Therapeutic Management of Haemorrhagic Septicaemia in Buffalo Heifers

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Abstract

Four buffalo heifers were diagnosed with Haemorrhagic Septicaemia (HS) based on history, environmental conditions and characteristic signs. The animals were treated with Ceftriaxone and Tazobactam, Meloxicam and Paracetamol, Prednisolone and Vitamin B-complex. The animals recovered after treatment since they were presented early and treatment regimen followed was effective.

Keywords: Buffalo; haemorrhagic septicaemia; management; Pasteurella *spp.*

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Introduction

Haemorrhagic Septicaemia (HS) is an acute fatal, highly prevalent septicaemic disease mainly affecting buffaloes and cattle and is caused by Gram negative bacteria, *Pasteurella multocida*. *Pasteurella* species are opportunistic pathogens that can cause endemic disease and are associated with epizootic outbreaks (Wilson and Ho, 2013). Among epizootic diseases of India, Haemorrhagic septicaemia is placed on highest for mortality and second for morbidity (Dutta *et al.,*1990). Most of the States of India are endemic for Haemorrhagic Septicaemia. The disease is having a significant impact on the livestock industry of India and results in severe economic losses (Mitra *et al*., 2013).

Buffaloes have a higher morbidity rate of Haemorrhagic septicaemia and have more severe clinical symptoms as compared to cattle (Khan *et al.,* 2006; Kawasaki *et al*., 2015). The disease is more prevalent during rainy reason and in unvaccinated animals (Mitra *et al*., 2013). Various stress like climatic, nutritional and metabolic stress are associated with disease occurrence. The pathological manifestations associated with Haemorrhagic septicaemia ranges from asymptomatic or mild chronic upper respiratory inflammation to acute, often fatal, pneumonic and disseminated disease. Environmental conditions and general health of animal is also important for disease severity. Transmission of disease occurs mainly by contact with infected oral or nasal secretions from carrier or infected animals or by ingestion of contaminated feed and water. Clinical symptoms begin with fever, lethargy, odema with copious salivation, lacrimation, nasal discharge and respiratory distress. Death can occurs within 1-3 days due to septic shock and widespread hemorrhages. Antibiotic treatment can be effective at early stages of infection (Radostits *et al*., 2007; Wilson and Ho, 2013).

History and Diagnosis

A dairy farmer brought his four buffalo heifers of about 3-4 years from Bhadola village, Ghaziabad district, Uttar Pradesh. History revealed that these animals were reared under an extensive, free range system near to a pond. The clinical examination of animals showed high body temperature of 105^0F, nasal discharge, hyper salivation and lacrimation. The mucous membrane of eyes was deep red and animals also showed dyspnoea and reluctance to move. Subcutaneous swelling in sub-mandibular region was also observed. Based on history, environmental conditions and characteristic symptoms the animals were clinically diagnosed as affected with per-acute Haemorrhagic Septicaemia.

Treatment and Discussion

The affected buffaloes were treated with Inj. Intacef Tazo[a] (Ceftriaxone 3000 mg + Tazobactam 375 mg), Inj. Melonex[a] plus (Meloxicam 5mg + Paracetamol 150 mg/ml) and Inj. Tribivet[a] (Vitamin B_1, B_6 and B_{12}) intramuscularly for five days. Inj. Prednisolone was

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a - Brand of Intas Animal Health, Ahmedabad

administered intramuscularly for first two days only, since the animals showed improvement in respiration, after steriodal therapy. Since the affected animals were in acute/ early stage of infection, they responded to treatment positively. The animals regained normal appetite and rumination after four days of treatment. The body temperature reached to normal (102^{0}F) on the fifth day morning and animals were observed as active and normal. Similar type of effective treatment and control of disease were reported by earlier clinicians also (Kumar *et al*., 2011; Mitra *et al*., 2013; Raju, 2015).

In our report, the affected animals were allowed for grazing in free range near to a pond side, where animals of other livestock farmers were also grazing. This may intensify the transmission of disease to susceptible animals from carrier or infected ones as reported by other researchers (Gajendragad *et al.,* 2012). Ceftriaxone and Tazobactum inhabits bacterial cell wall synthesis and prevents destruction of antibiotics from chemicals released from bacteria respectively. Meloxicam and Paracetamol were used as anti-inflammatory and anti-pyretic. B-complex Vitamins are essential to carbohydrate and fat metabolism, as well as for protein synthesis. Animals under stress frequently have poor appetite, which may be stimulated by water soluble B complex vitamins. In per acute cases of Haemorrhagic Septicaemia, the animal is cured, provided the proper treatment can be given in the initial stage of infection, as evidenced in our report. Thus the outbreaks can be effectively prevented by following proper vaccination schedule and education of livestock farmers about the good hygienic practices to be followed to minimize the stress of animals.

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Bihar Veterinary College celebrates its 91st Foundation day

Bihar Veterinary College, one of the constituent body of Bihar Animal Sciences University (BASU), Patna turned 91 years old on 2nd April, 2018. The celebrations was inaugurated by Chief Guest, Shri Sunil Kumar Singh, Agriculture Production Commissioner; Dr. N. Vijayalakshami, Principal Secretary, Animal & Fishery Resources, Govt. of Bihar; Dr. H. R. Mishra, Ex-Vice Chancellor, BAU, Ranchi; Prof. A. Ahmad, Ex-DDG-ICAR & Ex-Vice Chancellor, SKUAST, J&K and Dr. Rameshwar Singh, Vice-Chancellor, BASU. On the occasion, a technical seminar on 'Role of Veterinary Education for Economic Upliftment of farmers of Bihar' and animal health camp cum kisan gosthi were organized.