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## Babesiosis in a pregnant cow: A case report

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### Abstract

Five month pregnant crossbreed jersey cow aged around 4-5 years with the history of high fever, Inappetance, Anaemia, icteric conjunctiva and vaginal mucous membrane, reduced milk yield, restlessness, passing coffee coloured urine (Haemoglobinuria). Babesiosis was diagnosed on the basis of history of animal, presence of ticks on the body and clinical symptoms exhibited by the animal. Animal was successfully treated with berenil, Oxytetracycline (LA), melonex plus, tribivet, vitamin and mineral supplementation.

**Keywords:** red water, icteric, anaemia, pregnant cross breed jersey cow

### Introduction

Bovine babesiosis (BB) is an intraerythrocytic tick borne disease of cattle and buffaloes caused by the protozoan parasites of the genus *Babesia*. The two main species known to affect cattle are *Babesia bovis* and *Babesia bigemina*. The disease is principally transmitted by one host tick *Boophilus* species. Transmission occur transovarially between tick generations, by fomites and mechanically from contaminated blood. In utero transmissions have been reported, but are infrequently encountered in calves. Bovine Babesiosis is found in areas where its arthropod vectors are distributed, especially tropical and subtropical climates. *B. bovis* and *B. bigemina* are widely distributed and a major importance in Africa, Asia, Australia, Central and South America. *B. divergens* is economically important in some parts of Europe and North America. Babesiosis is the second most widespread blood-borne disease of animals, and prominently, is gaining increasing interest as an emerging zoonosis of humans. Clinically, the disease is characterized by fever and intravascular hemolysis manifested by a syndrome of anaemia, hemoglobinuria and jaundice. The signs can also vary depending on the specie of parasite and the host factor such as age and immune status. BB is predominantly observed in adult cattle, with *B. bovis* generally being more pathogenic than *B. bigemina* and *B. divergens*. Infected animals develop lifelong immunity against re-infection with the same species and cross-protection is evident in *B. bigemina*- immune animals against subsequent *B. bovis* infections. BB is also known as tick fever, Texas fever, red water fever. Incubation period is often 2-3 weeks or longer after tick infestation. Shorter incubation periods have however been documented in the field and through experimental inoculation (4-5 days for *B. bigemina* and 10-12 days for *B. bovis*). Babesiosis is the second most widespread blood-borne disease of animals (Homer *et al.*, 2000; Hunfeld *et al.*, 2008, Gohil *et al.*, 2013)<sup>[2, 3, 1]</sup> and, prominently, is gaining increasing interest as an emerging zoonosis of humans (Homer *et al.*, 2000<sup>[2]</sup>; Kjemtrup and Conrad, 2000; Zintl *et al.*, 2003; Hunfeld *et al.*, 2008; Leiby, 2011; Gohil *et al.*, 2013)<sup>[4, 6, 3, 2, 1]</sup>.

### History and clinical signs

Owner reported that the animal was five month pregnant with the history of inappetance and passing red coloured urine. Based on the history, the clinical examination reveals that

- High fever (103°F)
- Anorexia
- Pale conjunctival and vaginal mucous membrane
- Reduced milk yield
- Coffee coloured urine (Haemoglobinuria)
- Enlarged lymph node
- Dull and depressed

On physical examination ticks were found on the infected animal.

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### Diagnosis

Based on history, spot observation, nature of the clinical symptoms and present of ticks on the body of animal, it was tentatively diagnosed as babesiosis and after giving treatment to the animal it shows a good response to its treatment and it was finally diagnosed as babesiosis.

### Treatment

Animal was given Berenil 5% (Diminazene Aceturate) injection at the dose rate of 3.5mg/kg, intramuscularly. Berenil is an antiparasitic drug for treatment and control of protozoa infection in cattle, sheep, horses and dogs. Along with berenil, oxytetracycline 20mg/kg bwt, melonex plus 0.5mg/kg were also given tribivet 30 ml given intravenously, vitamin and iron supplements were given to increase RBC formation.



After treatment

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