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Case study on bovine coccidiosis in jersey crossbred calf

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Abstract
Bovine coccidiosis caused by protozoan parasites is reported in animals less than one year age and occasionally occurs in adults. One Jersey crossbred male calf about one and a half month old with a weight of 30 kg maintained at Livestock Farm Complex, Veterinary College and Research Institute, Orathanadu was affected with cocccidiosis during the month of October 2023. The affected animal showed clinical symptoms of bloody diarrhea with eroded mucus tissues and frequent straining to pass faeces. Faecal sample examination confirmed the presence of oocyst of Eimeria species. The calf was treated with antibiotics, coccidiostat, Kaiolin powder along with fluids therapy. The calf recovered gradually and started to void dung in normal consistency and intake of feed was also normal.

Keywords: Bovine coccidiosis, Jersey crossbred male calf, coccidiostat

Introduction
Bovine coccidiosis caused by protozoan parasites is reported in animals less than one year age and occasionally occurs in adults because of lower immuno competence in calves, so they are more susceptible than adult cattle (Soulsby, 1986) [5]. Coccidiosis is an intestinal infection caused by Eimeria genus groups of sporozoan protozoa. Coccidiosis has been indicated as an important cause of diarrhoea in calves, Radostits *et al.* 1994 [4]. The infection is transmitted through the ingestion of sporulated oocysts in contaminated feed, water and licking of contaminated surfaces. Coccidiosis causes severe diarrhea, dysentery, dehydration, depression, anorexia, weakness and recumbency in calves (Ahmed and Hassan Soad, 2007) [1]. This condition causes severe economic loss to the farmers as they spend money for treatment and by loss of the animal. The infected calves shed large numbers of oocysts into the environment after 2-3 weeks. Coccidiosis generally occur in late summer and winter. Highly moist environment and presence of oocysts in maternal feces will predispose the condition. The present study was aimed to study the therapeutic management of clinical coccidiosis in calves in the farm condition.

Clinical symptoms
The affected calf showed clinical symptoms of bloody diarrhea with eroded mucus tissues (shedding mucus lining), unthriftiness, anorexia, dehydration, poor body condition frequent straining to pass faeces. On clinical examination the rectal temperature was recorded as 38.5^{O}C, respiration rate was 26 per minute and heart rate was found to be 72 per minute. Muzzle was dry and mucous membrane of eye was pale pink with shrunken eye. Upon rectal examination watery blood mixed mucus and eroded mucus membrane were found. The examination of faecal sample confirmed the presence of oocyst of Eimeria species. On the basis of clinical findings and faecal sample examination the case was diagnosed as coccidiosis.

Treatment and Discussion
The calf was treated with sulphadiazine + trimethoprim 6.25 ml injected intramuscularly for three days (Yatoo *et al.,* 2013) [7] along with amprolium @10mg per kg body weight per day for 5 days (Chakrabarti and Jha, 2016) [2] was given as a coccidiostat for five days and light kaiolin powder 30 gram orally for three days.

Treatment with anticoccidial drugs should be started as soon as the animal starts to exhibit the clinical signs as this reduces the severity of the disease and decreases the mortality in the infected herd (Verma *et al*., 2018) [6]. To compensate the dehydration, electrolyte imbalance treatment was started with parenteral fluid therapy. Dextrose normal saline of 250 ml and Ringer's lactate solution of 200 ml was given intravenously for first two days. Immunol syrup was also given orally for five days to improve the immune status of the calf. The calf showed improvement and started normal feeding from third day onwards and voided dung normally from fifth day.

Conclusion

The causative agent of coccidiosis damage the inner lining of caecum and large intestine of the affected animals. The highly moist surroundings and presence of coccidial oocysts in maternal faeces affects young calves as they are immuno–compromised (Priti *et al*., 2008 and Yatoo *et al*., 2013) [3, 7]. Enhancing the new born calves immunity through proper colostrum feeding, proper sanitation of shed and providing hygienic feed, fodder and water are the important preventive measures for controlling coccidiosis in younger age group animal.

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