land liable to flooding may be affected.

Loyacano *et al.* (2002) reported that heifers untreated for nematode infections had poor reproductive scores than treated ones at initiation of breeding.

Materials and Methods

The study was carried out at Veterinary Polyclinic, Muvattupuzha, for a period of one year from 01-10-2004 to 30-09-2005. A total of 2726 faecal samples were collected and examined from cows, buffaloes, goats, calves, heifers and kids with history of anorexia, diarrhoea, and reduction in milk yield and delayed puberty. Examination of faeces was done by the direct and concentration methods.

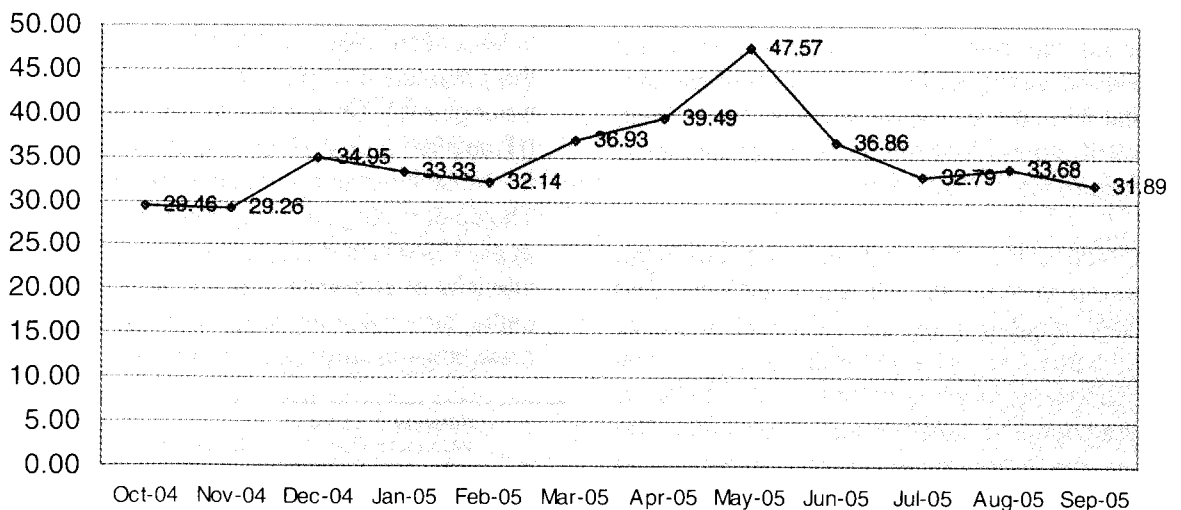
Results

Faecal samples of 2726 animals comprising of cows, buffaloes, goats, heifers, calves and kids were examined for parasitic infestation. Among 1517 positive faecal samples 961 were Amphistomosis positive with a prevalence of 34.15 percent.

Prevalence of Amphistomosis in Muvattupuzha Taluk Oct 2004 to Sept 2005

Table 1. (Page 46)

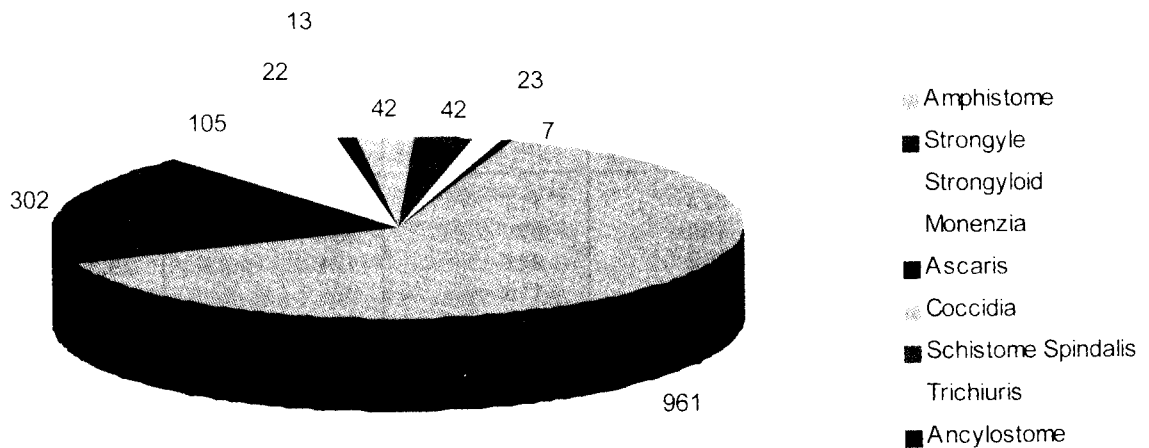
Percentage Distribution of Positive Dung Samples in Muvattupuzha Taluk Oct 2004 to Sept. 2005, N-1517



