



SPECIES COMPOSITION OF EIMERIA SPECIES IN BROILER CHICKEN IN OSMANABAD DISTRICT, MAHARASHTRA

B. V. More¹, S. C. Lokhande² and S. V. Nikam³

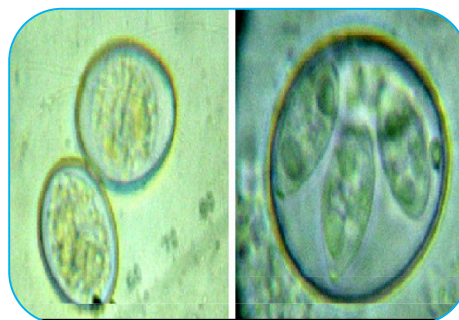
¹ Department of Zoology, Ramkrishna Paramhansa Mahavidyalaya, Osmanabad.(M.S.) India.

²Department of Zoology, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. (M.S.) India

³Department of Zoology Dr. Babasaheb Ambedkar Marathwada University, Aurangabad.

ABSTRACT

During a period of two years total number of 2530 samples was examined. 908 of these were positive for coccidial infection, the percentage of prevalence being about 35.88%. During the present study seven species of *Eimeria* are found in broiler chicken. These are *Eimeria tenella*, *Eimeria necatrix*, *Eimeria maxima*, *Eimeria brunette*, *Eimeria acervulina*, *Eimeria praecox* and *Eimeria mitis*.



KEYWORDS : Coccidiosis, *Eimeria*, Oocysts, Broiler chicken, *Eimeria* species.

INTRODUCTION

The coccidia consist of a wide variety of single-celled, parasitic animals in the subkingdom Protozoa of the phylum Apicomplexa. As a group, the coccidia of the genus *Eimeria* are host-specific i.e. each species occurs in a single host species or a group of closely related hosts. Infection by coccidia in sufficient numbers to produce clinical manifestations of disease. A light infection that does not result in demonstrable clinical effects. The species of coccidia in the chicken belong to the genus *Eimeria*.

The largest genus, and may be the most speciose genus of all animal genera. Coccidia have a complex life cycle and other unusual characteristics which have stimulated investigations that include various species responsible for the disease coccidiosis. These species cause pathological damage and mortality in poultry, cattle, sheep, goat, pig, rabbit and other animals. The genus *Eimeria* Schneider, 1975, with more than 1400 species by increasing number of biologists.

The coccidia have enhanced medical as well as veterinary and general biological importance.

MATERIAL AND METHODS

The material for the study of coccidia of chicken was obtained from various slaughter houses as well as from different fields in and around Osmanabad district (M.S). The different parts of alimentary canal of slaughtered chicken were examined.

The faecal contents were diluted with distilled water and sieved to remove the large faecal debris. After repeated washing the oocysts were concentrated by centrifugation at 3000 rpm for 10 minutes.

The oocysts were then spread out in shallow Petri dishes and covered with 2.5% solution of potassium dichromate for sporulation.

OBSERVATION AND RESULTS

During the present study seven species of *Eimeria* are found in Broiler chicken. The commonest was *Eimeriatenella*, it was found in 270 of 908 positive samples, showing a prevalence of 29.73% of the positive samples and 10.67% of the total samples examined.

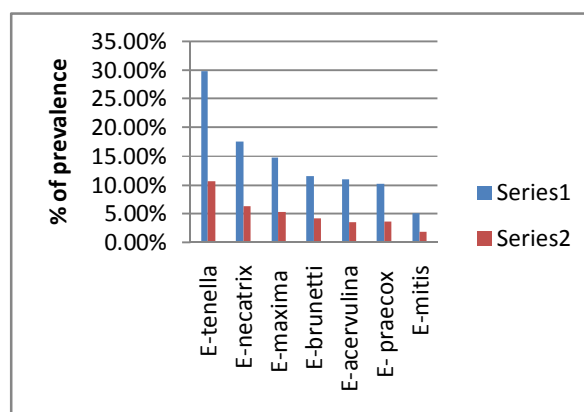
Eimerianecatrix was the second common species found in 159 out of 908 positive samples representing 17.51% of the positive samples and 06.28% of the total samples examined. *Eimeria maxima* was the third species found 134 out of 908 positive samples representing 14.75% of the positive samples and 05.29% of the total samples. *Eimeriabrunetti* was the fourth found 105 out of 908 positive samples representing 11.56% of the positive and 04.15% of the total samples examined. *Eimeriaacervulina* was the fifth found in 100 out of 908 positive samples, representing 11.01% of the positive samples 03.95% of the total samples. *Eimeria praecox* was the sixth species found in 93 out of 908 positive samples, representing 10.24% of the positive samples and 03.67% of the total sample examined.

Eimeriamitis was the Seventh species found 47 out of 908 positive samples representing 05.17% of positive samples and 01.85 % of total samples examined.

Table and fig.No.1

Shows species composition and % prevalence of *Eimeria* species in Broiler chicken in Osmanabad district during a period of two years i.e. from February 2015 to January 2017.

Sr.No	Species with total no. of positive samples		Percentage of Prevalence	
	Species	Number	+ve. samples 908	Total Samples 2530
1.	<i>E-tenella</i>	270	29.73%	10.67%
2.	<i>E-necatrix</i>	159	17.51 %	06.28%
3.	<i>E-maxima</i>	134	14.75%	05.29%
4.	<i>E-brunetti</i>	105	11.56%	04.15%
5.	<i>E-acervulina</i>	100	11.01%	03.55%
6.	<i>E- praecox</i>	93	10.24%	3.67%
7.	<i>E-mitis</i>	47	5.17%	01.85 %



ACKNOWLEDGMENT

The authors are very much thankful to the U.G.C. WRO Pune for providing the financial assistance under Minor Research Project F.No.47-947/14./2015 and also thanks for Principal Ramkrishna Paramhansa Mahavidyalaya, Osmanabad (M.S.) India for providing the laboratory facilities during this work.

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