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Caecal-coccidiosis in Vanaraja chicks and its successful therapeutic management

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Abstract

Coccidiosis causes considerable economic loss in the poultry industry in terms of reduced growth rate, impaired feed conversion leading to poor performance and huge mortality. Six dead Vanaraja chicks were reported by one farmer with complaints of bloody diarrhea, and sudden death of chicks in his backyard farm. On Postmortem examination, swollen hemorrhagic caecum and presence of oocyst in caecal content confirmed the infestation of caecal-coccidiosis. All the affected chicks were recovered successfully after 3 days of oral intake of amprolium. The severity of clinical signs and successful recovery within a short period of treatment is discussed here in this case report.

Keywords: Caecal-Coccidiosis, oocyte, amprolium, Vanaraja chicks

1. Introduction

Gastrointestinal parasitism is one of the most important constraints for the growth and developments of poultry industry in world including India. In gastrointestinal parasitism coccidian infection plays an important role [1]. Coccidiosis is a disease caused by parasites of the genus *Eimeria* and belonging to the phylum *Apicomplexa* with a complex life cycle, affecting mainly the intestinal tract of many species of mammals and birds. The most common species are *Eimeria tenella*, which causes the caecal coccidiosis, while *E. acervulina* and *E. maxima*, causing chronic intestinal coccidiosis [2]. *E. tenella* and *E. necatrix* are the most pathogenic to chicken which causes caecal-coccidiosis to young chicks [3]. This disease is characterized by decreased growth rate, weight loss, decreased egg production in layers, severe hemorrhagic diarrhea, depressed water and feed consumption and sudden death [4, 5].

2. Case History and Clinical Observation:

A farmer rearing 50 Vanaraja chicks in his backyard reported to ICAR-CIWA along with 6 dead chicks having complaints of bloody diarrhea and sudden death. We visited his poultry rearing site and found the chicks were dull and depressed with hemorrhagic droppings. On postmortem examination of the dead bird, the caecum was found dark colored, hemorrhagic and swollen (Fig.1). Both cloacal swab and caecal content swab examination revealed the presence of Eimerian oocyte (Fig.2).



Fig 1: Swollen hemorrhagic caecum



Fig 2: Oocyst in cloacal swab (45X)

3. Treatment and Discussion

The chicks were treated with amprolium @ 0.024% in drinking water for 3 days along with electrolytes [3]. After 3 days of treatment the chicks were recovered successfully and started taking normal feed and water. No symptoms of diarrhea reported afterwards.

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Coccidia are present almost universally in poultry-raising operations, but clinical disease occurs only after ingestion of relatively large number of sporulated oocytes by susceptible birds. Both clinically affected as well as recently recovered birds excrete oocytes in their droppings which contaminates feed, water, litter and soil. Oocyst may be mechanically transferred via equipments, clothing, insects and through farm workers [3]. Thus unhygienic condition, lack of bio-security and overcrowding of birds are important precipitating factors for this disease.

Among different coccidiocidal drugs, amprolium is considered as the best during clinical outbreaks. Amprolium is a thiamine antagonist which is essentially required for the rapidly dividing cells of the coccidia. It also has a wide range of safety margin [1, 3].

It was concluded that early diagnosis and medication can prevent huge chick mortality. But maintaining strict hygiene, bio-safety and use of coccidiostat in poultry feeds can prevent this condition.

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