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Clinical Article

FATAL BABESIOSIS IN MURRAH BUFFALOES IN HARYANA

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SUMMARY

Two clinical cases of babesiosis caused by *Babesia bigemina* in Murrah breed of buffaloes are described. Of the two cases, one buffalo succumbed to the infection. Clinical cases of babesiosis in buffaloes are otherwise rare but in light of the present finding, all the haemoglobinurea cases should be investigated for babesiosis also.

Key words: Babesiosis, *Babesia bigemina*, buffalo, clinical case

Babesiosis caused by *Babesia bigemina* is an important disease of pure-bred and crossbred cattle in India causing morbidity and mortality. Indigenous Zebu cattle and buffaloes are resistant to the disease but show seropositivity as well as rare parasitaemia (Singh *et al.*, 1978, Mishra *et al.*, 1998). Haryana is the home tract of Murrah breed of buffaloes (*Bubalus bubalis*), well known as one of the best milch animals in India. Babesiosis is not known to be a clinical problem in the Murrah buffaloes but recently, the authors have observed two clinical cases of babesiosis in them. The predominant livestock tick in the state of Haryana i.e. *Hyalomma anatolicum anatolicum,* is also being progressively replaced by *Boophilus microplus*, the vector tick for *B. bigemina* (Sangwan *et al.*, 2001).

A 6 year old Murrah buffalo in second lactation showing haemoglobinuria was treated with sodium acid phosphate for phosphorus deficiency, for 4 days. But when condition deteriorated, the case was referred to the Veterinary Unit of the University at Karnal. The clinical signs and symptoms on day 5 included high fever (41°C), anorexia, depression, weakness, cessation of rumination, coffee coloured urine and pale mucous membranes. The animal was taking water normally. Earlier, the milk yield had become nil compared to 10 litres a day and the buffalo didn't allow the calf to suckle. Blood picture of the buffalo revealed 6g% haemoglobin (Hb) and 18% packed cell volume (PCV). Microscopic examination of Giemsa stained blood smear revealed piroplasms of *B. bigemina* (2% parasitaemia). Next day, the buffalo was administerd diminazene aceturate @ 7 mg/ kg. b. wt., intramuscularly along with chlorphenaramine maleate, haematinics and liver extract. On the next day of treatment, Hb level declined to 4g% and the buffalo had no fever but died later in the day.

A second case of a Murrah buffalo aged 6 years, showing the symptoms of colic, anorexia, slight fever and treated with chloramphenicol, mephiramine, antipyretics, liver extract and digestive stimulants for three days without apparent benefit, was referred to this Unit in July 2005. The animal at the time of examination had fever (40°C) and haemoglobinuria. The blood smear examination of the buffalo confirmed *B. bigemina*. The analysis of haematological parameters revealed Hb and PCV contents of 9.5g% and 27%, respectively. Differential leucocyte count revealed 22% neutrophils and 78% lymphocytes. Based upon the laboratory findings, the animal was administerd diminazene aceturate @ 7 mg/kg.b.wt. intramuscularly along with haematinics and liver extract. The supportive therapy was continued for the next seven days. The clinical signs of haemoglobinuria and fever disappeared on the following day of treatment.

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The digestion of the animal was restored within 5-7 days of supportive therapy. The blood examination of the buffalo carried out after 10 days of treatment revealed Hb and PCV levels to be 10.5g% and 33%, respectively. The stained blood smear was also found negative for *B. bigemina* and the differential leucocyte count revealed 34% neutrophils and 66% lymphocytes. The colour and consistency of the urine was also found normal.

A rare report of clinical babesiosis due to *B. bovis* (Dwivedi *et al.*, 1979) is also available but most of the reports pertaining to babesiosis in buffaloes from India are of seropositivity or of spotting rare piroplasms of *B. bigemina* in the blood smears without the clinical disease. Phosphorus deficiency haemoglobinuria is a common disease in the area (Sridhar and Kumar, 2003) that responds well to the sodium acid phosphate treatment. However, several veterinarians in the area have observed that cases of haemoglobinuria are responding well to the diminazene aceturate treatment but due to lack of laboratory facilities and urgency to start treatment, the etiology could not be confirmed. It seems that clinical babesiosis in buffaloes is an emerging disease in the area and the haemoglobinuria cases should be investigated in the light of this information.

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ERRATA/CORRIGENDUM

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Pathological studies on imidacloprid toxicity in rats

Page 43

Please read title of table as:

Effect of imidacloprid (i.p. daily for 28 days) on body weight and organ weight in adult male Wistar rats

Page 44

The legends of Fig. 1 and Fig. 3 are interchanged by mistake.

Please read the legend of Fig. 1 as legend of Fig. 3 and legend of Fig. 3 as legend of Fig. 1

The errors are regretted.

- Editor, The Haryana Veterinarian