TRYPANOSOMIASIS IN A BAKERWALI DOG- A CASE REPORT

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Trypanosomiasis is a haemoprotozoan disease of Horses, Cattle, Camels and carnivores caused by Trypanosoma evansi. It is transmitted mechanically by bite of Stomoxys and Tabanus sps flies or ingestion of raw meat of infected animals. It is widely prevalent in tropical and subtropical regions. Affected dogs develop an acute disease with ocular, vascular and neurologic signs. The present article deliberates trypanosomiasis in a Bakerwali dog.

A Bakerwali male dog of 3 years age was presented to the clinic with history of anorexia, generalized weakness, lethargy and corneal opacity. Physical examination revealed rectal temperature -105°F, heart rate- 108 BPM, respiration rate 34 per minute, generalized weakness, moderate dehydration, pharyngeal edema, bilateral serous ocular discharge, papery white conjunctival mucous membrane and bilateral corneal opacity (Fig. 1). Auscultation of heart, lungs and abdomen does not reveal any abnormal sounds.

Blood samples were collected from cephalic vein in Dipottasium EDTA vacutainer for haematology and in Serum vacutainer for biochemical parameters estimation using standard kits. Blood glucose level was immediately recorded by putting a drop of fresh whole blood on Glucometer (Glucochek). Blood smears were prepared, dried and stained with Leishman Giemsa stain.

Microscopic examination of peripheral blood smear revealed heavy parasitemia of Trypanosoma evansi (Fig.2). Haematology revealed Hemoglobin-4.5 gm%, Packed cell volume-18 % and Total erythrocyte count-4.78 million/cumm, Total leucocyte count-18570/ cumm and platelets-170000/ cumm. Differential leucocytes count showed Neutrophils- 89%, Lymphocyte-8% and Eosinophils-3%. Biochemical parameters revealed hypoglycaemia (glucose-62mg/dl), increased values of Alanine amino transferase-157U/l, Aspartate amino transferase-145U/l, Alkaline Phosphatase-690U/l, Total bilirubin- 1.8 mg/dl, Serum urea nitrogen-45mg/dl, creatinine-1.98mg/dl

Figure 1. Bilateral corneal opacity in a Trypanosoma affected Bakerwali Dog.

Figure 2. Peripheral blood smear of dog showing Trypanosoma evansi
and decreased serum protein-5.2g/dl with hypoalbuminemia (Albumin- 2.3g/dl.)

Dog was treated with Inj. Analgin-3ml I/V followed by Inj. DNS-250ml and Inj. Dextrose (10%)-100ml I/V, Inj. Chlorpheniramine maelate-2ml I/M followed by Inj. Diminazene aceturate @5mg/kg b.wt. deep intramuscularly, 20 minutes after administration of Chlorpheniramine maelate. Supportive treatment included haematinic containing Iron, multivitamins (B1, B6, B12 & folic acid) and hepatoprotectant (Silymarin) orally twice daily for 2-weeks. Corneal opacity disappeared 7 days post treatment and Subsequent blood smear examination found negative for trypanosomes.

Clinical signs observed in the present case are in concurrence with Thirunavukkarasu et al. (2004), Gunaseelan et al. (2009) and Garud et al. (2005). Anemia in affected dog could be due to extra vascular haemolysis because of adsorption of Trypanosoma antigen on RBC surface as also reported by Soulsby (1982). Biochemical changes in the present case had been reported by many workers. Hypoglycemia, hypoproteinemia, hypoalbuminemia and increased AST, ALT are in agreement with Rode et al. (2009). Bakerwali dogs are reared by Bakerwals nomad for protection of their animals and have free access to raw animal meat. Trypanosoma infection in the present case may be transmitted by ingestion of raw infected meat as observed by Raina et al. (1985) also. Diminiazene aceturate had also been successfully used for treatment of canine trypanosomiasis as reported by Gunaseelan et al. (2009) and Garud et al. (2005) also.

References


