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## Successful therapeutic management of babesiosis in HF cow

**Siddiqui MFMF, Digraskar SU, Ajabe JS, Sakhare MP, Borikar ST, Shaikh SR, Kumbhar NS and Singh ND**

**Abstract**

A five year old HF cow was presented to Department of Veterinary Clinical Medicine, Ethics & Jurisprudence, College of Veterinary and Animal Sciences, Parbhani with compliant of inappetance, coffee coloured urine and drop in milk yield, dullness and depression since three days. On clinical examination it was revealed that rectal temperature was 105 °F, tachycardia, polypnea and pale conjunctival mucus membrane with tick infestation on body. The hematological finding revealed that there was decreased in Hb (3.2 g/dl), TEC (1.63 mil/cu.mm) and PCV (7.8%) whereas biochemical examination revealed as calcium (8.7 mg/dl) and phosphorus (5.33 mg/dl) were within normal range. On the basis of history, clinical examination, blood smear examination and haemato-biochemical investigation the case was diagnosed as Babesiosis. The affected cow was treated with inj. diminazene aceturate @ 3.5 mg/kg body weight deep IM once, inj. dextrose 5% - 2000 ml IV, inj. iron sucrose 20 ml IV, inj. Meloxicam @ 0.5 mg/kg body weight IM. Animal showed completely clinical recovery after 7<sup>th</sup> day of treatment.

**Keywords:** Babesiosis, HF cow, Diminazene aceturate, Coffee colour urine

**Introduction**

Babesiosis is very important haemoprotozoal disease affecting all animals and most commonly occurs in crossbred cows than native breeds. The disease is prevalent in tropical and subtropical region of India, at the time when ticks population is at peak level [4]. Disease is caused by genus *Babesia bigemina* intraerythrocytic haemoprotozoan parasite, transmitted by tick to the domestic as well as wild animals [1]. *Babesia* causes high mortality and morbidity in dairy cows and reduces the milk production and decrease working efficacy in affected animals which causes heavy economic loss to animal owners [5]. The disease is characterised by pyrexia, anaemia, coffee coloured urine and tick infestation on body [3]. The early detection and treatment of babesiosis is important tools to control the disease in animals [4]. The present communication describes haematological profile and therapeutic management of babesiosis in HF cow.

**History & Clinical signs**

A four year HF cow was presented to the Department of Veterinary Clinical Medicine, Ethics & jurisprudence, College of Veterinary and Animal Sciences, MAFSU, Parbhani with a compliant of anorexia, fever, passing of coffee coloured urine, reduced milk yield, tick infestation on body part and reluctant to move. On clinical examination it was found that there was tachycardia (78 beats/min), respiratory distress (32 breaths/min), rectal temperature (104.2 °F) and pale conjunctival mucus membrane. Fig. 1 shows heavy tick infestation at brisket area. Blood smear was prepared at high body temperature from ear vein stained with Giemsa stain and examined under microscope. Blood was collected on day 0 and day 12<sup>th</sup> for haematological examination.

**Diagnosis and Treatment**

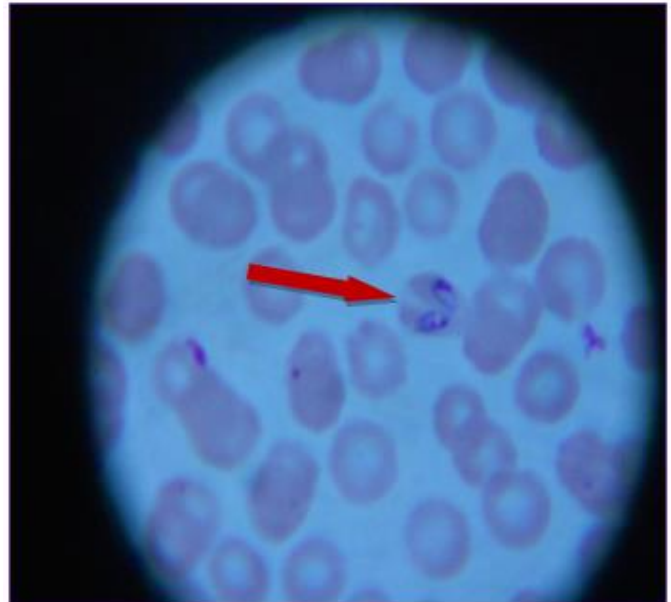
On the basis of history, clinical observation, symptoms and blood smear examination the case was confirmatively diagnosed as babesiosis. The present case was treated with Inj. Diminazene aceturate @ 3.5 mg/kg body weight deep intramuscularly once on both sides of neck, Inj. Chlorpheniramine maleate @ 0.5 mg/kg body weight IM, Inj. Meloxicam @ 0.5 mg/kg body weight IM, Inj. Liver tonic 10 ml IM, Inj.

