

PREVALENCE OF COCCIDIOSIS IN BROILER CHICKENS IN FAISALABAD, PAKISTAN

M. M. Ayaz, M. Akhtar, C.S. Hayat, M.A. Hafeez and A. Haq¹
*Department of Veterinary Parasitology and ¹Department of Poultry Husbandary,
University of Agriculture, Faisalabad, Pakistan*

ABSTRACT

A study was conducted during the period from October, 2000 to June, 2001 to record the prevalence of coccidiosis in broiler chickens in Faisalabad district. A total of 930 guts were collected and processed at Immunoparasitology Laboratory, Department of Veterinary Parasitology, University of Agriculture, Faisalabad. Seven species of *Eimeria* (E) viz. *E. tenella* (50%), *E. maxima* (40%), *E. mitis* (2%), *E. praecox* (0.8%), *E. acervulina* (4%), *E. necatrix* (2%) and *E. brunetti* (1.2%) were recorded. The overall prevalence of coccidiosis was found to be 37.95%.

Key words: Coccidiosis, prevalence, broiler chickens

INTRODUCTION

Coccidiosis is one of the major menaces for poultry industry other than viral, bacterial and fungal diseases. It is present throughout the world, infecting round the year to all varieties of poultry birds and chicks. The disease in chicks is caused by seven species of *Eimeria* viz. *E. tenella*, *E. necatrix*, *E. cervulina*, *E. mitis*, *E. praecox*, *E. maxima* and *E. brunetti*. (Deb, *et al.*, 1997). Prevalence of the disease is increasing day by day in spite of extensive use of anticoccidial drugs. The present paper reports the prevalence of coccidiosis in broiler chickens in and around Faisalabad, Pakistan.

MATERIALS AND METHODS

A total of 930 guts of broiler chickens were collected from different poultry shops of Faisalabad city during the period from October, 2000 to June, 2001. The collected guts were brought to the Immunoparasitology Laboratory Department of Veterinary Parasitology, University of Agriculture, Faisalabad, Pakistan, for further investigation. All the intestines and caeca were opened and examined microscopically for the presence of coccidial oocysts, as

described by Soulsby (1982). Oocysts recovered were subjected to sporulation (Speer, 1973). All the positive guts were recorded and the species were identified on the basis of their shape, sporocysts, sporozoites and size (Davies *et al.* 1963; Edger and Seibold, 1964).

RESULTS AND DISCUSSION

Among 930 poultry guts, 353 were found positive for coccidiosis. The overall prevalence recorded was 37.95%. The highest prevalent species recorded was *E. tenella* (50%), followed by *E. maxima* (40%), *E. acervulina* (4%), *E. necatrix* (2%), *E. mitis* (2%), *E. brunetti* (1.2%) and *E. praecox* (0.8%).

The prevalence of coccidiosis recorded in this study was higher than the earlier reports e.g. 30% (Hayat and Hayat, 1983), 10.2% (Dar and Anwar, 1981), 7.23% (Siddique *et al.*, 1987), 15.0% (Anjum, 1990) and 26.31% (Khan *et al.* 1990). The higher prevalence of the disease than the previous studies might be due to development of resistance to the chemicals used against coccidiosis. Further studies on the country wide prevalence of the disease are needed to know the present status of coccidiosis in Pakistan.

ACKNOWLEDGEMENTS

This study was supported by University of Agriculture, Faisalabad out of the funds provided by the Government under "Promotion of Research" programme.

REFERENCES

- Anjum, A.D., 1990. Weather and Disease: I. Prevalence of poultry diseases in and around Faisalabad and their relationship to weather. *Pakistan Vet. J.*, 10: 42-45.
- Dar, A.S. and A.H. Anwar, 1981. Incidence and pathogenesis of coccidiosis in chicken around Faisalabad, *Pakistan Vet. J.*, 1: 20-21.
- Davies, S.F.M., L.P. Joyner and S.B. Kendall, 1963. *Coccidiosis*. Oliver and Boyd. London. pp: 31-37.
- Deb, A.R., A. Kumar, R.N.P. Sinha and K.P. Prasad, 1997. Prevalence of *E. tenella* in poultry in and around Ranchi, *J. Res. Birsa Agric. Univ.*, 9: 89-91.
- Edger, S.A. and C.T. Seibold, 1964. A new coccidium of chicken, *E. mivati* with details of its life history. *J. Parasitol.*, 50: 193-204.
- Hayat, B. and C.S. Hayat, 1983. Incidence of intestinal parasites of chicken in Faisalabad District. *Pakistan Vet. J.*, 3: 165-167.
- Khan, G.A., M. Siddque, N. Shereen and T. Javed, 1990. Studies on the prevalence and pathology of natural coccidiosis. *Archiva-Veterinaria-Bucuresti*, 20: 89-96.
- Siddique, M., T. Javed and M.A. Sabri, 1987. Incidence and pathology of various poultry diseases prevalent in Faisalabad and surroundings districts. *Pakistan Vet. J.*, 7: 148-154.
- Soulsby, E.J.L., 1982. *Helminths, Arthropods and Protozoa of Domestic Animals*. English Language Book Society, London. pp: 631-636.
- Speer, C.A., 1973. Ex-cystation of sporozoite. *J. Parasitol.*, 59:35-40.