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Short Communication

PARASITIC STUDIES OF HEPATIC DISORDERS IN BUFFALOES

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SUMMARY

Parasitic infection was studied in buffalo/buffalo calves with hepatic disorders. Maximum infection was observed in one month age group and no infection was evidenced in above one year age group of animals. Parasitic examination of intestinal contents of the carcasses of buffalo/buffalo calves brought for the post mortem showing gross lesions in the liver revealed infection of *Strongyle* spp.(36.67 per cent) along with *Eimeria* spp. (23.3 per cent).

Key words: Parasites, hepatic disorders, buffaloes, post-mortem

Healthy livestock represents the most valuable and renewable resource for an Indian farmer. Of all the livestock, buffaloes hold the greatest promise for food security and sustainable development in the various farming systems (Kundu *et al.* 2004). Liver is the largest gland of the body and performs various vital functions. It is central to metabolic pathways. Because of the highly specialized functions of the hepatic parenchymal cells and dual blood circulation, the liver gets first exposure to inimical agents. Diseased liver adversely affects the health and growth of animals and also causes economic losses due to condemnation of such livers at the time of meat inspection (Purushotaman and Rajan, 1985). Buffalo calves suffer from higher mortality than cow calves (Tomar and Tripathi, 1991). A number of parasitic disease conditions such as fasciolosis, strongylosis, coccidiosis, amphistomosis, contribute towards mortality in buffaloes/buffalo calves. However, except fasciolosis, reports of involvement of the other parasites in hepatic disorders are scanty.

A total of 30 carcasses of buffaloes/buffalo calves showing gross lesions such as congestion, haemorrhages, adhesions, necrotic foci and hepatomegaly on post mortem in the liver were selected for this study. With a view to find out the prevalence of parasitic infections, the faecal samples/intestinal contents from these carcasses were collected. These faecal samples were examined for the presence of helminthic ova and coccidial oocysts. For examination, floatation and sedimentation methods were employed (Jakhar *et al.,* 2001).

Out of 30 cases, *Strongyle* spp. (11 cases, 36.67 per cent) and *Eimeria* spp. (7 cases, 23.3 per cent) were major infection causing agents. Twelve cases were negative for parasitic infestation and 16 cases revealed mixed parasitic along with bacterial infection. No mixed parasitic infection was observed in any case. Age wise incidence study revealed that the calves of age group up to one month, were found to harbour *Strongyle* spp. (four cases, 13.3 per cent) and *Eimeria* spp. (six cases, 20 per cent) infection while in age group >1-3 months, 3 cases (10 per cent) and 1 case (3.3 per cent) showed *Strongyle* spp. and *Eimeria* spp. Infestation, respectively. In age group of > 3-6 months, there was only one case (3.3 per cent) showing *Strongyle* spp. infection. In age group of > 6-12 months, 3 cases (10.0 per cent) were found carrying *Strongyle* spp. and no *Eimeria* spp. was detected. The animals in the age group >1 year did not show any parasitic infestation. It was also observed that prevalence rate of parasitic infection including coccidiosis among buffalo calves decreased with age. Gennari *et al.* (1997) and Riberia *et al.* (2000) also reported such infestations. Strongyle infection in buffaloes and calves was previously

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reported by Singh *et al.* (2000), Chaudhari *et al.* (2000), Aggarwal *et al.* (2004) and Singh and Aggarwal (2005).

Regarding age wise relation of these parasitic infection among buffaloes/buffalo calves, different scientists have different view. Incidence of infection with coccidia showed negative correlation with age of host but that of *Strongyle* showed positive correlation with age (Gupta *et al.*, 1985). In contrast to these findings Bharkad *et al.* (1999) reported positive linear correlation of *Eimeria* spp. infection with age. Prevalence of *Strongyle* was more in calves below 6 months of age as observed by Gupta and Paul (1990) and Pal *et al.* (2001). Parasitic infection in buffaloes and calves increases with age as reported by Manuel and Galdones (1982). Strongylosis in buffaloes was commonly reported during 4-8 years of age group and less frequently below one year as evidenced by Jagannath *et al.* (1989).

On the basis of these studies it is reasonable to conclude that parasitic diseases in buffalo/ buffalo calves might contribute towards hepatic diseases through decreased immunity of the animals. However, further studies needs to be carried out to corroborate these findings.

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