Seasonal Prevalence of Gastrointestinal Parasites in Goats from Durg District of Chhattisgarh

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Abstract

Systemic studies on the prevalence of gastrointestinal parasites in goats revealed that the percentage of overall prevalence of infection was 85.22%. The prevalence of different parasites encountered were *Paramphistomum* spp. (80.68%), *Cotylophoron* spp. (45.45%), *Moniezia* spp. (17.04%), *Avitellina* spp. (3.40%), *Haemonchus* sp. (26.13%), *Trichostrongylus* spp (5.68%), *Cooperia* spp. (3.40%), *Oesophagostomum* spp. (30.68%), *Bunostomum* sp. (5.68%) and *Trichuris* sp. (27.27%). Seasonal prevalence was highest in monsoon (94.60%), moderate in summer (87.50%) and lowest in winter (63.15%).
Keywords: Gastro-intestinal parasites, goat, Durg, Seasonal prevalence,

Introduction

Gastrointestinal parasitic infections in small ruminants are of considerable economic importance because small ruminants' rearing has been a major source of income especially to the marginal farmers and labours of the country (Bandyopadhyay, 1999). Several studies were done on the incidence of gastrointestinal parasites of goats in different parts of India (Thapar, 1956; Sinha & Sahai, 1973; Gupta, *et al*., 1987; Sanyal, 1989; Yadav & Tandon, 1989; Saha, *et. al*., 1996). In Chhattisgarh no systemic work has been done about the prevalence of various parasitic infection of goats. The present study was undertaken to elucidate the prevalence of gastrointestinal parasitosis in goats of Durg district in Chhattisgarh.

Material and Methods

Eighty eight gastrointestinal tracts of goats of either sex and different age groups were collected from the slaughter house Supela, Bhilai and were also collected from the Veterinary College Durg which were brought for the postmortem examination during November 1999 to October 2000. They were opened and examined systematically and thoroughly. Abomasal and intestinal contents and mucosal scrapings were also checked for the presence of small worms. Recovered parasites were fixed and preserved properly. Later they were identified by studying their morphological characters as described by Soulsby (1982). Seasonal prevalence were studied throughout the year dividing into three seasons, winter (Nov-Feb.), Summer (March-June) and Monsoon (July-Oct.).

Results and Discussion

The result of the study are summarized in the Table-1. The present study revealed that the overall prevalence of gastrointestinal parasitosis in goats was 85.22% with peak (94.60%) in monsoon.

The percentage of overall prevalence of parasitic infection *Paramphistomum* spp., *Cotylophoron* spp., *Moniezia* spp., *Avitellina* sp., *Haemonchus* sp., *Cooperia* spp., *Oesophagostomum* spp., *Bunostomum* sp., and *Trichuris* sp. were 80.68, 45,45, 17.04, 3.40, 26.13, 5.68, 3.40, 30.68, 5.68 and 27.27 respectively (Table-1). In case of *Paramphistomum*, infection was highest in monsoon (91.8%) and lowest in winter (63.15%).

The high prevalence of snail borne fluke in Durg district of Chhattisgarh was presumably due to water logging pond in and around the pasturelands during monsoon, which enhance the availability of intermediate hosts, and characteristic paedogenesis of the digenetic trematodes as observed by Boray (1969). The prevalence of

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Table-1. Seasonal Prevalence of gastrointestinal parasitic infections in goats.

Season	No. of Goat	No. of goat examined	Overall Prevalence of infection	Number of different gastrointestinal parasitic infection (percentage)				
				Paraam-phistomum	*Cotylop-horon*	*Moniezia*	*Avitellina*	*Haemochus*
				Trichosrt-ongylus	*Cooperia*	*Oesophago-stomum*	*Bunosto-mum*	*Trichuris*
Summer	32	28	87.50	25(78.12) 3(9.37)	12(37.50) 2(6.25)	7(21.87) 11(34.37)	2(6.25) 2(6.25)	8(25.00) 10(31.25)
Monsoon	37	35	94.60	34(91.89) 2(5.40)	23(62.16) 1(2.70)	6(16.21) 12(32.43)	— 2(5.40)	11(29.72) 10(27.02)
Winter	19	12	63.15	12(63.15) —	5(26.31) —	2(10.52) 4(21.05)	1(5.26) 1(5.26)	4(21.05) 4(21.05)
Total	88	75	85.22	80.68 5.68	45.45 3.40	17.04 30.68	3.4 5.68	26.13 27.27

Haemonchus sp. was highest in monsoon (table-1) might be either due to favorable environment in monsoon which were conducting the development of exogenous stages of parasites or due to reduced prepatent period and also increased larval population. Saha, *et. al*. (1996) also made similar observations in goats from West Bengal. Similarly Katoch, *et. al*. (2000) from Mathura region also recorded highest incidence of *Haemonchus* sp. during rainy season. In the present study the high prevalence of *Oesophagostomum* spp. And *Trichuris* sp. was noted in summer and monsoon than winter (table -1) while Saha *et. al*. (1996) reported highest prevalence in winter in goats from West Bengal.

In present investigations the seasonal prevalence of gastrointestinal parasitic infection in goats showed that prevalence was highest in monsoon (94.60%), moderate in summer (87.50%) and lowest in winter (63.15%). Low prevalence in winter season was due to reduced grazing hours of the animals, which helps in reducing the chances of contact between host and parasites (Katoch, *et.al*., 2000).

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References

1. Bandyopadhyay, B. (1999): *Journal of Vet. Parasitol*. 13(2): 79-80.
2. Boray, J.C. (1969): *Vet. Med. Rev*. 4:290-304.
3. Gupta, R.P., Yadav, C.L., Choudhury, S.S. (1987): *Vet. Parasitol*. 24: 117-127.
4. Katoch, R., Chauhan, P.P.S. and Johri, D.K. (2000): *Indian Vet. J*. 77:259-260.
5. Saha, S.B., Pramanik, S. and Mukherjee, G.S. (1996): *Ind. J. Anim. Sci*. 11: 51-52.

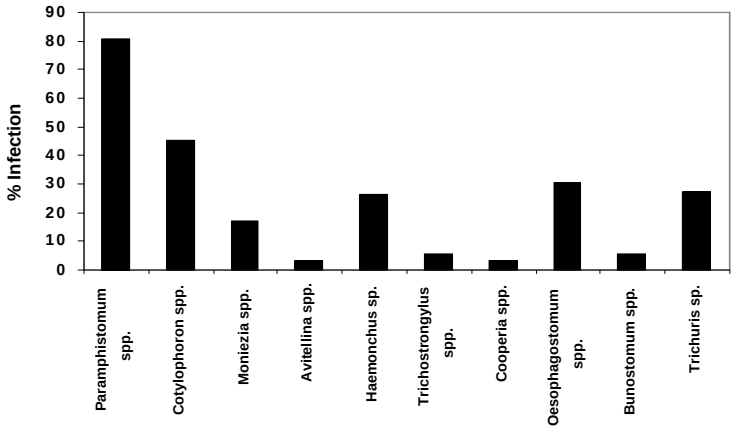

Fig.1 Overall prevalence of different gastrointestinal parasitic infection in goat.