

Short Communication

TRYPANOSOMOSIS IN DOG – A CASE REPORT

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ABSTRACT: A male mongrel dog of five years age was brought to Veterinary Polyclinic, Suri, Birbhum, West Bengal, India, having markedly pale mucous membrane, corneal opacity and unable to stand. Confirmation of case was done by microscopic examination of *Trypanosome* organism in thin blood smear with Giemsa Stain. 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: *Trypanosoma*, Dog, Birbhum.

Trypanosomosis is a haemoprotozoan disease entity caused by various members of *Trypanosoma* sp. affecting different species of domestic and wild animals like horses, mule, donkey, camel, cattle, buffaloes, sheep, goat, dogs, pig, elephant, deer, foxes, tiger and jackals with chief clinical signs of high intermittent fever, anaemia, loss of weight, oedema of dependent parts, nervous symptoms, abortion and is responsible for major production losses (Barr *et al.* 1991). The disease is transmitted by biting flies particularly Tsetse, Tabanus, Stomoxys, Culicoides etc (Green 2006). Severity of canine Trypanosomosis ranges from acute, subacute to chronic. In dogs an acute and fatal type is commonly seen and death possibly occurs in 2 - 4 weeks (Soulsby 1982). Lakshmi Prasad *et al.* (2015) reported prevalence of 2.28 % in male, 2.40% in female dogs and highest prevalence in young dogs of less than 2 years of age. Clinical signs are characterized by weight loss, progressive weakness, anorexia, anaemia, intermittent fever, conjunctivitis, swelling of limbs, enlarged superficial lymph nodes and corneal opacity which are characteristic findings in chronic Trypanosomosis (Thirunavukkarasu *et al.* 2004). There are a number of effective trypanosomacidal agents for dogs including suramin, quinapyramine and diminazene but single dose of diminazene aceturate is effective in eliminating the natural Trypanosomosis infection in canine (Rani and Suresh 2007).

Case history

A male mongrel dog of five years age was brought to Veterinary Polyclinic (SAHC), Suri, Birbhum, West Bengal, India with history of anorexia,

dullness and persistent recumbency for five days. On clinical examination, subnormal rectal temperature (98°F), markedly pale mucous membrane, unilateral corneal opacity (Fig. 3), oedematous swelling of hind legs and generalized debility was observed. The dog was tested for the presence of haemo-parasites through blood smears (Coles 1986). For this purpose, hair was clipped from the outer surface of the pinna of ear near the margin. The marginal ear vein was pricked with sharp sterilized needle after disinfection with methylated spirit. A drop of blood was placed on a clean glass slide and smear was made and air-dried. The smear was stained with the Giemsa stain (Coles 1986) and examined under light microscope (X40) and then by using the oil immersion objective (X100). Microscopic examination revealed the presence of *Trypanosoma* organism outside the RBCs (Fig. 1 and Fig. 2). Stomatocytes are the abnormal RBCs possessing a slit-like central pallor surrounded by a dense surrounding zone (Fig. 2). This gives the cell the appearance of a human mouth. Stomatocytes result from red blood cell membrane defects found in haemolytic diseases (Carolyn *et al.* 2003).

The reported clinical signs were in agreement with the findings of Rani and Suresh (2007). Observed oedematous swelling of hind legs, subnormal temperature (98°F) and recumbency are characteristic findings in chronic Trypanosomosis (Thirunavukkarasu *et al.* 2004).

Treatment

Treatment of dog with Trypanosomosis was carried out with diminazene aceturate at dose rate of 3.5 mg/kg body weight intramuscularly (Rani and Suresh 2007).

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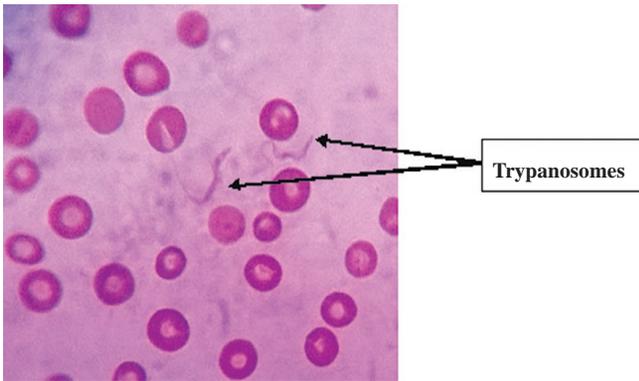


Fig.1. Photomicrograph of Giemsa Stained Blood Smear of Dog (X100) showing Trypanosomes.

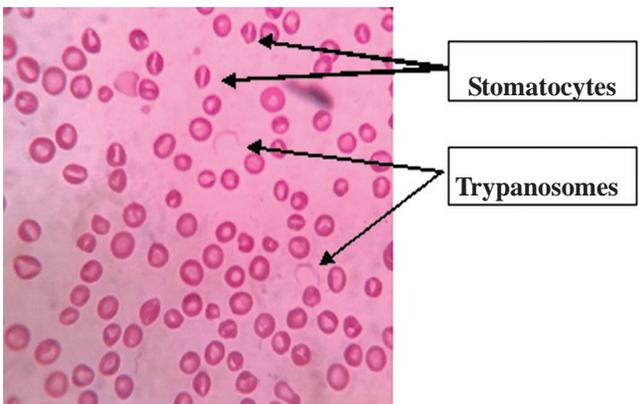


Fig. 2. Photomicrograph of Giemsa Stained Blood Smear of Dog (X100) showing Trypanosomes and Stomatocytes.



Fig. 3. Picture showing dog with unilateral corneal opacity.

Injection of Berenil RTU (Intervet) was administered along with prehydration with Inj. DNS 500 ml intravenously, Inj. Chlorpheniramine Maleate @ 0.4 mg/kg body wt (Inj. Chloril, TTK Pharmaceuticals Ltd.) intramuscularly, oral haematinics (Syr. RBC Pet, Vetoquinol) @ 2 tsf b.d. orally, and Inj. Methyl cobalamin, Vitamin B₁, Vitamin B₆ (Inj. Neuroxin-M, Zydus AHL) @ 2ml/day intramuscularly for 5 days.

The animal started taking food from day 1 post treatment and able to stand and walk from day 2 onwards.

The dog was found clinically recovered within a week of time.

Higher prevalence of *T. evansi* infection was observed in Mongrel than in Pomeranian, Cross breeds, German Shepherd, Doberman and Labrador breeds in Andhra Pradesh (Lakshmi Prasad *et al.* 2015). In a survey conducted at Ludhiana, 4.68% (3/64) of dogs were found to be sub-clinically infected through examination of blood smears during the rainy season. These dogs were kept mainly in an area with a considerable population of dairy cattle (Singh *et al.* 1993). Ravindran *et al.* (2008) reported 7.69% (2/26) of apparently healthy dogs were positive for Trypanosomosis by PCR analysis from Gwalior, Madhya Pradesh, India.

The clinical signs and symptoms along with the microscopic examination of *Trypanosoma* organism through peripheral blood smear suggested the case of Trypanosomosis. However, it was difficult to distinguish the species of *Trypanosoma*. So there is need of serological and molecular tests for the diagnosis of species of *Trypanosoma*. Moreover, it can also be concluded that single dose of diminazene aceturate @ 3.5 mg/ Kg body weight had been successful in treating the dog with Trypanosomosis (Ramesh *et al.* 2016).

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