



P-ISSN: 2349-8528

E-ISSN: 2321-4902

IJCS 2018; 6(3): 1646-1647

© 2018 IJCS

Received: 15-03-2018

Accepted: 17-04-2018

Utpal Barman

MV Sc Scholar, Dept. of Clinical Medicine, Ethics and Jurisprudence, College of veterinary science, Assam Agricultural University, Khanapara, Guwahati, Assam, India

Bhaben CH Baishya

Asst. professor, College of veterinary science, Assam Agricultural University, Khanapara, Guwahati, Assam, India

Pallavi Devi

Asst. professor, College of veterinary science, Assam Agricultural University, Khanapara, Guwahati, Assam, India

Sushanta Goswami

Professor, teaching veterinary Clinical Complex, College of Veterinary Science, Assam Agricultural University, Khanapara, Guwahati, Assam, India

Pranjal Borah

Junior scientists, Goat Research Station, College of veterinary science, Assam Agricultural University, Khanapara, Guwahati, Assam, India

Correspondence**Utpal Barman**

MV Sc Scholar, Dept. of Clinical Medicine, Ethics and Jurisprudence, College of veterinary science, Assam Agricultural University, Khanapara, Guwahati, Assam, India

Subclinical babesiosis in a cow and its therapeutic management

Utpal Barman, Bhaben CH Baishya, Pallavi Devi, Sushanta Goswami and Pranjal Borah

Abstract

A case of babesiosis in a HF cow was recorded without exhibiting typical clinical signs of haemoglobinuria. Pear shaped babesia organism was detected through microscopic examination of the blood smears. It was treated successfully treated with nilbery, vetocycline and supportive therapies.

Keywords: babesiosis, haemoglobinuria, pear shaped

Introduction

Babesiosis is an emerging disease and included in the OIE's list of 'B' category diseases (OIE Terrestrial Manual, 2004) [3]. Annual economic losses to the livestock industry due to babesiosis in India are estimated to be about 57.2 million US dollars (McLeod and Kristjanson, 1999) [2]. It is a tick borne haemoparasitic disease characterised by high fever, haemoglobinuria and anemia (Soulsby 1982). Sometime it occurs without showing any typical clinical sign. The recovered animals remain as carriers with subclinical infection lasting for several months or years that affects the production performance of the animals.

Case history and clinical findings

A case was attended over telephonic communication at a dairy cattle hard. A HF cow of around 4 years of age was showing inappetance for last 24 hours. The owner reported that there was sudden drop in the milk yield. Clinical examination revealed an elevated body temperature (103.4) and a pale conjunctival mucous membrane. On auscultation, Heart and lung sound was found normal with respiration and pulse rate within the normal range. Further examination revealed presence of tick infestation on the body coat. The freshly voided stool by the cow was reddish in colour.

Diagnosis

Around 2 ml of whole blood was collected aseptically from the cow in an EDTA vacutainer for routine as well as parasitological examination. Haematological examination was carried out in an automatic animal blood cell counter and it revealed a fall in haemoglobin level (7.6 mg/dl) and Red Blood Cell Count (4.21 mill/mm³). Thin blood smear was prepared and stained with Giemsa stain. Microscopic examination of the blood smear revealed presence of pear shaped *Babesia bigemina* organism inside the RBC. Based on the symptoms shown and the report of haematological and microscopic examination, the case was diagnosed as subclinical babesiosis.

Treatment

The cow was treated with a single dose of diminazene diaceturate (Nilbery) @4mg/kg body weight deep intramuscularly in the neck region and analgin (Vetalgin)@ 15 ml daily intravenously for 2 days along with intravenous fluid therapy and supportive therapy consisting of oral haematinics and vitamin supplement. On second day of treatment, the cow showed no satisfactory improvement. So, oxytetracycline (Vetocycline DS) @ 10 mg/kg iv) was added 12 hourly for 5 days. The cow started regaining its appetite from 3rd day post treatment and complete recovery was noticed on 5th day post treatment. Blood was collected on 5th day post treatment and it revealed an improvement in the level of haemoglobin and Red Blood Count along with absence of the organism in microscopic examination of the blood smear.

Discussion

Generally, babesiosis occurs in cow with a typical clinical signs of coffee coloured urine. But it was not found in the present case, hence it was termed as subclinical. Kakati (2014) also recorded similar findings in his study. The drop in the level of haemoglobin and RBC is due to the intravascular haemolysis of RBC and increased phagocytic activity of non-infected RBC by RE system. Generally, diminazene diacetate is the drug of choice against babesiosis in cattle. But, in the present case effective response was received only after administration of oxytetracycline. It might be due to the presence of some other organisms that were sensitive to oxytetracycline which could not be detected in the microscopic examination. The effective response after adding oxytetracycline might also be due to the synergistic effect between diminazene acetate and oxytetracycline.

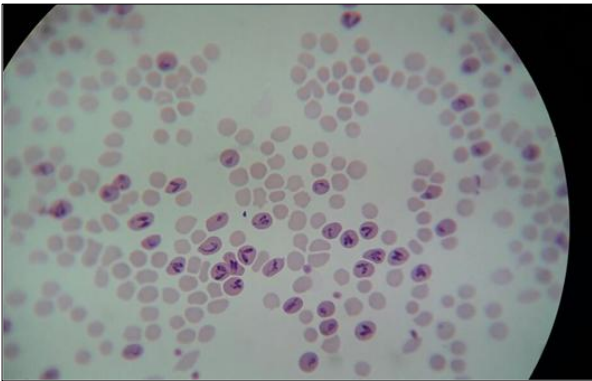


Fig 1: photomicrograph showing pear shaped *Babesia bigemina* organism inside red blood cell (giemsa stain, 100x)

Reference

1. Kakati P. Studies on ticks and tick borne haemoparasitic infection in cattle of Assam. M.V.Sc. thesis, Assam Agricultural University, Guwahati, 2013.
2. McLeod R, Kristjanson P. Final report of joint esys/ILRI/ACIAR Tick Cost project - Economic impact of ticks and TBD to livestock in Africa, Asia and Australia. International Livestock Research Institute (ILRI), Nairobi, Kenya, 1999.
3. OIE. Bovine babesiosis. In: Terrestrial Manual. Chapter 2.4.2. Office International Des Epizooties, World Health Organization for Animal Health, Paris, France, <http://www.oie.int/en/international-standard-setting/terrestrial-manual/> access-online. 2004, 1-16.