

HAEMATO BIOCHEMICAL CHANGES IN A CASE OF CANINE TRYPANOSOMIASIS

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Trypanosomiasis (Surra) is an important protozoan disease caused by *Trypanosoma evansi*. It is widely distributed in tropical and subtropical regions. It is insect borne and their epidemiology is determined by the ecology of insect vector. Surra in dogs is characterized by high mortality and morbidity and anemia which has been recorded as a consistent finding in infected dogs. (Prabhakar *et al.*, 1971). Some alteration in serum biochemistry including hypoglycemia, decreased albumin, globulin was also observed with infected dogs. (Aquino *et al.*, 2002) The present study was to evaluate the hematological and biochemical alterations in a dog infected with *Trypanosoma evansi*.

A six year old male nondescript dog was presented to the Veterinary Teaching Hospital of Madras Veterinary College with a history of diarrhoea and emaciation. On physical examination the dog had a body temperature of 104.0 F, pulse rate 98 per minute, respiratory rate 23 per minute, loss of body weight, lacrimation, nasal discharge and the conjunctival mucous membrane was pale with bilateral corneal opacity

Galhotra *et al* (1986) also observed similar clinical signs such as increased temperature (101.8-107.4 F) with increased pulse rate (85-104

and respiration rate (15-28) during febrile phase in experimentally infected dogs. The peripheral blood smear, whole blood and serum were screened in the Centralized Clinical Laboratory of the Madras Veterinary College. The blood smear stained with Leishman - Giemsa stain revealed microcytic hypochromic anaemic changes and as many as 15-20 trypanosomes per field. Haematological examination showed Hb - 9 g/dl, RBC - 4.32 million / cmm, PCV - 28 %, WBC 3200 / cmm and this was in agreement with Prabhakar *et al.*, (1971). The anemic changes are attributable to extravascular destruction of RBC which may be through the process of erythro phagocytosis or metabolic product and toxins liberated from the parasites.

Serum biochemistry analysed by colorimetric method using MISPA EXCEL chemistry analyzer showed BUN of 15.80 mg/dl, creatinine 2.87mg/dl, SGPT 4.83 I.U/l, total protein 6.27g/l, albumin 1.88 g/l, cholesterol 197.08mg/dl, glucose 33.99 mg/dl, potassium 3.94 mmol. Amongst these blood glucose was found to be low. Kulkarni (1994) also observed low blood glucose (27.33 mg/dl) in buffaloes. The metabolic products and toxin liberated may be the reason for low blood glucose and glycogen reserve due to hepatic changes. In addition it is established that trypanosomes utilize a large amount of glucose.

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