



## **An Unusual case of Theileriosis in a HF cross bred cow and its Clinical management**

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### **ABSTRACT**

*The present report discusses the occurrence of Theileriosis in a cow with some unusual symptoms which mislead to consider the condition as pericarditis. A six year old HF crossbred cow was presented to College Hospital, Veterinary College, Shivamogga, with a history of brisket oedema, lack of appetite and failure of recovery in spite of treatment given by the local Veterinarian for 5 days. The detailed clinical examination revealed that animal is weak, a football sized brisket oedema, jugular cording, anaemia, enlargement of prescapular lymph nodes and moderate tick infestation. The animal was subjected to ultrasonography for confirmation of pericarditis, which showed normal cardiac activity, no pleural and pericardial effusions and the rumino-reticular contractions were normal. Hence it was considered normal cardiac activity. The haematological parameters showed anaemia and leucopaenia. The Giemsa's stained blood smear revealed Theileria organisms in RBCs. The case was diagnosed as Pseudopericarditis due to Theileriosis. The animal was treated with Buparvoquone at 2.5 mg/kg body weight IM along with supportive haematinics. The appetite came to normal within a week. The brisket oedema and the jugular cordings were reduced over a period of 20 days.*

**Key words:** Cow, Theileriosis, Pseudopericarditis, Buparvoquone

Received 10.05.2017

Revised 10.06.2017

Accepted 30.07.2017

### **INTRODUCTION**

The arthropod borne hemoparasitic diseases are of great economic impact on livestock affecting 80% of the world cattle population and causes economic loss due to morbidity and mortality [1]. Theileriosis is one such commonest haemoprotozoan diseases of Indian subcontinent causing severe economic losses. The disease usually expressed with common clinical signs of high fever, anorexia, conjunctival petechia, enlarged lymph nodes, and anaemia, diarrhoea and dysentery are also associated with later stages of infection [2].

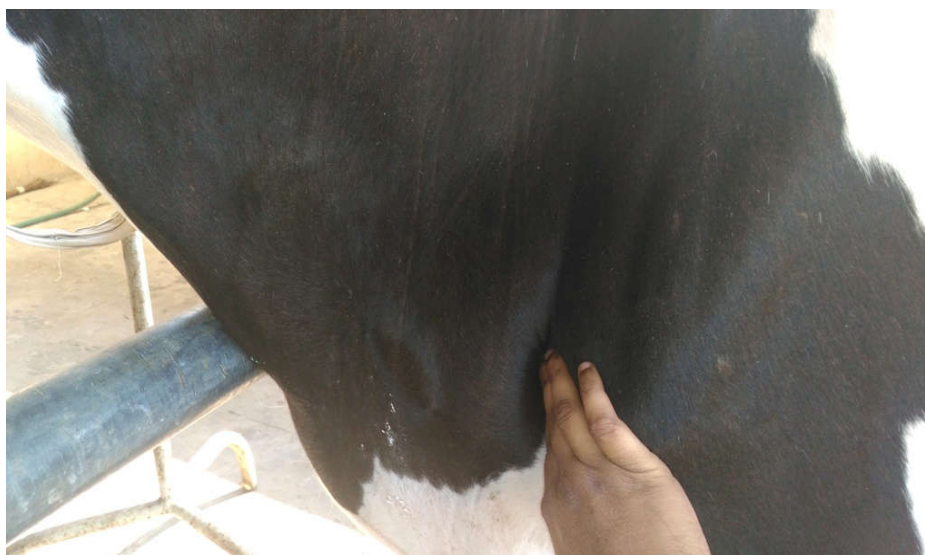
Various diseases usually occur in animals with common clinical manifestations. But there are certain occasions in which the some clinical manifestations exhibited in animals mask the original cause. The present paper discusses a case of Theileriosis in a HF crossbred cow and the clinical manifestations exhibited in the cow are almost correlating the signs of traumatic pericarditis.

