Case Report

**ACUTE POST PARTURIENT HAEMOGLOBINURIA IN A CROSS BRED DAIRY COW**

Senthil Kumar A**, Sri Balaji N¹ and Uma Rani R¹

*Corresponding Author: Senthil Kumar A*,  senthilkumarwls@gmail.com

Post parturient hemoglobinuria being a production disease not only drastically reduces milk production but also causes great losses in term of mortality and high expenses of treatment. A pluriparous dairy cow was referred with a history of coffee colored urine, reduced appetite, reduction in milk yield and pica from 10 days post calving. Based on clinical observation and laboratory findings the case was as diagnosed as an acute post parturient haemoglobinuria. The animal was treated with inj. Toldimfas sodium 20% 30 ml i/v, for 3 days, Inj. Multivitamin for 5 days and Dicalcium Phosphate 60 g orally for 15 days and the animal showed complete recovery on sixth day.

**Keywords:** Dairy cow, Post parturient hemoglobinuria, Treatment

**INTRODUCTION**

Post Parturient hemoglobinuria is a sporadic disease of high producing buffaloes and Cows. It occurs immediately after parturition and characterized by rapid intra vascular haemolysis, anemia, haemoglobinuria, weakness, marked decrease in milk production (Mahmut et.al.,2009). The exact etiology and pathogenesis still remain unknown because different etiological factors have been reported to be associated with the disease in different parts of the World. The present report records a case of acute post parturient haemoglobinuria due to hypophosphatemia and its successful therapeutic management in a cross bred dairy Cow.

**CASE HISTORY AND OBSERVATIONS**

A pluriparous dairy Cow presented with history of passing Coffee colored urine, reduced appetite, reduction in milk yield, dullness and open mouth breathing, constipation for the past three days. Animal also showed the symptoms of pica during the last month of gestation. Anamnesis revealed that the animal calved ten days before and it was a fifth calving. Detailed clinical examination revealed pale mucous membrane, normal rectal temperature, tachypnea, tachycardia, coffee colored urine, frequent urination, reduced ruminal motility and no pain on abdominal palpation. Faecal and blood samples were negative for...
parasites. Hematology revealed that haemoglobin was 5.72 g percent, total erythrocyte count was $2.81 \times 10^3$/cmm, packed cell volume 16.62%. Blood biochemistry showed that the serum Phosphorus was 1.66 mg/dl and serum Calcium was 49.18 mg/dl. Based on the history, clinical signs and laboratory findings, the case was diagnosed as post parturient haemoglobinuria due to hypophosphatemia.

**TREATMENT AND DISCUSSION**

The animal was treated with Sodium salt of 4-dimethylamino 2-methylphenyl phosphic acid-Toldimfas sodium 20% (Inj. Tonophosphan 30 ml i/v, Intervet India Pvt Ltd., Pune) for 3 days Inj. Multivitamin (VVBET FORTE-V SOL Pharma Private Ltd., Chennai) for 5 days and Dicalcium Phosphate 60 g orally for 15 days. The animal responded well for the treatment and there was complete recovery on sixth day. In the present case, history of pica, recent calving, Coffee colored urine helped to diagnose as post parturient haemoglobinurina and it was confirmed by laboratory findings and treatment response.

The clinical signs recorded in the present study are in agreement with Rodostitis *et al.* (2007) and Sujatha Turkar *et al.* (2013). Haematological analysis revealed significant decrease in haemoglobin, packed cell volume and total erythrocyte count. Similar findings have been recorded by Rodostitis *et al.* (2007). Serum biochemistry revealed significant decrease in inorganic phosphorus and is attributed to the deficiency of phosphorus in fodder and soil. Dietary phosphorus deficiency and/or rations containing cruciferous plants were suspected causes of severe hypophosphataemia and have been associated with hemolytic anaemia in cows (Heuer and Bode, 1998). Hypophosphataemia results in impaired glycolytic pathway and depletion of ATP in erythrocytes subnormal concentration of ATP predispose red blood cells to alter function and structure, a loss of normal formability and an increase in fragility, result to haemolysis (Rodostitis *et al.*, 2007). Fodder grown on phosphorus deficient soil, draught condition and prolonged housing are considered as predisposing factor of disease (Rodostitis *et al.*, 2007). Stockdale *et al.* (2005) also documented decreased serum phosphorus in affected buffaloes as reported in the present study. Heavy drainage of phosphorus through milk, particularly in high milk yielding animals, leads to hypophosphataemia as reported by Bhikane *et al.* (1995).

In the present case, treatment with i/v Phosphorus was very effective and the clinical signs and haematological serum bio chemical parameters were attained to a normal range after treatment as also observed by Pandy and Mishra (1987), Singh *et al.* (1989) and Sujatha Turkar (2013).

**CONCLUSION**

The present study, concluded that supplementation of acid inorganic phosphorus can be successfully used for the therapeutic management of post parturient haemoglobinuria due to hypophosphatemia in a crossbred dairy Cattle.

**REFERENCES**