Iron sucrose 20 ml IV diluted in one litre 5% dextrose saline IV once and Inj. Ivermectin @ 0.2 mg/kg body weight S/C once was given to control ticks. The colour of urine was changed to normal after 24 hours of treatment with Inj. diminazene aceturate. Fig. 2 shows change in colour of urine before & after treatment and Fig. 3 shows intra-erythrocytic *Babesia bigemina* organism.

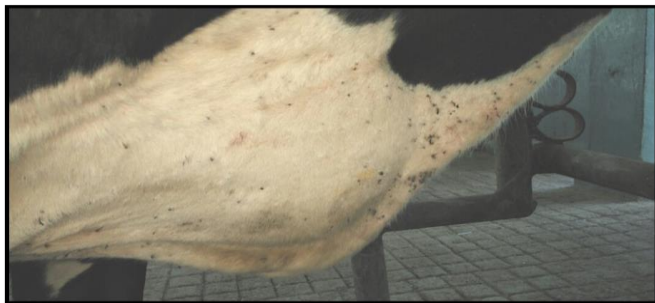
**Results and Discussion**

Haematological finding before treatment was Hb (3.2 g/dl), TEC (1.63 mil/cu.mm), PCV (7.8%) and serum calcium (8.7 mg/dl) and phosphorus (5.33 mg/dl) value were within normal range. The color of the urine changes dark brown to normal after 24 hours administration of diminazene acculturate and the animal showed improvement in feed intake, water intake and general health condition. Fig. 4 showing a body condition of *Babesia* affected animal before treatment and Fig. 5 showing a body condition of *Babesia* affected animal after treatment.

The subsequent severe reduction in Hb, PCV, TEC and platelet are indicative of haemolytic anaemia observed generally in animals with Babesiosis [2]. Due to the intravascular haemolysis, the erythrocytic indices (MCV, MCH and MCHC) revealed normocytic and normochromic anaemia. It led to anaemic hypoxia. Pulse and respiratory rates increased due to the compensatory mechanism of heart and lungs for proper tissue oxygenation [6]. On day 12<sup>th</sup> the hemoglobin (7.5 g/dl) was recorded and it was found that Hb level were improved significantly & reached towards normal range. The HF cow showed the significant improvement after the treatment with Inj. Diminazene aceturate, clinical & hematological values reached towards the normal & animal also showed improvement in appetite and body condition.



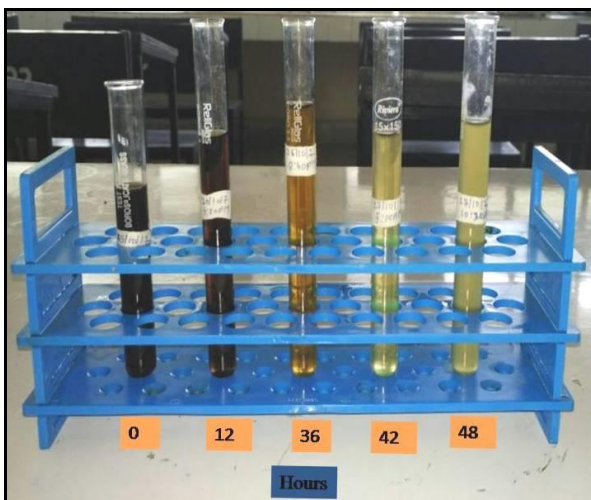
**Fig 3:** Intra erythrocytic *Babesia Spp.*



**Fig 1:** Tick infestation in Babesiosis affected HF cow



**Fig 4:** Body condition of *Babesia* affected animal before treatment



**Fig 2:** Changes in colour of urine before & after treatment at different hours interval



**Fig 5:** Body condition of *Babesia* affected animal after treatment

## References

1. Mohan KCM, Muralidhara A, Ramesh PT, Hogalagere DN, Shivalingappa YM, Anuradha ME *et al.* Prevalence of Canine Babesiosis in Different Breeds of Dogs in and Around Bengaluru. *Advances in Animal and Veterinary Sciences.* 2017; 5(3):140-144.
2. Radostits OM, Gay CC, Blood DC, Hinchcliff KW. *Veterinary Medicine A Textbook of the Diseases of Cattle, Sheep, Pigs, Goats and Horses.* 9<sup>th</sup> Ed., W.B. Saunders, London, 2000.
3. Rajput ZI, Hu Song-hua, Arijo AG, Habib H, Khalid K. Comparative study of Anaplasma parasites in tick carrying buffaloes and cattle. *Journal of Zhejiang University Science.* 2005; 6B:1057-1062.
4. Saritha G. Clinical Management of Babesiosis in cattle. *Research Journal for Veterinary Practitioners.* 2016; 4:30.
5. Senthil KA, Yasotha A. Clinical management of babesiosis in crossbred dairy cattle. *International Journal of Environmental Science and Technology.* 2015; 4(5):1438-1441.
6. Tufani NA, Fazili MR, Malik BSA, Dar KH. Clinico-haematological and therapeutic management of acute babesiosis in a Holstein –Friesian crossbred cow. *Veterinary Clinical Science.* 2015; 3 (3):11-14