### **CASE HISTORY, OBSERVATION AND DIAGNOSIS**

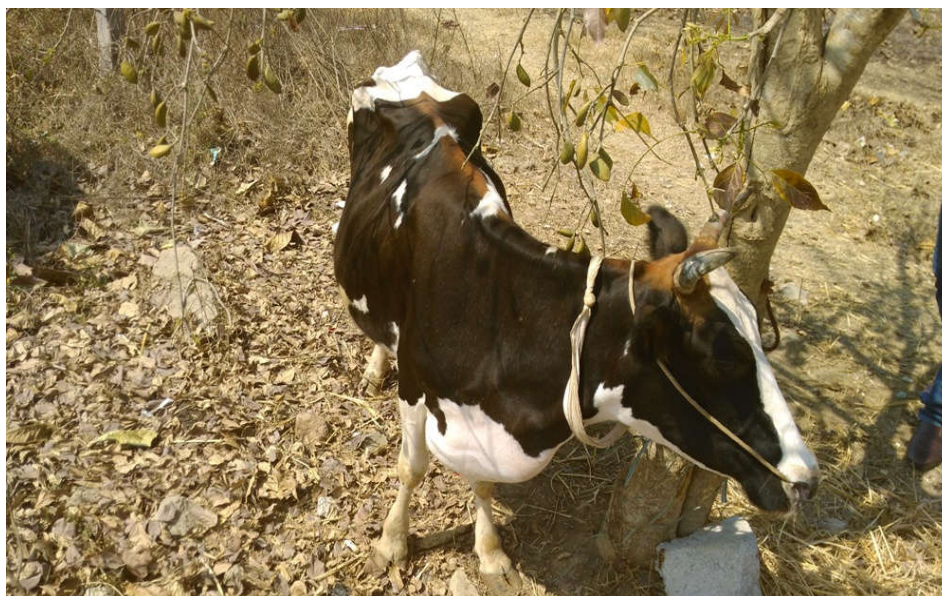
A 6 year old HF crossbred cow was presented to college hospital, Veterinary College Shivamogga with a history of brisket oedema, lack of appetite, no recurrent bloat, and failure of recovery in spite of treatment given by the local veterinarian for 5 days. Previously the animal was treated with Ceftriaxone injection at 10mg/kg BW IV, Meloxicam at 0.2 mg/kg IM and multivitamin and liver extracts 15 ml IM and Frusemide at 2 mg/kg IV for five days by the local veterinarian for 5 days with no progress in the recovery.

On clinical examination, the animal was weak, reluctant to move, temperature was in normal range (102°F), pale conjunctival mucous membrane, moderate tick infestation, pre scapular lymph nodes were swollen (Figure 1), there was no abdominal distension, the right and left jugular veins were highly prominent appearing like cord, brisket oedema was prominent with the size of approximately a football (Figure 2). On auscultation of thoracic region at 5<sup>th</sup> to 6<sup>th</sup> intercostals space revealed no muffled heart sounds, mild tachycardia (82beats /min), no pericardial friction rub, no fluid splashing or tinkling sounds.

The investigation for the metallic object in the lower reticular area using metal detector revealed no result. The ultrasonography (GE logic book® GE healthcare Pvt. Ltd.), using a 3-MHz microconvex transducer, of ventral thoracic region revealed normal cardiac activity and there is no variation in the cardiac and pericardial structure. There was no pleural and pericardial effusion. The examination of pericardial sac revealed absence of any fibrinous deposits. The ultrasonography also revealed normal reticular and ruminal contractions, no space occupying structures near ventral side of reticulum and rumen (Figure 3 and 4). The haematobiochemical values showed anaemia, (Hb 8.0 g %), and leucopaenia (8000/dl) and the Giemsa's stained blood smear examination revealed presence of *Theileria* organisms. The aspiration of prescapular lymphnode did not yield the Koch's blue bodies. The case was diagnosed as pseudopericaditis due to Bovine tropical *Theileriosis*.



