

## Winter Coccidiosis in a Cow calf

Vijesh Kumar Saini<sup>1</sup>, Nitin Kumar and Ravendra Singh

Veterinary Surgeon

Animal Husbandry and Dairying

Palwal (Haryana)

### Abstract

A four months old male cow calf was presented with history of haemorrhagic diarrhoea, anorexia, depression and dehydration. Based on clinical symptoms and microscopic examination the condition was diagnosed as winter coccidiosis and treated with Sulphadiazine and Trimethoprim along with fluid, electrolyte and multivitamin preparations. Animal showed improvement second day onwards post-treatment.

**Keywords:** Cow calf; coccidiosis; diarrhoea; eimeria; sulphadiazine

### Introduction

Coccidiosis is an important intestinal disease of calves caused by various species of *Eimeria* belonging to phylum-apicomplexa (Almeida *et al.*, 2011). In winter season mainly *E. zuerni* is responsible for infection but *Eimeria bovis* is also common (Geurden *et al.*, 2005). The prevalence of coccidiosis in cattle and buffaloes has been well reported from different parts of India (Nambiar and Devada 2002; Singh and Agarwal, 2003). Generally, coccidiosis occurs in late summer or winter months in India but, it may occur throughout the year. It affects mostly young calves below one year of age. The disease is commonly found in animals kept under intensive husbandry practices. Coccidiosis is considered an important cause of diarrhoea in young calves (Radostits *et al.*, 1994). The disease occurs in acute, subacute and chronic forms. Bloody diarrhoea, dehydration, rough hair coat, reduced growth rate, anemia, weakness and weight loss are the signs of coccidiosis (Ahmed and Soad, 2007). Coccidiosis causes severe economic losses to farmers by reducing weight gain, decrease in feed efficiency, morbidity, mortality and increases susceptibility to other diseases (Thomas, 1994).

### History and Clinical Signs

A four months old male cow calf (Fig. 1) was presented with history of hemorrhagic diarrhoea, anorexia, dehydration, rough hair coat, anaemia, weakness and depression. Blood stains and mucus were also observed in faecal sample. On clinical examination heart rate was 64/minute, respiration rate 27/minute and rectal temperature 102.4°F. Mucous membrane was pale and anemic.

### Diagnosis and Treatment

Faecal sample was examined for presence of parasites ova or oocyst. On faecal examination, typical unsporulated oocysts of *Eimeria spp.* (Fig. 2) were observed under microscope. Other parasitic eggs were not found in faecal sample. So on the basis of clinical symptoms and results of faecal examination it was confirmed that animal was suffering from winter coccidiosis. Sulphadiazine and Trimethoprim (Biotrim<sup>a</sup> I/M inj @ 3 ml deep I/M) were



Fig. 1: Calf infected with winter coccidiosis

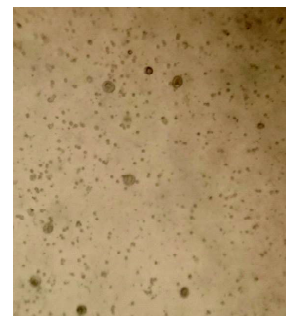


Fig. 2: Unsporulated coccidian oocyst (100x magnification)

1. Corresponding author. E-mail: vijesh24@gmail.com

given for five days to control infection. Dextrose normal saline (DNS @ 500 ml) and Ringer's lactate (RL @ 500 ml) was given intravenously along with multivitamin preparation (Tribivet<sup>b</sup> @ 3 ml) to prevent dehydration and electrolyte imbalance. Animal showed improvement second day onwards post-treatment.

### Discussion

Clinical cases of Coccidiosis in calves were reported by Priti *et al.* (2008) in Bihar and Yatoo *et al.* (2013) in Uttar Pradesh and stated that coccidiosis affects young calves as they are immuno-compromised. Highly moist surroundings and presence of oocysts in maternal faeces are the predisposing factors for coccidiosis and it may cause severe enteritis resulting in diarrhoea, dysentery and dehydration. Hazarika and Das, (2017) reported winter coccidiosis in cattle calves in Assam and advised that the coccidiosis in cattle calves should not be neglected in field condition because this infection is opportunistic and may occur either as summer or winter coccidiosis. Chakrabarti *et al.* (2016) reported a case of winter coccidiosis in calf in Ranchi and their findings as well as results were similar to ours. They also suggested that feeding colostrum to enhance immunity in calves, hygiene and sanitation of calf shed are important steps to prevent coccidiosis.

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