

Canine Babesiosis – A Case Report

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ABSTRACT

Babesiosis is a life-threatening disease of dogs caused by *Babesia gibsoni* and *Babesia canis*. A three years old male German shepherd dog weighing 30 kg was presented to Veterinary Polyclinic, Jalandhar with the history of voiding blood mixed urine, vomiting and icterus. History of vaccination and deworming was regular. The animal was treated with single shot of diaminazene acetate (BERENIL-RTU, Intervet India Pvt.Ltd.,Pune, Maharashtra, India) @ 3.5 mg/kg body weight intramuscularly. Injection Oxytetracycline @ 10 mg/kg body and Dextrose Normal Saline Intra Venus along with injection Mecovet were administered for a week. The dog showed good response and uneventful recovery.

Key words: canine, babesiosis, icterus, diaminazene acetate,

INTRODUCTION

Babesiosis is a life-threatening disease of dogs that is caused by haemoparasitic organisms (Lappin, 2001). The disease is mainly caused by *Babesia gibsoni* and *Babesia canis* (Casapulla et al., 1998; Farwell et al., 1982) and is transmitted by brown dog tick *Rhipicephalus sanguineus*. *Dermacentor reticularis*, *Dermacentor marginatus*, and *Haemaphysalis leachi* also involved in the transmission of babesiosis (Filipe, 2006).

Clinical signs of canine babesiosis vary depending on *Babesia* species, host immunity, age and concurrent diseases. It can be clinically classified as either complicated or uncomplicated (Amy, 2001). It should be considered in the differential diagnosis of haemolytic anaemia in dogs because uncomplicated babesiosis mainly characterized by haemolytic anaemia, including fever, tachypnoea, tachycardia, splenomegaly, icterus and depression. This paper describes a case of canine babesiosis in a dog.

Case history and observations

A three years old male German shepherd dog weighing 30 kg was presented to Veterinary Polyclinic Jalandhar with the history of voiding blood mixed urine, vomiting and icterus. History of vaccination

and deworming was regular.

On clinical examination animal had temperature of 104.6 °F and icteric conjunctival and oral mucous membrane. Faecal sample examination did not reveal any ova of parasitic importance. Blood and serum samples were collected for further investigation.

Haemogram revealed leukocytosis (22,000/cumm) with neutrophilia. Haemoglobin and volume of packed cells were 5.5 g% and 18% respectively. Serum urea nitrogen, creatinine and total proteins values were within the normal range. Based upon the blood smear and clinic haematological findings this case was diagnosed as babesiosis.

Treatment and discussion

The animal was treated with single shot of diaminazene acetate (BERENIL-RTU, Intervet India Pvt.Ltd.,Pune, Maharashtra, India) @ 3.5 mg/kg body weight intramuscularly. Injection Oxytetracycline @ 10 mg/kg body weight and Dextrose Normal Saline Intra Venus along with Injection Mecovet were administered for a week. Three shots of Injection Imferon 2 ml IntraVenus on alternate day to regenerate the liver function and restore the blood haemoglobin level, respectively.

The dog showed good response and uneventful recovery. Similar haematological findings including low haemoglobin, PCV, leukocytosis with neutrophilia and lymphopenia were reported by Samradhni et

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al. (2005). In canine babesiosis, haemolytic anaemia is the hallmark sign. It can be intravascular, extravascular, or both (Rafael, 2007). The anaemia results in hypoxia and

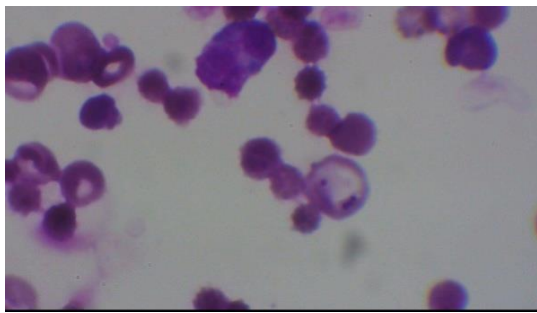


Fig. 1 Blood smear positive for *B. gibsoni*



Fig. 2 Dog before Treatment



Fig. 3 Dog after Treatment

tissue damage, which causes release of inflammatory mediators and vascular endothelial damage (Zdravko, 2010). Diagnosis generally made by blood smear examination. Serologic assays (e.g. immunofluorescent antibody, enzyme-linked immunosorbent assay, polymerase chain reaction) have also been used (Filipe, 2006). The case should be differentiated with leptospirosis, ehrlichiosis, immune mediated haemolytic anaemia and immune mediated thrombocytopenia. Amy (2001) reported three specific agents are currently recommended for treating babesiosis. First and foremost is imidocarb dipropionate @ 5.0 to 6.6 mg/kg Intramuscular or Subcutaneous, repeated in 2 weeks to treat clinical disease, second is diaminazene

aceturate @ onetime Intramuscular dose of 3.5 mg/kg then 1% trypan blue at the dose rate of 10 mg/kg Intra Venus as single dose. Though Imidocarb dipropionate was effective, due to its non-availability, other therapeutic agent such as Diaminazene aceturate used in the present study. Canine babesiosis therefore remains a major concern for veterinary practitioners, which is perfectly justified by its prevalence and its medical severity.

CONCLUSION

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