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Coccidiosis in Domestic Juvenile Pigeons

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Abstract

During coccidiosis, birds have impaired digestion which leads to passing of watery droppings subsequently loss of body condition in the individual birds. Sixteen juvenile pigeons were diagnosed that they were suffering with the clinical coccidiosis by the examination of faecal samples. Flotation technique was adopted for the confirmation of the parasitic oocysts in the faeces of pigeons. All the pigeons were successfully treated with amprolium.

Key words: *Coccidiosis; Eimeria; Columba livia; Amprolium; Juvenile*

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Introduction

Different types of internal and external parasites in pigeon's leads to loss of body condition, severe discomfort and the parasites act as vectors for other diseases. During the acute stage of disease condition, mortality of the birds can be noticed (Sivajothi). Coccidiosis is one of the most common and highly pathogenic obligatory enteric protozoans affecting poultry in the world. Juvenile pigeon mortality due to coccidiosis was varies from 5% to 70% and pigeons between the third to fourth months were highly susceptible (Al-Rubaie). The present study placed a record on successful treatment of coccidiosis in the juvenile pigeons with amprolium.

Material and Methods

Sixteen birds in a flock of 64 pigeons were identified that they were suffering with watery greenish colour droppings in Proddatur, YSR Kadapa District of Andhra Pradesh (Figure-1). Faecal droppings were collected in to a sterile container for parasitic ova examination. Direct microscopic examination was carried out by addition of few drops of distilled water and further samples were examined for the parasitic oocysts by the flotation technique. Microscopic examination of the faecal samples revealed presence of the unsporulated coccidial oocysts (Figure 2).

Figure 1: *Pigeon with severe coccidiosis.*

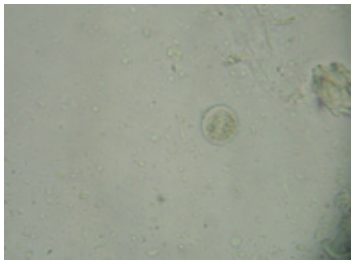

Figure 2: *Unpopulated Oocysts (400X).*

Treatment and Discussion

All the birds were treated with oral amprolium (20%) (1 gram of powder in 1 litre of water) solution by addition of the water daily for seven days. Improvement in the condition of the birds was assessed by the consistency of droppings and activity of the birds. All the pigeons were recovered uneventfully by the change in the colour and consistency of the faeces without any adverse reactions. After completion of therapy, multi vitamin syrup was added in the drinking water for nutritional support.

In general, oocysts of *Eimeria* found in the pigeon feces. It was immature oocysts with colourless, mature oocysts with complete triple-layered wall and last one is degraded oocyst, which is clark yellow and finely granulated without any refractive granules. Oocysts are spread by aerosol transmission by means of dust from dried feces or debris from nests or footwear. Juvenile pigeons are anorexic, dehydrated, dull, emaciated and watery diarrhoea but in four birds, it was hemorrhagic diarrhea. In the present study, diagnosis of the coccidiosis was done by the examination of the oocysts in the faeces of pigeons. Examination of the coccidian oocysts was enhanced by the floatation technique. But during the severe pathologic coccidiosis, clinical signs arise before gamogony; therefore, fecal samples will be negative. Coccidiosis in adult birds is self limiting and treatment is not required but, juvenile pigeons are required treatment. Oocysts from the effected droppings will become infectious after completion of the sporulation procedure and it will take 1 to 2 days after the shedding of oocysts from the infected pigeon. Complete eradication of the oocysts in the environment can be achieved by regular removal of the litter and cleaning the premises with disinfectants (Selvarani).

Amprolium is a pyrimidine derivative, has coccidiostatic properties. It is structurally similar to thiamine and, when ingested by coccidia, competitively inhibits folic acid metabolism. It is structurally similar to the thiamine and when provided higher dose of amprolium causes reduction in the thiamine levels further leads to vitamin deficiency to the birds. It is not advisable to give excessive quantity of thiamine (more than 1:1 ratio of thiamine to amprolium) along with the amprolium therapy which further leads to reduction in the efficacy of the amprolium towards the coccidiosis in the birds. Toxicity of the amprolium was very minimal due to its poor enteral absorption and quick elimination from the circulation (Hoskin).

In the previous studies coccidiosis was recorded in different species of the animals and successfully treated with sulphonamide group of drugs (Reddy). In the present study amprolium was selected to treat the juvenile birds.

Conclusion

Study puts a record on the outbreak of coccidiosis in juvenile pigeons and its successful management with amprolium.

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Conflict of Interest

None.

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