

Coccidiosis in a Domestic Rabbit: A Case Report

SHASHI KALA*, ANIL KUMAR¹, RAJEEV KUMAR² AND NIKEE KUMARI

INTRODUCTION

Coccidiosis is a highly contagious sporozoal infection in rabbits. It is caused by intracellular protozoan parasites of the genus *Eimeria* and causes significant mortality in domestic rabbits. In rabbit fifteen species of *Eimeria* have been identified (EL-Shahawi *et al.*, 2012), of them fourteen species are known to infect the intestine while one is located in the biliary ducts of the live. There are two types of coccidiosis in rabbit- intestinal and hepatic. Intestinal coccidiosis mainly affects young weaned rabbits of six week to five months age. It cause severe disease in rabbits and the severity depends up on the infective dose, parasite species, immune status and age of animals (Sivajothi *et al.*, 2014). Adult rabbits are usually symptomless carriers of coccidian infections (Coudert *et al.*, 2000). Hepatic coccidiosis (*Eimeria stiedae*) is one of the most pathogenic coccidian protozoans in domestic rabbits causing severe coccidiosis and increased mortality (Ebtesam, 2008). It causes severe damage to the liver and is more pathogenic in young rabbits and led to death among these animals.

Usually, anticoccidial treatment is only successful for rabbits that have been infected for less than 5 or 6 days. If treatment is successful, diarrhoea and mortality may still be seen for few days after the initiation of the treatment. A number of coccidiostats are used to control the disease. In India commonly used coccidiostats are Bifuran, Sulpha drugs and Amprosol (Sharma and Srivastava, 1989). Regular use of coccidiostats by mixing them with feed or water may be used to control the coccidiosis in rabbits.

CASE HISTORY AND CLINICAL EXAMINATION

An eight months old female rabbit was presented to the Institute of Animal Health and Production, Bihar, Patna with history of anorexia, dullness and occasional watery diarrhoea. The clinical examination revealed 100.4° F rectal temperature, emaciated body, rough hair coat, pendulous and distended abdomen. The faecal sample was collected for examination of internal parasites. The consistency of sample was semi-solid with mucous. The sample was processed in the laboratory and examined by direct smear as well as saturated sugar floatation technique. Eimerian oocysts were identified according to character described by Soulsby, (1982).

TREATMENT AND DISCUSSION

Microscopical examination of faecal sample revealed the presence of oocysts of

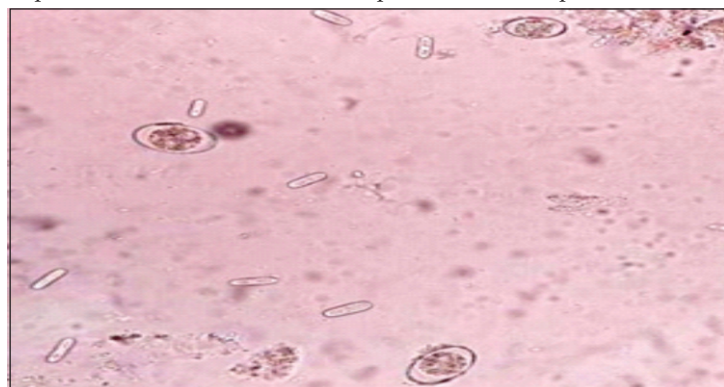


Fig. 1: Eimerian Oocysts (40X)

Institute of Animal Health and production Bihar, Patna

¹Department of TVCC, Bihar Veterinary College, Patna

²T.V.O. AHD Bihar, Patna

*Corresponding author Email: kala12shashi@gmail.com

ARTICLE INFO

Received on : 29-04-2019
Accepted on : 25-06-2019
Published online : 09-07-2019

ABSTRACT

Coccidiosis is considered to be a major problem in rabbits as mortality rate may go high particularly during and after rainy season. In this case report, clinical symptoms observed were anorexia, dullness, emaciated body, rough hair coat, pendulous and distended abdomen. The faecal sample was collected; examined microscopically for screening of internal parasites. The case was diagnosed as coccidiosis and animal was treated with Sulphaquinoxaline and Diaveridine for a week. One week later, rabbit was recovered clinically and faecal sample was found negative for *Eimeria* Species.

