

Therapeutic management of Trypanosomiasis with bilateral corneal opacity in a dog

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Abstract

Two year old male mongrel dog was brought to the Teaching Veterinary Clinic at College of Veterinary Sciences and A.H., Jalukie, Nagaland, India, having markedly pale mucous membrane, corneal opacity and inappetance. On the basis of the history and clinical signs, a tentative diagnosis of canine trypanosomosis was made followed by its confirmation with Giemsa stained blood smear examination. The animal was successfully treated with single dose of diminazene aceturate at the dose rate of 3.5 mg/kg body weight, intramuscularly along with the supportive therapy.

Keywords: Corneal opacity, Diminazine aceturate, Trypanosomiasis

Introduction

Trypanosomosis is a haemoprotozoan disease which is caused by various species of *Trypanosoma* sp. It affects a wide range of hosts such as camels, horses, cattle, and buffaloes and dogs. The illness is spread by biting flies, specifically Tsetse, Tabanus, Stomoxys, and Culicoides (Green, 2006). However, dogs might acquire sick by consuming the carcass of a diseased animal. Two forms of Trypanosomiasis occurs in dogs viz. American trypanosomosis (Chagas disease) caused by *T. cruzi* and African trypanosomosis (surra or sleeping sickness) produced by *T. evansi*. However, on the Indian subcontinent, dog trypanosomosis is mostly caused by *T. evansi* (Eloy and Lucheis 2009), which is deadly in dogs and second only to horse trypanosomosis. The condition is often acute in dogs, with clinical symptoms including hind leg oedema, anorexia, intermittent fever, ocular opacity, lethargy, dehydration, pale mucous membranes, fever, and weight loss (Eloy and Lucheis 2009).

Case History and Observations

A male mongrel dog of 2 years age weighing 13 kg with improper deworming and vaccination history was presented to the Teaching Veterinary Clinic at College of Veterinary Sciences and A.H., Jalukie, Nagaland, India, with history of anorexia, bilateral corneal opacity (Fig.1) and dullness for a week. On clinical examination, pyrexia (103°F), markedly pale mucous membrane, enlarged submandibular lymph node, bilateral corneal

opacity and generalized debility was observed. So, on the basis of history and clinical observations, a tentative diagnosis of canine trypanosomiasis was made followed by confirmation with Giemsa stained blood smear (Coles, 1986). Examination revealed the presence of *Trypanosoma* organism outside the RBCs (Fig.2). Haematology revealed normocytic normochromic anemia with neutropenia and lymphocytosis (Table 1).

Table 1: Preliminary Blood Report

Blood Parameters	Normal Range	Result
1. Hb g/dL	12-18	9.0
2. PCV %	37-55	25.4
3. RBC m/mm ³	5.5 – 8.5	4.05
4. WBC m/mm ³	6 – 17	8.16
5. Platelets m/mm ³	120 – 600	349
6. Neutrophils %	50 – 80	36.5
7. Lymphocytes %	8 – 38	62.7

Treatment and discussion

Therapeutic regimen was comprised of Diminazine aceturate-Phenazone combination (@ 3.5 mg/kg deep IM; Rani and Suresh, 2007). Supportive treatment with hepatic protectant and iron supplement was given as 5 ml twice daily, Meloxicam with Paracetamol 150 mg/ml (5 mg +150 mg/ml @ 0.4 mg/kg BW IM BID for 3 days) was also given. Improvement with respect to corneal opacity took 7 days time (Fig.3).

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The dog recovered clinically, within a week's time. The reported clinical signs were in agreement with the findings of Dakhane *et al.*, 2024, Howes *et al.* (2011), Rani and Suresh (2007), Saurabh Kumar (2017). A single dose of diminazene aceturate @3.5 mg/ Kg body weight had been successful in treating the dog with trypanosomiasis and similar finding was also reported

by Ramesh *et al.* (2016). In conclusion, trypanosomiasis in dogs causes gradual unthriftiness, ocular and renal involvement. Clinical symptoms along with blood smear examination and complete blood count (CBC) can be used to diagnose the disease. A single dose of diminazene aceturate can be successfully used to treat the disease.



Fig.1. Picture showing bilateral corneal opacity

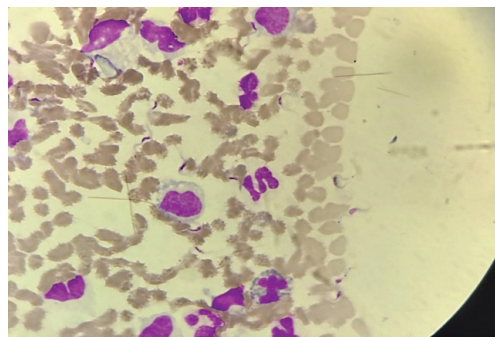


Fig.2. Giemsa Stained Blood Smear of Dog (X100) showing Trypanosomes.



Fig.3. Clearance of Corneal opacity

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