

Case Study

<https://doi.org/10.20546/ijcmas.2018.708.411>

Theileriosis in Tharparkar Calves and its Therapeutic Management-Case Study

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ABSTRACT

Keywords

Theileria, Calves,
Buparvaquone,
Hyalomma, Anorexia

Article Info

Accepted:
22 July 2018
Available Online:
10 August 2018

Theileria diseases are known to cause heavy losses to the livestock industry. Lack of appropriate control strategies for this disease lead to increase in mortality, reduced milk production, lowered animal drought power, ultimately produces constraint to the dairy industry. Theileriosis is a tick-borne disease, caused by *Theileria annulata*. The vector ticks are of the genus *Hyalomma*. This case report revealed the successful therapeutic management of theileriosis in Tharparkar calves. Clinical examination of affected calves revealed high fever (104.5⁰ F to 106⁰F), dullness, anorexia and enlarged lymph nodes. The blood smears examination after staining revealed the presence of Theileria organisms. Buparvaquone along with supportive therapy could cure calves.

Introduction

Theileriosis is caused by *T. annulata* and is transmitted through Ixodid tick of genus *Hyalomma anatolicum* (Mirzaei, 2007). In bovine, Tropical Theileriosis occurs in Mediterranean countries, Middle East, Indian and China due to infection of *T. annulata* (Radostits *et al.*, 2007). Theileriosis is a major constraint for cattle production in the tropics and subtropics (Jongejan and Uilenberg, 1994). In India the annual loss reported due to tropical theileriosis is approximately US\$ 800 million (Devendra, 1995). The hot and humid climate is highly favourable for the development and survival of ticks. The major clinical manifestation of theileriosis is higher

body temperature regularly than in any other cattle disease. Fever from 41 to 42°C is common in acute stages. Later on (day 5 to day 10 from the clinical onset), temperature will lower to a normal range (38.0–39.5°C), but the disease will continue to progress, despite a possible apparent clinical improvement (appetite comes back).

Afterwards, from day 10 to day15, there is a downfall stage, with hypothermia (37 to 38°C), anemia, jaundice, and heart failure. Such animals rarely recover, even with intensive treatment. Lymph nodes are commonly enlarged and there may be episodes of blood from the nose, difficulty breathing and weight loss (Sengupta *et al.*, 2003).

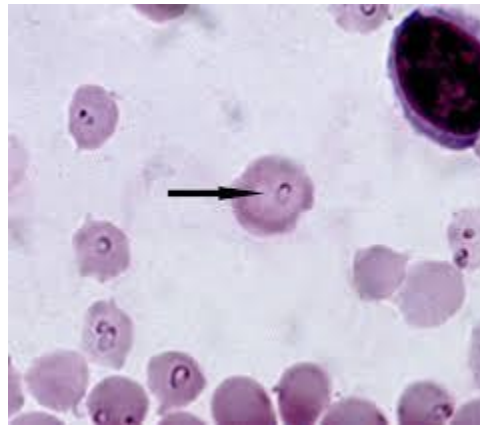
Theileriosis occurs due to infection of variety of tick vectors and leads to appearance of infections ranged from clinically in apparent to rapidly fatal one (Taylor *et al.*, 2007). The present case report demonstrates the therapeutic management of theileriosis cases in calves.

Case History and Observation

Two calves having age between 4-6 months at Livestock Research Station, Chandan reported

with persistent fever (104.5⁰F and 106⁰F) along with enlargement of prescapular lymph node, oedema of the dependent parts of the body, weakness, anorexic, lachrymation, dyspnoea and anaemia. Clinical signs revealed suspicion for haemoprotozoan infection, blood smear examination from peripheral circulation revealed presence of Theileria (Fig. 1). Faecal examination was done to rule out any endoparasitic infestation, results of which were negative for presence of any egg or evidence of parasite.

Fig.1 Blood smear



Therapeutic management and Discussion

In the present study, the affected calves were treated with Buparvaquone @ 2.5 mg/kg body weight intramuscularly and advised to repeat after seven days (Naik *et al.*, 2010). In addition, meloxicam @ 0.5 mg/kg body weight intramuscularly for three days.

Additionally supportive therapy with crystalloid fluid, iron preparations, multivitamin, folic acid and cyanocobalamin was also done as it can fasten the recovery rate in Theileria (Singh *et al.*, 2016). The calves were recovered and attained normal health after one week of treatment. After two weeks of treatment animals were further screened for evidence of infection which was found negative. The present case report

demonstrates the therapeutic management of theileriosis cases in calves.

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How to cite this article:

Meel, M.S., R.S. Pal, G. Mishra and Kajla, M. 2018. Theileriosis in Tharparkar Calves and its Therapeutic Management – Case Study. *Int.J.Curr.Microbiol.App.Sci*. 7(08): 3981-3983.
doi: <https://doi.org/10.20546/ijcmas.2018.708.411>