Scholars Journal of Agriculture and Veterinary Sciences **e-ISSN 2348–1854**
Sch J Agric Vet Sci 2015; 2(3A):180-181 **p-ISSN 2348–8883**

(An International Publisher for Academic and Scientific Resources) DOI: 10.36347/sjavs.2015.v02i03.005

Theileriosis in calves and its Successful Therapeutic Management

Vipan Kumar*[1], Parvinder Kaur[2], Heigo Pal[3], Parveen Kumar[4], Hanish Sharma[5] , V.M. Wadhawan[6]
[1]Junior Epidemiologist, [2] Asst. Parasatilogist, [3] Veterinary Gyanecologist, Veterinary Pathologist, Senior Research Fellow[5], Joint Director[6]
Regional Disease Diagnostic Laboratory (North Zone), Jalandhar-144001, Punjab

***Corresponding Authors**
Name: Vipan Kumar
Email: vipanjolly@gmail.com

Abstract: Theileria is one of the most important blood protozoan parasite and a major constraint to the dairy industry and causes devastating losses to the livestock worldwide. Theileriosis is caused by *Theileriaannulata* and is transmitted through *Hyalomma anatolicum*. The present report demonstrates the successful therapeutic management of theileriosis in calves. Clinical examination of affected animals revealed high fever (104^0 F), dullness and anorexia. The blood smears examination after staining revealed the presence of *Theileria* organisms. Buparvaquone along with supportive therapy could cure all the animals.
Keywords: Theileria, calves, Buparvaquone, Blood protozoan

INTRODUCTION

Theileriosis is caused by *T. annulata* and is transmitted through Ixodid tick of genus *Hyalommaanatolicum*[1]. It is the most important blood protozoan parasite and a major constraint to the dairy industry and causes devastating losses to the livestock. In India the annual loss reported due to tropical theileriosis is approximately US$ 800 million [2]. The hot and humid climate is highly favourable for the development and survival of ticks. The major clinical manifestation oftheileriosis are pyrexia, lympadenopathy,anemia,anorexia,cachexia, respiratory distress, petechiae on conjunctiva,unilateral and bilateral exopthalmia[3,4,5]. The present case report demonstrates the therapeutic management theileriosis cases in calves.

Case History and Observation

Three calves aged below two month were presented to the Veterinary Polyclinic, with a history of dullness, anorexia, and high body temperature (104^0F) since 3-4 days. The cases were suspected for haemoprotozoan diseases and the blood samples were collected with EDTA from the calves. The blood samples were referred to Veterinary Parasitology Laboratory at Regional Disease Diagnostic Laboratory, for confirmatory diagnosis.The blood smears were stained with Giemsa's and examined for the presence of haemoprotozoan parasites.

Treatment and Discussion

Out of three animal blood smears examined two calvesharboured*Theileriaannulata*organisms by Giemsa's staining technique (Fig. 1). Similarly [6] reported theileriosis in 7 day old bovine calf. According to [7,8] the young calves of below one month of age are highly susceptible for theileriosis, hence the calves should be given proper immuno- prophylactic measures immediately after birth under field conditions. [9,10] opined that, the young calves are highly susceptible for theileriosis.

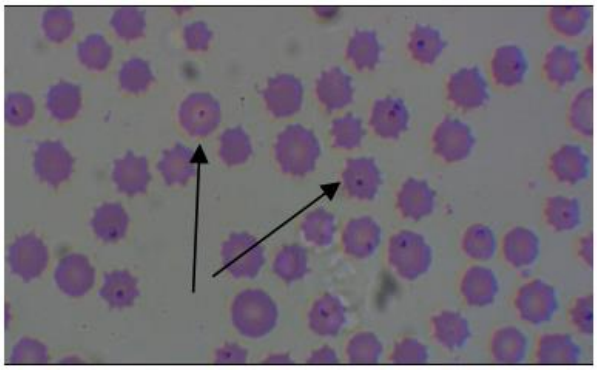

Fig-1:. *Theileria annulata* piroplasms

In the present study, the affected animals were treated with Buparvaquone (Butalex at the dose rate of dose 2.5 mg/kg body weight) intramuscularly and advised to repeat after seven days. In addition, meloxicam (Melonex at dose rate of dose 0.5 mg/kg body weight) intramuscularly for three days. The calves were recovered and attains normalcy after one week of treatment. This is in accordance with [6] they used buparvoquone along with supportive therapy for the successful treatment.

One blood smears did not revealed any haemoprotozoan parasites, but the animals were responded for the above said treatment.

REFERENCES

1. Mirzaei M; Treatment of natural tropical theileriosis with the extract of the plant Peganumharmala. Korean Journal of Parasitology, 2007; 45: 267-271.
2. Devendra C; In Global Agenda for Livestock research, EDS, ILRI, Nairobi, 1995; 41-48.
3. Sengupta PP, Bansal GC, Ray D; Ocular lesions in experimental theileriosis. Journal of Veterinary Parasitology, 2003; 7(2):127–129.
4. Branco S, Ovalho J, Leitao A, Pereira I, Malta M, Mariano I, Carvalho T, Baptista R, Shields BR, Peleterico MC; Fatal cases of *Theleriaannulata* infection in calves in Portugal associated with neoplastic likelymphoid cell proliferation. Journal of Veterinary Science, 2010.; 11 (1): 27-34.
5. Sudan V, Sharma RL, Yadav R, Borah MK; Turning sickness in a cross bred cow naturally infected with Theileria annulata. Journal of Parasitic Diseases, 2012;36(2):226-229.
6. Gupta SK, Yadav A, Raina AK and Singh R; Theileriosis in a seven-day old b o v i n e calf – a case report. Indain Journal of Veterinary Medicine, 2004; 24: 55.
7. Mudgal VK; Studies on cross-immunity and field trials with cell culture vaccine against bovine tropical theileriosis. M.V.Sc thesis. Haryana Agricultural University, Hisar, India. 1993
8. Naik G, Ananda K J and Kavitha B; Theileriosis in calves and its successful treatment. Veterinary World, 2010; 3 (4):191.
9. Sharma RD, Nichani AK; A cell culture vaccine against bovine tropical theileriosis even in for young calves. Proceeding first Asian Congress of Veterinary Parasitology, held from October 6-8 1990 Bihar Veterinary College, Patna, India. 1990.
10. Grewal AS; Development of theilaria vaccine for control of bovine tropical theileriosis. Proceding Annual Scientist meet of All India Coordinated Research Projects on ‘Intracellular blood protista with special reference to the immunoprophylaxis and control’ held on Feb. 8, 1992 at Haryana Agricultrual University, Hisar, India. 1992.