PREVALENCE OF PARAMPHISTOMUM CERVI IN RUMINANTS SLAUGHTERED IN DISTRICT MUZAFFAR GARH

M. A. RAZA, S. MURTAZA1, H. A. BACHAYA2 AND A. HUSSAIN3

Department of Animal Sciences, University of Agriculture, Sub-Campus Dera Ghazi Khan; 1Department of Clinical Sciences, BZU, Multan; 2Livestock & Dairy Development Department, Punjab; 3Department of Parasitology, University of Agriculture Faisalabad, Pakistan

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 Kakarsulemankhel, 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

<table>
<thead>
<tr>
<th>Animal species</th>
<th>Animals examined</th>
<th>Animal positive</th>
<th>Infected percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheep</td>
<td>14</td>
<td>4</td>
<td>28.57</td>
</tr>
<tr>
<td>Goats</td>
<td>42</td>
<td>10</td>
<td>23.80</td>
</tr>
<tr>
<td>Cattle</td>
<td>34</td>
<td>6</td>
<td>17.64</td>
</tr>
<tr>
<td>Buffaloes</td>
<td>10</td>
<td>2</td>
<td>20.00</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>22</td>
<td>22.00</td>
</tr>
</tbody>
</table>

X² = 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.

Acknowledgements
The authors are thankful to Dr. Hassan Farooq Kazmi, Dr. Nadeem Sial, Dr. Rana Sulatn, Dr. Rafiq Sameja and Dr. Imran for their technical support during this work.

REFERENCES