**Figure1:** enlargement of prescapular lymph node



**Figure 2:** Brisket Oedema and Jugular engorgement

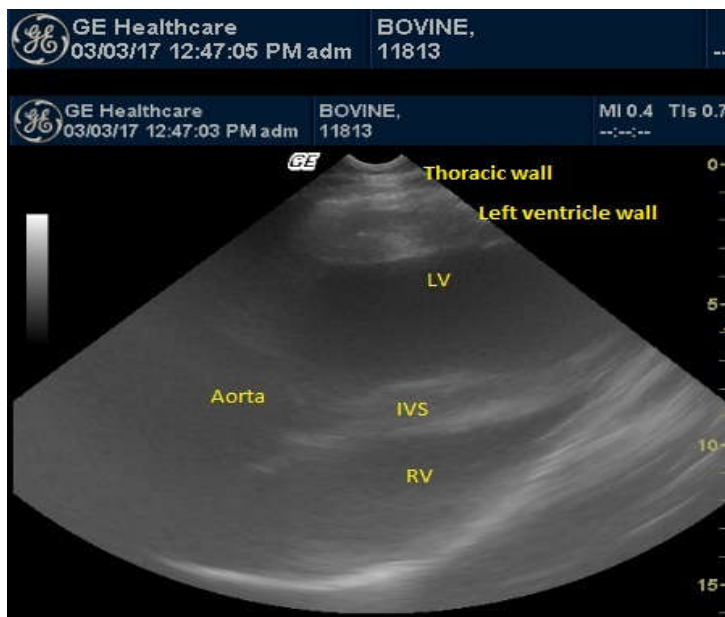


Figure3: ultrasonography of heart depicting normal structure



Figure 4: Ultrasonography of reticulum having normal structure



Figure 5: Recovered animal 20 days after treatment. No jugular engorgement and brisket oedema.

**TREATMENT AND DISCUSSION**

The animal was treated with Buparvoquone (Zubion®, Intas Pharmaceuticals Pvt. Ltd. Ahmadabad) at the dose of 2.5 mg/kg Body weight IM and supportive iron supplementations (aRBCe Rakkt® syrup, Vetoquinol India Animal Health Pvt. Ltd. Mumbai) were given at the dose of 50 ml per day for 10 days in a month for 2 to 3 months to combat anaemia. An uneventful recovery was observed after a week of treatment. The appetite came to normal within a week. The brisket oedema and the jugular cordings were reduced over a period of 20 days onwards (Figure 5).

The symptoms like brisket oedema, jugular cording and reluctance to move, lack of appetite are the common symptoms of traumatic pericarditis. [2]. But there are certain occasions in which the exhibited symptoms usually mask the original disease. In the present case the clinical manifestations almost correlating with the symptoms of traumatic pericarditis but the symptoms exhibited are due to Theileriosis hence it can be considered as Pseudopericarditis due to Theileriosis.

Pseudopericarditis is one of the rare complications of circulatory system of cattle. The signs reported in the present study were similar to those described for pseudopericarditis in the literature [2, 3]. The term pseudopericarditis has been used to describe jugular engorgement and oedema of the brisket and ventral abdominal wall caused by pressure at the base of the cranial and caudal vena cava returning blood to the heart [3]. There are certain other conditions in which the pseudopericarditis in cattle can be expected are tumours, abscesses, echinococcus cysts, swollen lymph nodes resulting from tuberculosis and leukosis, one-sided pleuritis and diaphragmatic hernia (4,5 and 6) also reported the involvement of Theileriosis in Pseudopericarditis and justified that as the mediastinal lymph nodes around the caudal and cranial vena cava were affected, they could also be swollen and putting pressure on the vena cava which leads hindrance of backflow of blood leads to the development of oedema and jugular cording. The clinical signs observed in the present case are in accordance with Keles *et al.* [6].

The treatment with Buparvoquone cause completely recovery from the symptoms. The use of Buparvoquone as a drug of choice was reported previously [7]. The literature search on involvement of Theileriosis in pseudopericarditis was not found in India.

It can be concluded that Theileriosis can also be considered as one of disease for differential diagnosis of traumatic pericarditis in large ruminants and can be treated successfully with Buparvoquone.

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**CITATION OF THIS ARTICLE**

Satheesha S.P., Dhanalakshmi S., Chandrashekhar G., Naveen M., Manasa R. Kottadamane and Malatesh D.S. An Unusual case of Theileriosis in a HF cross bred cow and its Clinical management. *Bull. Env. Pharmacol. Life Sci.*, Vol 6 [9] August 2017: 140-143