



CEREBRAL BABESIOSIS DUE TO *BABESIA GIBSONI* IN A DOG - A CASE REPORT

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Babesiosis is an important haemoprotozoan disease causing high morbidity and mortality in dogs. It is caused by *Babesia canis* and *B.gibsoni* and is transmitted by brown dog tick *Rhipicephalus sanguineus*. Cerebral babesiosis is characterized by nervous symptoms such as limb weakness, muscular pain, paresis and sudden death. There are several reports of cerebral babesiosis due to *Babesia canis* in India (Bharti, 2003; Sriram and Gomathi Nayakam, 2004). Reports of cerebral babesiosis due to *Babesia gibsoni* is scarce (Chaudhary *et al.*, 2009). The present paper describes a case of cerebral babesiosis in a dog and its successful treatment with diminazene aceturate.

A four year old male boxer was presented to the University Veterinary Hospital, Mannuthy with a history of depression, weakness, ataxia, occasional seizures and anorexia. On clinical examination, the animal was anaemic with pale mucous membranes and was dehydrated. Clinical data were within normal range except for a rise in body temperature (104°F). Wet film examination of blood did not reveal any motile parasites. Peripheral blood smear examination revealed characteristic ring shaped *B.gibsoni* organisms in the erythrocytes. Haematological examination revealed low haematocrit values with neutropaenia and eosinophilia.

The animal was treated with a single injection of diminazene aceturate @7.5mg/Kg body weight, deep intra muscular. Also supportive therapy with chloramphenicol @ 25 mg/Kg body weight i/v for five days, dextrose 10% solution i/v and neurobion forte, one tab daily orally. The animal showed marked improvement and remission of clinical signs after five days. Blood smears collected on the fifth day were negative for *B.gibsoni*.

Cerebral babesiosis occurs with the

sludging of erythrocytes within central nervous system capillaries leading to tissue hypoxia, weakness, ataxia, seizures and vestibular or cerebellar signs (Suresh *et al.*, 2010). Epileptic fits, ataxia and/ or paresis have been reported in dogs with cerebral babesiosis caused by *B.canis* (Jacobson, 1994). Moore and Williams (1979) also suggested that sludging of parasitized erythrocytes in the smaller vessels or capillaries of the brain, owing to disseminated intra vascular coagulation may be responsible for the CNS symptoms. Jacobson and Lobetti (1996) also observed muscular pain and tremors in dogs with babesiosis and opined that it could be due to rhabdomyolysis owing to release of inflammatory cytokines and nitric oxide. In the present case there was clinical recovery using diminazene aceturate at a dose rate of 7.5mg/kg BW as suggested by Taboada (1998). Even though the incidence of cerebral babesiosis is limited, it should be included in the differential diagnosis of neurological disorders in dogs.

Summary

A case of cerebral babesiosis due to *B.gibsoni* in a dog characterised by depression, weakness, ataxia, seizures and anorexia was described. It was successfully treated with a single dose of diminazene aceturate @7.5 mg/kg BW. The report stresses the need for including cerebral babesiosis in the differential diagnosis of neurological disorders in dogs.

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