



## ORIGINAL ARTICLE

**Studies on Prevalance of Cestode Parasite *Avitellina* Gough, 1911 from *Capra hircus* L.****Dhanraj Balbhim Bhure<sup>1</sup>, Sanjay Shamrao Nanware<sup>1</sup> and R.G. Pawar<sup>2</sup>**<sup>1</sup>Post Graduate Department of Zoology, Yeshwant Mahavidyalaya, Nanded (M.S.)<sup>2</sup>Department of Zoology, S.S.G.M. College, KopergaonEmail: [drajbhure82@gmail.com](mailto:drajbhure82@gmail.com), [snanware@rediffmail.com](mailto:snanware@rediffmail.com)Received: 5<sup>th</sup> April 2017, Revised: 21<sup>st</sup> April 2017, Accepted: 25<sup>th</sup> April 2017**ABSTRACT**

The present investigation deals with the preliminary survey of cestode parasite *Avitellina* Gough, 1911 collected from the intestine of a *Capra hircus* L. at different collection sites of Nanded district (M.S.) India during June, 2016 to May, 2017. The high incidence of infection was recorded in Monsoon season (77.50 %) followed by winter season (62.85%) whereas infection was low in summer season (32.50%). The results of present study clearly indicate that environmental factors and feeding habitat are influence the seasonality of parasitic infection either directly or indirectly.

**Key words:** *Avitellina*, Cestode parasite, *Capra hircus*, Nanded, Prevalence

**INTRODUCTION**

Parasites are extremely abundant and diverse in nature, representing a substantial portion of global biodiversity. Helminthes are one of the most destructive internal parasites of the vertebrate animals including man (Strickland, 2000). They caused the increase of mortality rate and the decrease in livestock productions (Soulsby, 1986). Goat received the great interest as one of the most important and preferable livestock for human consumption. Population investigation is necessary to provide data for the prediction of integrated methods to achieve the regulation of numbers of harmful parasites (Kennedy, 1974, 1976). Notable contribution made by Dobson, 1994; Dogiel, *et. al*, 1935,1958; Euzeby1972; Anderson 1976; Moller, 1978 and Rajeshwar Rao,1982. But, little information on the livestock parasites in this area was available. This study was planned to record the prevalence of cestode parasite *Avitellina* Gough,1911 collected from the intestine of a *Capra hircus* L. Seasonal prevalence were studied throughout the year dividing into three seasons, Monsoon (June-September), Winter (October-January) and Summer (February-May).

**MATERIALS AND METHODS**

Study was conducted in different collection sites of Nanded district. Nanded is situated in south eastern part of Maharashtra State, lies between 18.15 to 19.55 North latitudes and 97.07 to 98.15 East longitude. It covers an area of 10,528 sq. km. In the present study, intestines of *Capra hircus* L. were examined for cestode infection during the period of June, 2016 to May, 2017 from Nanded Region, M.S., India. Cestodes were collected, preserved in hot 4% formalin, dehydrated in various alcoholic grades, stained with Borax carmine, cleared in xylene and mounted in D.P.X. These Cestodes were identified by standard methods. Obtained data were recorded; processed for study of seasonal variation.

**RESULTS AND DISCUSSION**

Results of present study on prevalence of Cestode *Avitellina* sp. is presented in Table 1. The high incidence of infection was recorded in Monsoon season (77.50 %) followed by winter season (62.85%) whereas infection was low in summer season (32.50%).

The seasonal occurrence of parasitic infection in goat depicted higher infection of helminthes in rainy season followed by winter than in summer. This is in accordance with findings of other researchers (Yadav, *et al*, 2006). Varadharajan and Vijayalakshmi, 2015 reported overall infection percentage was higher in rainy season (68.36%) followed by winter (60.84%) than in summer (55.30%). Saha, *et. al*, 1996 also made similar observations in goats from West Bengal; similarly

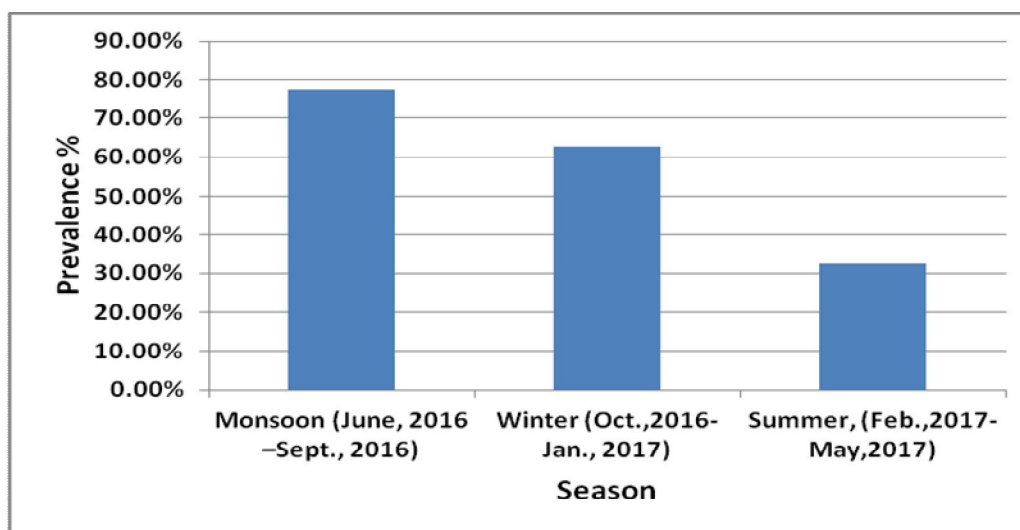
Katoch, et. al., 2000 from Mathura region also recorded highest incidence of *Haemonchus* sp. during rainy season. Pathak and Pal, 2008 reported seasonal prevalence of gastrointestinal parasitic infection in goats, his result showed that prevalence was highest in monsoon (94.60%), moderate in summer (87.50%) and lowest in winter (63.15%).

Heavy rainfall and high relative humidity predisposed to heavy parasitic infection (Hawkins, 1945). Climatic factors also influenced dispersion of larvae in the herbage which increased the chance of contact between host and larvae (Ogbourne, 1972, Croll, 1975). Higher infection during rainy season may also be attributed to suitable molarity of salt present in soil, an important factor for ecdysis (Soulsby, 1966).

**Table 1:** Prevalence of *Avitellina* sp. of *Capra hircus* during June, 2016 to May, 2017

Seasons	No. of the host Examined	No. of the host Infected	Total No. parasites collected	Incidence %
Monsoon (June, 2016 -Sept., 2016)	40	31	43	77.50%
Winter (Oct.,2016- Jan., 2017)	40	22	35	62.85%
Summer, (Feb.,2017-May,2017)	40	13	19	32.50%

**Fig.1:** Graph showing prevalence of *Avitellina* sp. of *Capra hircus* during June, 2016 to May, 2017



### CONCLUSION

From the above findings it was observed that the infections of gastrointestinal Cestode *Avitellina* sp. in goat was most prevalent throughout the year in varying intensity. Hence, appropriate strategic treatment with broad spectrum anthelmintic should be practiced during the start and end of rainy season.

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