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Wet Film Diagnosis of Concurrent Trypanosomiasis and Microfilariasis in a Dog – A Case Report

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KEYWORDS

Wet film diagnosis, concurrent Trypanosomiasis, dog

A B S T R A C T

Hemoprotozoal diseases are common in tropical countries and severe infections leads to sudden casualties. *Trypanosoma* sps. is an extra – erythrocytic, protozoan parasites transmitted by flies causing fever, anemia, myocarditis and corneal opacity. Filaria are mosquito borne parasitic nematodes. Concurrent infections of trypanosome and microfilaria in a one and a half year old male Great Dane is reported here along with their successful management with Diminazene aceturate and Ivermectin.

Introduction

Trypanosoma Sps. is a hemoprotozoan disease of domestic and wild animals spread by biting tabanid flies. The disease is generally acute and fatal in canines (Soulsby, 1982) and affected dog exhibits the clinical signs of fever, anemia, myocarditis and corneal opacity. Concurrent infection with microfilaria is reported here. The most notorious filariae is *Dirofilaria immitis* causing serious cardiac diseases. Other less notorious species are found in the subcutis such as *Dirofilaria repens* or *Dipetalonema reconditum* are considered to be non – pathogenic (Kassai, 1999). Females of all these species produce microfilaria circulating in the blood. They are transmitted by common mosquitoes and for *Dirofilaria reconditum* the intermediate host is fleas and lice.

The aim of this paper is to report the rare trypanosomiasis concurrent with microfilarial infection in a Great Dane.

Materials and Methods

A one and a half year old male Great Dane was presented to a tertiary care hospital with the history of anorexia since a week. The same was treated at the primary veterinary care centre with little response. Hence, it was referred. Initial examination revealed pyrexia and the dog was dull, depressed and dehydrated. The conjuctival mucous

membrane was pale with all superficial lymphnodes enlarged. The dog had bilateral corneal opacity and pain on abdominal palpation. Splenomegaly was evident on abdominal palpation. Radiography and ultrasonography confirmed splenomegaly. For immediate diagnosis and initiation of treatment peripheral wet film was examined at 10X in a light microscope. The sample was positive for *Trypanosoma* Sps. and microfilaria. The treatment was aimed at managing both the infections. Further confirmation was done with complete haematological and biochemical profile.

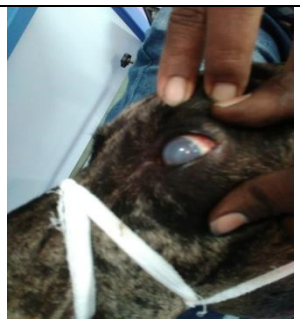
Results and Discussion

The ultrasonography and radiography revealed splenomegaly. Detailed clinical examination revealed pyrexia, pale conjuctival mucous membrane, exertion dyspnea and bilateral corneal opacity of which latter is attributed to trypanosomiasis (Soulsby, 1982). Dyspnea might have been due to microfilariasis. Complete blood count results revealed decrease in haemoglobin, packed cell volume and hypochromasia manifested by pale mucous membrane and hence anemic. Serum analysis revealed hypoglycaemia a common finding in trypanosomiasis. Blood Urea Nitrogen and Creatinine were elevated mildly.

Treatment

On inital wet film examination the dog was treated with single dose of Injection Diminazene aceturate deep intramuscular route @ 3.5 mg / Kg bodyweight along with 5 % Dextrose intravenously. The microfilaria was treated with single shot of injection Ivermectin @ 200 micrograms / Kg body weight subcutaneously. The dog was kept under observation for 24 hours for any signs of anaphylaxis due to killed trypanosomes and microfilariae. The supportive therapy was with antihistamines and hematinics. The dog had a uneventful recovery which was observed by increase in alertness, normal body temperature, increased appetite and reduction in corneal opacity.

ENLARGED POPLITEAL LYMPHNODE



CORNEAL OPACITY

MICROFILARIA IN PERIPHERAL WET FILM

It is concluded that table side diagnosis is important in initiating immediate treatment and thus saving a life.

The identification of a single cause should be recorded with caution and further concurrent infection should be expected and examination of the sample should be done completely inspite of single positive result. The side – effects of the treatment should be done with utmost care.

The efforts to save the life of the animal become futile when we lose the animal for the side – effects of the treatment. The control of vectors should be taken care to

avoid spread of infection and reinfection of the affected animal. Educating the owners regarding control of vectors is essential.

Acknowledgement

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