

Prevalence of Ceacal Coccidia Infection in Chicken Around North Telangana: A Brief Study.

V.Ravikanth*, Amol M. Salankar, T.Rama, Rashmita Panda, Sandeep Shahapure.

College of Veterinary Science, Korutla, Karimnagar, Telangana.

E-mail: vallururavi86@gmail.com**Abstract**

The current study was conducted in different poultry farms surrounding area to the Veterinary College Korutla, karimnagar. The study was carried on 50 poultry birds to observe the clinical, gross and histopathological changes in poultry birds suffering from coccidiosis. Among the birds studied 33 (66%) were showing characteristics like to be heavily infected with ceacal coccidia protozoan. The gross symptoms included loss of appetite, unthriftiness, greenish or reddish diarrhoea, and drooping head. Affected birds were mostly found showing their comb and wattles pale and anaemic. Postmortem revealed intestine extremely ballooned, having petechial haemorrhages, oedematous, necrosis and sloughing of caecal epithelium. Histological evidence showed leakage of blood, oedema, necrosis, disruption and loss of villi. Out of 33 affected birds 26 died (78.78%) and recovered birds showed reduced growth rate. The study indicated that endemic outbreak of coccidia can cause heavy losses to commercial poultry farms.

Keywords: Chicken, Coccidiosis, Gross Changes, Histopathological Changes, North Telangana.**1. Introduction**

Coccidiosis causes considerable economic loss in the poultry industry, especially in broiler chickens. Chickens are susceptible to at least 9 species of coccidia. Coccidiosis is associated with reduced growth rate, impaired feed conversion leading to poor performance of broiler chickens and mortality. Avian coccidiosis is classified into caecal and intestinal forms. Caecal coccidiosis is protozoan disease caused by *eimeria tenella* (Gardinar,1955), an acute disease characterized by diarrhoea and massive caecal haemorrhages. It is the most common pathogenic and chronic form occurring in the commercial poultry. As far as the literature is available, little work has been done on the pathology of coccidiosis in the Jagitial district. Present studies were, therefore, proposed to determine the gross pathology and clinical evidence of caecal forms of the disease in poultry.

2. Materials And Methods

The findings reported here in this study are a part of survey carried out to record the incidence of coccidiosis in poultry at different commercial poultry farms near the College of Veterinary science korutla. The birds under study were in the range of 15 to 35 days. During the visit of poultry farms, it was tried to find out the sick birds in the flock, in which, the symptoms and morbidity were noted. In case of dead birds, postmortem was conducted and the lesions were recorded and fresh faecal smears from the intestinal contents were prepared and examined for oocysts and sporozoites. For histopathological changes, morbid tissues from the caeca were fixed in 10% formal saline solution. These tissues were processed with ascending grades of ethyl alcohol to prepare fine blocks in paraffin wax. Sections were taken at 5-7 μ and slides were stained with Hematoxylin and Eosin stains.

3. Results And Discussion

The symptoms included loss of appetite, unthriftiness, pale comb and wattles greenish or reddish diarrhoea. Affected birds were mostly found showing their comb and wattles pale and anaemic. Postmortem revealed caecum having petechial haemorrhages, oedematous, necrosis and sloughing of caecal epithelium. Histological evidence showed leakage of blood, oedema, necrosis, disruption and loss of villi.

The symptoms were observed and recorded individually in all the sick birds. The syndrome of symptoms thus recorded, included loss of appetite, unthriftiness, greenish or reddish diarrhoea, huddling together, heads drawn in and ruffled feathers. Besides, weakness, emaciation and inability to stand were evidently recorded at all the farms. The affected birds were mostly found showing their comb and wattles pale and anaemic. The findings thus recorded coincide with those of Tyzzer (1929), Johnson (1930) and Davis (1963).

