

## PREVALENCE OF *PARAMPHISTOMUM CERVI* IN RUMINANTS SLAUGHTERED IN DISTRICT MUZAFFAR GARH

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### ABSTRACT

Rumen of 100 slaughtered animals viz. sheep (n=14), goats (n=42), cattle (n=34) and buffalo (n=10) were examined to determine the prevalence of adult *Paramphistomum cervi* during January 2007 in Tehsil Jatoi, District Muzaffar Garh, Pakistan. Overall prevalence was found to be 22% (22/100) and species wise prevalence was 28.57% (4/14) in sheep, 23.80% (10/42) in goats, 17.64% (6/34) in cattle and 20% (2/10) in buffaloes, the difference between the species being non significant.

**Key words:** Prevalence, *Paramphistomum cervi*, ruminant species.

### INTRODUCTION

Prevalence of gastrointestinal helminthes in ruminants has been reported from 25.1 to 92% in different areas of Pakistan at different times (Iqbal *et al.*, 1993; Ali *et al.*, 2000; Raza *et al.*, 2007; Ijaz *et al.*, 2008; Al-Shaibani *et al.*, 2008; Kakar and Kakar-sulemankhel, 2008). Among the helminthes, trematode parasites of ruminant livestock have a world-wide distribution and even have zoonotic importance (Rafique *et al.*, 2009). In some countries are considered a major constraint on productivity. Likewise, paraphistome infections (e.g. *Paramphistomum cervi*, *P. ichikawai* and *P. microbothrium*) remain widespread, particularly in Asia, where prevalence rates of 30-60% are still recorded in some areas (Gupta *et al.*, 1985; Raza *et al.*, 2007; Liu *et al.*, 2009).

Review of parasitic research in Pakistan (Iqbal *et al.*, 1993) has revealed that most of the surveys have been carried out for prevalence of parasites around institutions like Faisalabad and Lahore. However, there are certain geographical regions in which livestock population needs to be examined for the presence of gastrointestinal helminthes. Therefore, the present survey was conducted to determine the prevalence of *Paramphistomum cervi* under field conditions in slaughtered sheep, goats, cattle and buffaloes in Muzaffar Garh district, Pakistan.

### MATERIALS AND METHODS

The survey was carried out in different areas of Tehsil Jatoi of District Muzaffar Garh, Pakistan during January 2007 in slaughtered ruminants on the Eid-ul-Azha occasion. Rumens of sheep (n=14), goats (n=42), cattle (n=34) and buffaloes (n=10) were examined for the presence of adult *P. cervi*. The flukes were

identified based on the characteristics given by Soulsby (1982). A complete record of the species of the animals slaughtered and examined was kept. In order to see the magnitude of difference in the prevalence of *P. cervi* among four species, the data were analyzed statistically, using Chi-square test (Petrie and Watson, 1999).

### RESULTS AND DISCUSSION

The present survey revealed that 22% (22/100) ruminants were infected with *P. cervi* in the areas of Tehsil Jatoi of District Muzaffar Garh. Species-wise prevalence was 28.57, 23.80, 17.64 and 20.00% for sheep, goats, cattle and buffaloes, respectively (Table 1).

**Table 1: Species-wise prevalence of *Paramphistomum cervi* in ruminants**

Animal species	Animals examined	Animal positive	Infected percentage
Sheep	14	4	28.57
Goats	42	10	23.80
Cattle	34	6	17.64
Buffaloes	10	2	20.00
Total	100	22	22.00

$\chi^2 = 0.8311949$  (P>0.05).

In this survey, prevalence of *Paramphistomum cervi* was recorded to be highest in sheep. The rate of helminth infection in sheep varies from one region of the world to another. The difference is the prevalence of *P. cervi* among animals of four species was non significant (Table 1), indicating that prevalence of *Paramphistomum cervi* is independent of species. A variety of factors like age (Asanji and Williams, 1987), sex and breed of the host (Pal and Qayyum, 1992), grazing habits (Saiful-Islam *et al.*, 2008), level of

education and economic status of farmers (Ouattara and Dorchies, 2001), standard of management and anthelmintic used (Valcarcel and Romero, 1999) can influence the prevalence of helminthes.

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