

Babesia gibsoni infection in a German Shepherd dog

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Introduction

Babesiosis is caused by intra erythrocytic protozoan parasite of the genus *Babesia*. A wide range of domestic and wild animals and occasionally man is affected by the disease, which is transmitted by ticks and has a worldwide distribution. *Babesia canis* and *B. gibsoni* are the two organisms commonly known to infect dogs. Both the organisms are transmitted by *Ixodid* tick vectors and are found throughout Asia, Africa and Europe. *Babesia canis* being more prevalent in southern region where as *B. gibsoni* is more prevalent in northern region. Cases of canine Babesiosis may be present with a wide variation of severity of clinical signs, ranging from a hyper acute, shock associated, haemolytic crisis to an in apparent subclinical infection. This paper describes a case of acute infection of *Babesia gibsoni* in a seven year old female German shepherd dog.

Case history and clinical observation

A female German shepherd dog aged seven years was presented to the District Veterinary Centre hospital, with the history of weakness, anorexia and general malaise. On clinical examination days, the animal had temperature of 104.5 °F and pallor of conjunctival and oral mucus membrane. Infection with haemoprotozoan parasite was suspected and the following samples were collected; thin blood smears prepared from ear tip for Giemsa staining and whole blood in EDTA @ 1mg/ml of blood for haematological evaluation.

The treatment suggested on the same day pending the result of test results was, Oxytetracycline @ 20 mg/kg body weight intravenously, antipyretic Piroxicam 2 ml intramuscularly, Polybion 2ml intravenously, Dexorange and Liv 52 syrup orally and advised to bring the animal next day for further treatment.

Freshly prepared peripheral blood smears from ear tip stained with Giemsa revealed small, single, signet ring shaped trophozoites of the parasite in more than 50 per cent of erythrocytes (Fig. 1) confirmed as

Babesia gibsoni. Haematological analysis revealed haemoglobin value of 3 g%, PCV 20 % and total RBC count 1.1 millions/cubic milli metre. Since animal was severely anaemic blood transfusion was recommended.

Based on clinicohaematological findings and blood smear examination, the case was diagnosed as Babesiosis due to *Babesia gibsoni* infection.

Treatment

The dog was treated with Oxytetracycline @ 20 mg/Kg body weight intravenously daily for three days followed by Doxycycline @ 5 mg/Kg orally for seven days, Dimenazine aceturate @ 5 mg/Kg I/M, whole blood transfusion @ 10 ml/Kg intravenously followed by oral haematinics. Dexamethasone 2ml was given intravenously prior to transfusion to avoid any transfusion reaction. The owner was advised to present the animal after one week for further examination.

After one week, peripheral blood smear when examined after Giemsa staining, the number of RBC's infected with protozoan parasite were very less and haemoglobin levels and PCV values were in normal range. A 2nd dose of Dimenazine aceturate @ 5 mg/kg was given I/M and advised to continue oral haematinics. The animal showed good response and uneventful recovery.

Results and Discussion

Naturally occurring cases of Babesiosis in dogs were manifested by a wide variety of non-specific

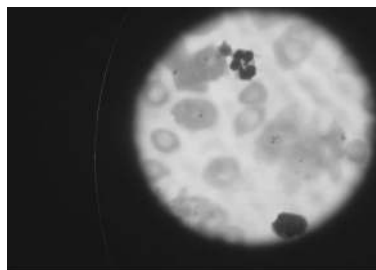


Figure-1. *Babesia gibsoni* inside RBC

vague clinical signs (Irwin and Hutchinson., 1991). Dimenazine acetate and Imidocarb Dipropionate are the two of the most widely used babesiacides. Long acting tetracycline's @ 20 mg/kg body weight is reported to reduce the severity of the disease if treatment begins before or soon after infection. Blood transfusion is life saving in severely anaemic animals.

Animals that have survived Babesiosis remain subclinically infected. These dogs may suffer a relapse of disease in future or serve as point source for further spread of disease in a given area (Cleveland *et. al.*, 2002). In this case the owner had been made aware of the possibility of subclinical infection and relapse of disease in future.

Babesia gibsoni causes a chronic disease in canines with progressive anaemia as the main sign. *Ixodid* tick vectors are transmitting the disease. Confirmatory diagnosis can be made by peripheral blood smear examination after Giemsa staining for the

demonstration of signet ring shaped trophozoites inside RBC's and can be treated with Dimenazine acetate and Oxytetracycline. This paper is a report of *Babesia gibsoni* infection in a German shepherd dog and its successful treatment.

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