

Case Study

Therapeutic Management of Concurrent Infection of Theileriosis and Amphistomiasis in a Cow

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ABSTRACT

Keywords

Theileria,
Amphistomiasis,
Primaquin

A cross bred cow was presented with a history of pyrexia, anorexia diarrhea, progressive weakness and fall in milk yield. On the basis of clinical examination and hematology, the case was diagnosed as mixed infection of theileriosis and amphistomiasis. The animal responded to therapy of primaquin, oxytetracycline and oxyclozanide.

Introduction

Tropical theileriosis, a tick born haemo-protozoan disease caused by *Theileria annulata* is one of the devastating disease affecting cattle and buffaloes (Hasnappour et al. 2008). It is estimated that 250 million cattle in countries like India, Iran and china are at a risk of this disease causing serious economic concern through morbidity, mortality and production losses. The disease is characterized by high fever, lymph node enlargement, anaemia, petechiae of mucus membrane and varying degree of jaundice.

Drugs such as tetracycline, halofuginone, primaquin, paravaquone and buparvaquone (Butalex) have been used for the treatment of clinical theileriosis. Buparvaquone is the most effective and safe drug with an overall cure rate of 92% as reported against 1800 field cases of theileriosis caused by *Theileria annulata* and *T. parva*, (McHardy,

1987). However the drug is expensive and there are limitations regarding it's availability for widespread use under rural conditions. Under these circumstances, a combined therapy using tetracycline, antimalarials and antipyretics may be employed to develop an economic sustainable treatment protocol for treatment of theileriosis in both urban and rural areas. The present paper puts on record of a mixed infection of theileria and amphistomiasis along with its successful management with primaquin, oxytetracycline and oxyclozanide.

Case history and observations

A four year old cross bred cow was presented to the Teaching Veterinary Clinical complex, RVC, Kanke, Ranchi with a history of fever, anorexia, weakness, diarrhea and fall in milk yield. On clinical

examination, animal showed signs of fever, general debility, respiratory distress, pale conjunctival membrane and enlarged prescapular lymph node. Hematological exam revealed Total RBC (1.20 million/cmm), Total WBC 6000/cmm), Hb (5g%), PCV (17%), DLC (Neutrophil-74%, Lymphocyte-19%, Eosinophil-1% and Monocyte 2%). The blood smear showed blue coloured schizont in lymphocytes. Fecal exam revealed amphistome infection (+++). On the basis of history, clinical signs and lab findings the condition was diagnosed as mixed infection of theileriosis and amphistomiasis.

Treatment and Discussion

The animal was treated with oxytetracycline LA 15mg/kg bwt IM, 3inj at 48 – 72 hrs interval along with Primaquine @ 0.75mg/kg/b.wt (Malarid DT) 10 tab OD for 10 days. Amphistomiasis was treated with oxyclozanide @ 15 mg/kg b.wt for 3 days. Supportive treatment was given in form of Inj Ferritas 10 ml IM alternate/day (5 injections) @ 0.5 mg/kg b. wt I.M and Inj Belamyl 10 ml I.M O.D for 3 days.

Primaquine phosphate is one of the several 8 – aminoquinoline antimalarial drug which eliminates the erythrocytic stage of *Theileria annulata* and has been used with success in control of theileriosis in China (Zhang, 1980, 1987). Malarid DT (26.5 mg primaquine equivalent to 15 mg primaquin base) Concurrent use of two treatments of Halofuginone Lactate and six of Primaquin phosphate at the dose rate of 1 mg and 2 mg/kg b.wt respectively was fruitful in eliminating *Theileria buffeli* infection (Stewart *et al.*, 1990). Imidocarb

dipropionate and primaquine diphosphate has been found effective in reducing *T. orientalis* parasitaemia in cattle. The combined therapy of oxytetracycline, primaquin phosphate and oxyclozanide resulted in recovery of the animal after two weeks.

In conclusion, A case of mixed infection of theileriosis and amphistomiasis and its successful treatment with primaquin phosphate was reported

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