KEYWORD

Eimeria Species, Rabbit, Treatment

Eimeria species (Fig.1) and diagnosed the animal was suffered from coccidiosis. The rabbit was treated with Sulphaquinoxaline and Diaveridine at the dose rate of 1g/litter of water for 7 days. One week after treatment, there was marked clinical recovery and faecal sample was also negative for coccidial infection. Most of the anticoccidial drugs are used only for prevention of disease, while sulphonamides are currently used primarily for the treatment of coccidiosis outbreak (Pakandl, 2009).

Sulphaquinoxaline, a sulpha anticoccidial agent, is a traditional antibiotic drug widely used to control coccidiosis in poultry and rabbits (Chun *et al.*, 2015). Successful treatment of rabbit coccidiosis with sulphaquinoxaline has been reported by earlier workers (Laha *et al.*, 1999, Magray *et al.*,

2010). The dose recommended in present study was in accordance with Becha and Devi, (2014). However Singla *et al.*, (2000), reported that 2.5% Toltrazuril (Baycox) given at 25ppm in water for 2 days was highly effective method of reducing oocysts due to hepatic coccidial infection to nil.

CONCLUSION

Hence it was concluded that Sulphaquinoxaline and Diaveridine can be use for treatment of coccidiosis in rabbit. Coccidiosis caused by *Eimeria* species is responsible for major losses in rabbit industry. It is thus an emerging disease of increasing importance in commercial rabbits. The control of rabbit coccidiosis is entirely dependent on prophylactic chemotherapy and a number of coccidiostats may be used to control the disease.

REFERENCES

- Becha BB and Devi SS. 2014. Management of severe hepatic coccidiosis in domestic rabbits. *Ind. J. Vet. and Anim. Sci. Res.* **43**(1):44-48.
- Chun LIU, Shen-Yjie WANG, Qian ZHANG and Yi-Xiang SHAO. 2015. Influence of three coccidiostates on the pharmacokinetics of florfenicol in rabbits. *Exp. Anim.* **64** (1), 73-79.
- Coudert P, Licois D, Zonnekeyn V. 2000. Epizootic rabbit enterocolitis and coccidiosis: a criminal conspiracy. In *Proc. 7th World Rabbit Congress. 7-4 July. 2000. Valence. Spain.* 215-218.
- Ebtesam MM. 2008. Hepatic coccidiosis of the Domestic Rabbit *Oryctolagus cuniculus domesticus* L. In Saudi Arabia. *World J. Zool.* **3**(1):30-35.
- EL-Shahawi GA, EL-Fayomi HM, Abdelhaleem HM. 2012. Coccidiosis of domestic rabbit (*Oryctolagus cuniculus*) in Egypt: light microscopic study. *Parasitol. Res.*, 110:251-258.
- Laha R, Hemaprasanth DA and Harbola PC. 1999. Comparative efficacy of sulphadimidine and combination of amprolium, sulphaquinoxaline in the control of natural coccidial infection in rabbits. *Ind. Vet. J.* **76**:1013-1015.
- Margay A, Khan AR and Rashid M. 2010. Study on fatal hepatic coccidiosis in rabbits of Kashmir Velly. *Journal of Environment and Bio Sci.* **24**:243-245
- Pakandl M. 2009. Coccidiosis of rabbit: a review. *Folia Parasitologica* **56**(3):153-166.
- Sharma JP and Srivastava JB. 1989. Studies on some diseases of rabbits and their managemet in Jammu region. *Livestock Advisor.* **14**:32-36.
- Singla, L.D, Juyal, P.D. and Sandhu, B.S., 2000. Pathology and therapy in naturally *Eimeria stiedae*-Infected rabbits. *J. Protozool. Res.* **10**, 185-191.
- Sivajothi S, Reddy BS, Rayulu VC. 2014. Intestinal coccidiosis infection in domestic rabbits. *Int. J. Bio. Res.* **2**(2):48-50.
- Soulsby E.J.L. 1982. Helminths, arthropods and protozoan of domesticated animals, 7th edn., Bailliere Tindall and Cassell Ltd., London