OCCURRENCE OF GASTROENTERITIS WITH CONCURRENT INFECTION OF HEPATOZOOONOSIS IN DOG
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Introduction
Gastroenteritis is a syndrome, characterised by inappetance, vomition, dehydration, bloody diarrhoea and death in unattended cases (Shastry, 1983). The disease may occur in animals of all ages but is much more common in young age (Anonymous, 2008). Hepatozoonosis is a protozoan disease caused by *Hepatozoon canis* in dogs and is usually occur as an asymptomatic to mild disease infecting 1 to 5 per cent of the circulating leucocytes (Baneth and Weigler, 1997; Baneth et al., 2003). Present paper put on record the occurrence of gastroenteritis along with concurrent infection of *H. canis* infection in Pomeranian dog.

Materials and Methods
A five year old Pomeranian female dog was presented to Teaching Veterinary Clinical Complex (TVCC), Bombay Veterinary College (BVC), Goregaon, Mumbai for treatment. Laboratory investigation viz. serum biochemical analysis for kidney function test (urea, BUN-blood urea nitrogen and creatinine) and liver function test (SGOT and SGPT) was done at TVCC, BVC, Mumbai using Automatic analyse. The blood in ethylene di-amine tetra acetic acid (EDTA) was collected to know the status of dehydration. The blood parameters viz. haemoglobin (Hb), packed cell volume (PCV), total erythrocyte count (TEC), erythrocyte sedimentation rate (ESR), total leucocyte count (TLC), and differential leucocyte count (DLC) was carried out using Haemo-autoanalyser at Department of Pathology, BVC, Mumbai. Detailed history taken from owner revealed that dog was having ticks before three month back. Moreover, examination of skin at the time of admission did not revealed any tick on the body.

Result and Discussion:
Clinically, dog showed inappetance, dehydration, vomition, and bloody diarrhoea. On the basis of physical and clinical examination dog, the case was diagnosed as gastroenteritis. The clinical signs viz. vomition, dehydration and bloody diarrhoea have been reported in gastroenteritis (Anonymous, 2008; Shastry, 1983). The liver enzymes such as SGOT (25.67 IU/L) and SGPT (50.59 IU/L) and kidney function test parameters such as Urea (18.26 mg/dl), BUN (8.53 mg/dl) and creatinine (0.80 mg/dl) were within normal physiological range.
CBC finding revealed marginal decrease in haemoglobin (22.0 gm %), where as packed cell volume (54%) and total erythrocyte count (7.85 x10⁶ / cu. mm) were marginally elevated. Erythrocytic indices revealed hemoconcentration (Anonymous, 2008; Shastry, 1983). The erythrocyte sedimentation rate (ESR) was decreased (2 mm/hr). Decreased ESR has been suggested in haemoconcentration (Benjamin, 2001). TLC analysis revealed normal leucocyte count (6.20 x10³ / cu. mm). Differential leucocytes count revealed relative neutrophilia (79%) and lymphopenia (L-12%) The other leucocytes were within normal range (M-07%; E-02%, B-00). The Leishman’s stained blood smear revealed cigar shaped, pale-staining cytoplasmic bodies (gamonts) in the neutrophils (Fig. 1). These bodies were identified as gametocytes of H. canis based on their morphological characteristics (Soulsby, 1982). The parasitemia of leucocytes was 2 per cent. In the present investigation, the parasitemia due to H. canis is low (2%). Baneth and Weigler, (1997) and Baneth et al, (2003) are of the opinion that hepatozoonosis in dogs usually occur as an asymptomatic to mild disease, and is associated with a low level of H. canis infects 1 to 5 per cent of the circulating leucocytes. Moreover, Ingole et al. (2011) reported 7.25 and 2 per cent parasitemia in two cases of H. canis infection, respectively. Rajamanickam et al. (1985) recorded 1-5 per cent parasitemia in canine hepatozoonosis. The ticks were present on the body of dog three month back and hence could not be identified in the present case. Platelets count was 1.22 lakh/ cu. mm and were reduced on smear. Thrombocytopenia in canine hepatozoonosis has been reported (Ingole et al., 2011). The dog was treated with Metranidazol orally (7-10 ml@ kg b. wt), DNS (150 ml, I/V) and ampicillin-cloxacillin combination drug (@ 10 mg/ kg b. wt.) for three days. Clindamycin @10 mg/ kg b. wt. (I/M, twice daily for 14 days was suggested for treatment of H. canis infection (Ingole et al., 2011) after complete recovery from diarrhoea.

**Conclusion**

A case of gastroenteritis with concurrent infection of H. canis infection was diagnosed in Pomeranian dog on the basis of clinical signs and finding cigar shaped, pale-staining cytoplasmic bodies (gamonts) in the neutrophils of Leishman stained blood smear. Its detail clinical pathology with its therapeutic management is discussed.

**References**


