

Neutrophilic Ehrlichiosis in a Dog – A Case Report

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Abstract

A 10 month old male Spitz dog was presented with a history of inappetance and vomiting for 4 days. The animal was dull and depressed with pale conjunctival mucous membrane, enlarged lymphnodes and elevated temperature. Haematology revealed anemia, leukocytosis and thrombocytopenia. Blood smear was positive for *Ehrlichia ewingii*. Serum biochemistry showed an increase in BUN and creatinine. The case was treated with Normal saline, Pantaprazole parenterally and advised oral tab Doxycycline, Pantaprazole and suspension Thrombup for 28 days. The animal showed uneventful clinical recovery after a month.

Key words: dog - *Ehrlichia ewingii*- neutrophil

Ehrlichia spp. are obligate intracellular gram negative bacteria transmitted by ticks that often infect white blood cells of mammals. A number of *Ehrlichia* spp. infections have been reported in dogs including *E. canis*, *E. chaffeensis*, *E. ewingii*, and *E. muris* (Qurollo *et al*, 2013). *E. ewingii* infection in dogs can cause fever, anorexia, thrombocytopenia, polyarthritis, and central nervous system abnormalities (Rar and Golovljova, 2011). This paper reports on a case of neutrophilic Ehrlichiosis in a dog.

Case History and Observations

A 10 month old, male Spitz dog was brought to the Madras Veterinary College Teaching Hospital with the history of inappetance and vomiting for the past 4 days. The animal was dull and depressed. Clinical examination revealed pale conjunctival mucous membrane, enlarged lymphnodes and elevated temperature (40.1°C). Blood sample was collected for complete blood count and analysed in autohemoanalyser (BC

Vet 2800). Haematology revealed anemia (10.9 g/dL), leukocytosis (18,600 / dL) and reduced platelet count (39,000/cmm) and neutrophilia (83%). Peirpheral blood smear examination with Giemsa staining revealed the presence of *Ehrlichia* organisms in the neutrophils with its typical parasitological, morphological and staining characters which confirmed the organism *E. ewingii* (Fig 1). The organisms appeared as small, coccobacillary farms. Blood picture revealed anaemic changes along with relative neutrophilia and thrombocytopenia. Serum sample was collected and processed in A15 autoanalyser for biochemical investigation. All other parameters were within their normal range except BUN (70.10 mg/dL) and Creatinine (5.44 mg/dL).

Treatment and Discussion

The case was treated with Normal saline @10 mg/kg BW IV, Pantaprazole @ 1mg/ kg BW IV and advised with Oral Tab Doxycycline @ 10 mg/kg BW SID, Tab Pantaprazole @ 1mg/kg BW BID and Suspension Thrombup for 28 days. The animal showed uneventful clinical recovery after a month. In dogs, administration of 5 mg of Doxycycline/kg orally twice daily for 14 to 28

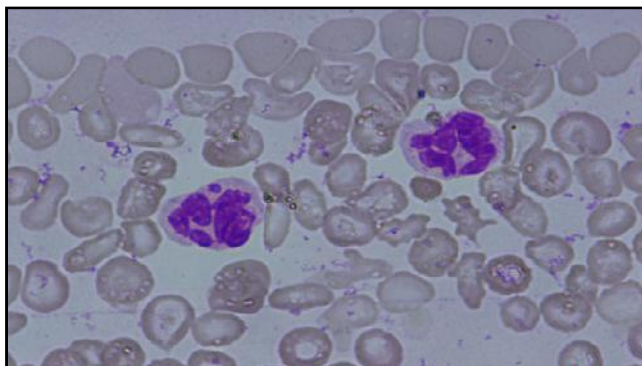


Fig 1. Blood smear showing neutrophilic *E. ewingii* (Giemsa x 100).

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days has been shown to be effective in the treatment of infections with *E. canis*, *E. ewingii*, or *A. phagocytophilum* (Breitschwerdt *et al.*, 1998).

In India, incidence of *E. ewingii* infection in dog was already reported in Kolkata (Das and Sabyasachi, 2013). *E. ewingii* is commonly seen in circulating neutrophils in the 1st week of clinical signs (Bharadwaj *et al.*, 2013). Signs of infection are generally far milder than those classically associated with *E. canis* infections include suppurative polyarthritis in one or more limbs, acute lameness, muscular stiffness, lethargy, mild fever and thrombocytopenia.

Summary

A case report of Neutrophilic Ehrlichiosis in a dog and its successful management with doxycycline and supportive therapy is reported.

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Does Compensatory Cotyledonary Hypertrophy Prevent Hydrallantois? - A Clinical Case

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Abstract

A Crossbred bovine primi developed hydrallantois at 5½ months pregnancy and it was terminated with PGF₂α and Dexamethasone. Subsequently, the animal resumed cyclicity within 3 months, conceived, sustained pregnancy, delivered a viable female calf and expelled foetal membranes within 310 minutes. Foetal membranes revealed 33 grossly hypertrophied cotyledons with micro villi in inter - cotyledonary areas suggestive of compensatory mechanism. It may be concluded an animal which is able to establish a compensatory mechanism in time can sustain a normal pregnancy and not neces-

sarily a cow that suffered dropsy should again experience the same condition in its subsequent pregnancy also.

Key words: Bovine; hydrallantois; cotyledons; hypertrophy

Hydrallantois is seen sporadically in cattle particularly dam carrying twin foetuses. It is usually develops during the last 3 months of gestation, but in severe cases may be from 5th month. As Hydrallantois was found associated with abnormally less numbers of caruncles it was congenital in heifers, while it was assigned to pathology of uterus, foetal membranes and foetal kidneys in parous cows (Youngquist and Threlfall, 2007). In contradiction to the pathol-

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