Coccidiosis was determined through demonstration of post mortem lesions recorded in dead birds. The post mortem revealed the lesions of caecal forms of coccidiosis. In case of caecal coccidiosis, enlargement of caecum with clotted blood, haemorrhagic or whitish spots on caecal wall, inflammation, necrotic patches, dilation of caecum with consolidation of caecal contents were observed in almost all the cases. However, in some cases, caeca were found solid consisting casts of necrosed blood cells, epithelial cells and other debris. On opening the caeca, the bloody mass, a characteristic of caecal coccidiosis, was found in some cases. The change in colour from red to mottled reddish or milky white due to formation of oocysts were observed in some cases at various poultry farms. These findings however, correspondingly are related to those recorded by Raillet and Lucet (1891), Fantham (1910), Tyzzer (1929) and Long (1973). They also observed enlargement of caecum with clotted blood, haemorrhages throughout caecal mucosa, thickened caeca, shortened and consistent cases of necrosed blood cells and change in colouration from reddish to milky white. It was further observed that caecal form of infection occurred more frequently on all the farms.

Histopathological lesions in case of caecal form revealed loss of epithelial tissue, leukocytic infiltration in submucosa congestion of blood vessels which indicated disruption followed by leakage of blood, severe muscular oedema, necrosis of submucosa, loss of villi, disruption of caecal mucosa, cluster of oocysts and marked haemorrhage, necrosis of caecal mucosa and lymphoid cells showing hyperplasia. These findings are in agreement with Rasheda and Bano (1985). In addition they observed oedema and erosion of the sub-mucosa, glandular tissue cells infiltration, decreased villar height in addition to caseous necrosis and fatty decomposition.

Out of 33 affected birds 26 died (78.78%) and recovered birds showed reduced growth rate. The study indicated that endemic outbreak of coccidia can cause heavy losses to commercial poultry farms in North Telangana. To prevent coccidia, suitable biosecurity measures are to be followed in every farm and feed formulations must be incorporated with anticoccidial drugs.



Figure 1: showing ballooning (B) and Petechial hemorrhage (P) in caecum (arrow) of poultry.

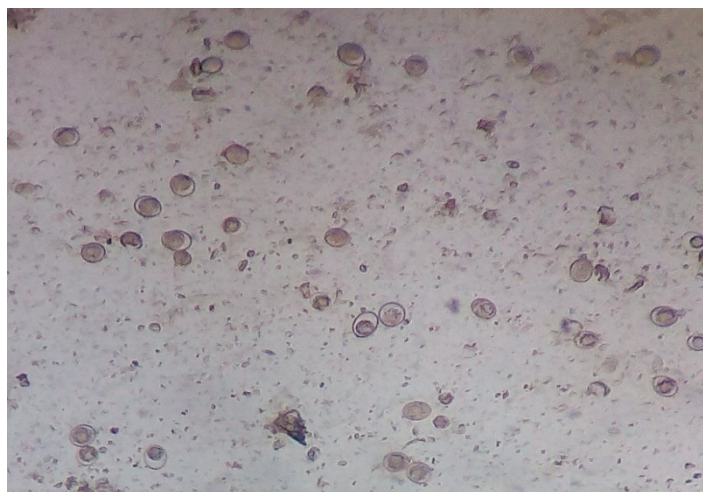


Figure 2: showing unsporulated oocyst in the faecal sample

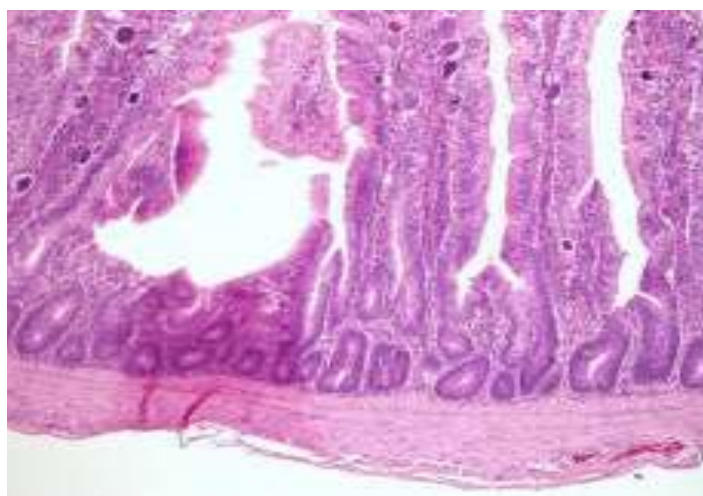


Figure 3: showing destroyed villi in caecum