(Table 1.) Seasonal Prevalence of Amphistomosis in Muvattupuzha Taluk

Season	Month	Faecal Samples Analysed	Samples Positive for Parasites	Samples Positive for Amphistomosis	Percentage of Positive Samples
Post Monsoon	October 2004	224	114	66	29.46
	November 2004	188	97	55	29.26
	Total	412	211	121	29.37
Winter	December 2004	186	115	65	34.95
	January 2005	153	87	51	33.33
	February 2005	168	84	54	32.14
	Total	507	286	170	33.53
Summer	March 2005	176	104	65	36.93
	April 2005	195	114	77	39.49
	May 2005	309	200	147	47.57
	June 2005	274	152	101	36.86
	Total	954	570	390	40.88
	Monsoon	July 2005	308	159	101
August 2005		291	156	98	33.68
September 2005		254	135	81	31.89
Total		853	450	280	32.83
GRAND TOTAL		2726	1517	961	34.15

Endoparasite										
	Amphistome	Strongyle	Strongyloid	Monenzia	Ascaris	Coccidia	Schistome Spindalis	Trichiuris	Ancylostome	Total
October 2004	66	31	10	2	1	1	2	0	1	114
November 2004	55	20	6	2	2	3	6	0	3	97
December 2004	65	22	13	3	0	4	8	0	0	115
January 2005	51	20	7	2	0	2	4	1	0	87
February 2005	54	16	4	1	1	1	6	0	1	84
March 2005	65	19	7	0	4	4	0	5	0	104
April 2005	77	17	7	4	1	2	5	1	0	114
May 2005	147	31	15	0	1	2	1	3	0	200
June 2005	101	34	6	3	0	4	2	2	0	152
July 2005	101	33	9	0	1	8	1	5	1	159
August 2005	98	28	10	1	2	7	5	5	0	156
September 2005	81	31	11	4	0	4	2	1	1	135
TOTAL	961	302	105	22	13	42	42	23	7	1517



Frequency Distribution of Endoparasitic Infestations in Muvattupuzha for the period from October 2004 to September 2005.

Discussion

About 34.15percent of the animals screened for parasitic infestations were found positive for the presence of amphistome ova.

The affected animals showed anorexia. This observation is in agreement with the study conducted by Forbes *et al* (2000).

Many of the amphistome positive heifers had a history of delayed puberty. The effect of amphistomosis on reproductive performance is similar to the observation made by Loyacano *et al* (2000).

The abundance of marshy lands and water logged areas in muvattupuzha taluk are attributed to the increased prevalence of amphistomosis.

Summary

A study on the prevalence of Amphistomosis in Muvattupuzha Taluk was conducted at Veterinary Poly

Clinic, Muvattupuzha during the period 1-10-2004 to 30-9-2005.

A total of 2726 dung samples from animals consisting of cows, buffaloes, goats, heifers, calves and kids were screened. The microscopic examination of dung sample revealed the prevalence of 34.15percent Amphistomosis. Infested animals showed anorexia and drop in milk yield. Infested heifers showed poor reproductive performance. This Pilot study emphasises the need for an urgent detailed study to assess the extent of the parasitic infestations and formulate remedial measures.

Acknowledgement

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Study Conducted at Veterinary Poly Clinic, Muvattupuzha

From 01-10-2004 to 30-09-2005

INFOMANIA

ANSWERS

- | | |
|-----------------------------|-------------------------------------|
| 1. Aardwark | 2. Boxer |
| 3. Papillion | 4. Rinderpest |
| 5. Bumblebee bat | 6. E.Coli |
| 7. 12 blood groups; B and J | 8. To diagnose the type of jaundice |
| 9. AHEAD | 10. Belgian blue |