

THERAPEUTIC MANAGEMENT OF CANINE EHRLICHIOSIS IN A LABRADOR BITCH

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SUMMARY

A 3.5 year old Labrador bitch was presented with complaint of vomiting, melena, increased noisy respiration rate and inability to walk properly. Clinical examination revealed submandibular oedema, pale conjunctival mucous membrane, tachycardia, hyperpnoea, enlargement of peripheral lymph nodes and normal rectal temperature. Examination of Leishmann stained blood smear revealed morulae stages in monocytes which were identified as *Ehrlichia canis*. The bitch was treated with oxytetracycline followed by doxycycline in recommended doses. There was remarkable improvement in general body condition after treatment.

Key words: *Ehrlichia canis*, bitch

Canine ehrlichiosis is a tick-borne disease caused by *Ehrlichia canis* that invades and multiplies within leukocytes and platelets in the peripheral blood (Borjesson, 2000; Mavromatis *et al.*, 2006). It is clinically manifested by vomiting, corneal opacity, melena, epistaxis, reluctance to move etc. This report puts on record successful therapeutic management of ehrlichiosis in a Labrador bitch.

A 3.5 year old Labrador bitch belonging to Chhattisgarh police was presented to the Teaching Veterinary Clinical Complex, College of Veterinary Science and A.H. Anjora, Durg with complaint of vomiting, melena, increased noisy respiration rate and inability to walk properly. Anamnesis revealed that the problem started about three days ago and the animal was treated with non-steroidal anti-inflammatory drugs and antibiotics without any improvement. Clinical examination revealed submandibular oedema, pale conjunctival mucous membrane, tachycardia (111/min.), hyperpnoea, enlargement of peripheral lymph nodes and normal rectal temperature. The bitch was dull, depressed and reluctant to move. Two ml of blood was collected in a vial containing EDTA (@ 1mg/ml) as an anticoagulant for haematological studies. Another 3ml of blood was collected in a test tube without anticoagulant for collecting serum for biochemical studies. Blood smear was prepared,

stained with Leishmann stain and examined. On microscopic examination, morulae stages were seen in monocytes which were identified as *Ehrlichia canis*. Haematological studies were performed as per standard methods of Jain (1986). The haematological values were found to be: haemoglobin (3.8 g/dl), neutrophils (92%), eosinophils (2%), lymphocytes (5%), monocytes (1%) and platelets (75000/cu mm). Biochemical parameters were estimated following standard methods using diagnostic kits in a semi-autoanalyzer (Chemistry analyser, RA-50 Bayer). The values of biochemical parameters were found to be total protein (4.38 gm/dl), albumin (1.4 gm/dl), globulins (2.98 gm/dl), total bilirubin (0.75mg/dl), alanine transaminase (ALT; 306 IU/L), aspartate transaminase (AST; 259 IU/L), alkaline phosphatase (AKP; 292 IU/L), creatinine (2.61 mg/dl) and blood urea nitrogen (39.2 mg/dl).

On the basis of clinical signs, blood smear examination and laboratory investigations, the bitch were diagnosed to be a case of ehrlichiosis. The bitch was treated with inj. oxytetracycline @ 10 mg/kg b.wt. I/V for 7 days followed by doxycycline @ 5mg/kg b.wt. orally for 10 days along with dextrose 5% @ 10ml/kg b.wt. I/V, inj. haematofos (haematinic with vitamin B-complex) @ 0.2ml/kg b.wt. I/M on alternate days for four occasions and tablet pantoprazole @ 40mg once a day for 10 days. On 3rd day of treatment there was

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improvement in general body condition and the animal was able to walk. Complete recovery was observed after 10 days and there was no morulae seen in monocyte on microscopic examination of blood smear at day 10. The animal regained its normal health in 21 days.

The parasite *Ehrlichia canis* is normal inhabitant of monocytes as well as neutrophils and eosinophils and is concentrated in tropical and subtropical regions due to the geographical distribution of its vector tick *Rhipicephalus sanguineus* (Andereg and Passos, 1999). The clinical signs as observed in this study were also reported by Manzillo *et al.* (2006). Severe neutrophilia and thrombocytopenia observed in this study corroborate with the findings of Waner (2008) and Dixit *et al.* (2012).

The biochemical attributes in this study revealed hypoproteinaemia along with hypoalbuminaemia and hyperglobulinaemia and increased activities of ALT, AST and AKP. These findings are in accordance with the findings of earlier workers (Waner and Harrus, 2000). The blood urea nitrogen level was within normal limits but the serum creatinine levels showed slightly higher values. However, Dixit *et al.* (2012) reported lower values of ALT, AST and creatinine. Thus the

present study reveals successful therapeutic management of canine ehrlichiosis in a Labrador bitch.

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