Parturient Paresis in a Buffalo

A. M. Syed[1], T. A. Shafi[2], M. F. M. F. Siddiqui[2], M. P. Sakhare[2]and P. M.Mane[1]*

[1]Assistant Professor, Department of Veterinary Medicine, [2]Hospital Registrar, Teaching Veterinary Clinical Complex, College of Veterinary and Animal Sciences, MAFSU, Parbhani

Abstract

A 9 year old lactating buffalo was presented to TVCC, COVAS, Parbhani with history of parturition 7 days ago. The buffalo was presented in sternal recumbency with head resting on lateral flank along with other signs such as cold extremities, agalactia, suspended rumination and absence of defecation and urination. On the basis of history, clinical signs, symptoms and laboratory investigations of serum calcium, the case was diagnosed as parturient paresis. The animal was treated with calcium borogluconate (450 ml) slow intravenously along with other supportive therapy, B-complex (inj. Vitamin $B_{1,}$ $B_{6,}$ B_{12}) 10 ml intramuscularly for 4 consecutive days. The animal responded to the calcium borogluconate infusion within 30-40 minutes. The owner was also advised to give mineral mixture (calcium rich) 50 gm orally daily with feed for one month.

Key words: Buffalo, Parturient paresis, Calcium borogluconate

Parturient paresis is metabolic disease of adult female domestic animals, observed most commonly periparturiently. High yielding dairy animals are most commonly affected with increased susceptibility during 3rd to 5th lactation, although rare cases have been recorded at the first and second calving. The disease is characterized by hypocalcemia, severe muscular weakness, recumbency (initially sternal and then lateral in advanced disease), circulatory collapse and ultimately shock resulting the death of the animal (Radostits *et al.,* 2007).

Case History and Observations

A 9 year old lactating buffalo (5 ltr/day) was presented to TVCC, COVAS, Parbhani with history of parturition 7 days ago. The buffalo was presented in sternal recumbency with head resting on lateral flank (Figure) along with other signs such as cold extremities, agalactia, suspended rumination and absence of defecation and urination. The history revealed normal parturition, non retention of placenta and animal being fed on dry roughages solely without supplements consisting of mineral mixture containing calcium or any other concentrate mixture. Clinical examination revealed below normal rectal temperature (99° F), tachycardia (82/min) on cardiac auscultation, absence of ruminal motility, congested mucus membrane and dry muzzle. The biochemical analysis revealed serum Ca below normal (5.8 mg %). On the basis of history, signs and symptoms and laboratory investigations of serum calcium, the case was diagnosed to be of parturient paresis.

The animal was treated with calcium borogluconate (450 ml) slow intravenously along with other supportive therapy, that included B-complex (inj. Vitamin $B_{1,}$ $B_{6,}$ B_{12}) 10 ml intramuscularly for 3-4 consecutive days. The animal responded to the calcium borogluconate infusion within 30-40 minutes. The owner was also advised to give mineral mixture (calcium rich) 50 gm orally daily with feed for one month.

Discussion

Parturient paresis a metabolic disease of high yielding dairy animals is most commonly encountered around periparturient period due to the heavy demands of calcium by the fetus, which exhausts the calcium reserves of the body and also precipitated if diets deficient or low in calcium are being fed to the animal (Radostits *et al.,* 2007). In the present case, the buffalo was fed on dry poor quality roughages for long time. Dry roughages are deficient in calcium and also buffalo was not supplemented with mineral mixture containing calcium or any other concentrate mixture resulting into the hypocalcemia which is evidenced by the low serum Ca (5.8 mg%).The affected buffalo was in 4th lactation and the symptoms of parturient paresis were started after 6th day of parturition. Due to depletion of calcium level(hypocalcaemia), the major manifestations exhibited by animal were ruminal atony, agalactia and sternal recumbency (a typical sign of parturient paresis)

Corresponding Author: tawheed78@gmail.com

Fig. Buffalo suffering from milk fever with sternal recumbency and lateral deviation of head.

(Radostits *et al.,* 2007; Smith, 2015). Within half an hour of the treatment with calcium borogluconate, the animal showed defecation, urination, neck turned to normal position and animal made attempts to stand up. On day second, animal stood up, started feeding normally and milk yield returned to 1.5 litre. The estimated serum calcium level on second day was 8.7 mg %. In this case, calcium borogluconate resulted in the clinical recovery as evidenced from the improvement in the clinical signs and elevation in the serum calcium levels post treatment. Braun *et al*., (2012) has also reported good efficacy of calcium borogluconate while treating fifteen milk fever cows, and also evidenced a hypercalcaemic response after intravenous administration of calcium borogluconate in these hypocalcemic cows.

The clinical manifestation, laboratory investigation and response to calcium therapy were suggestive of parturient paresis in the buffalo. Calcium borogluconate along with B-complex resulted in successful treatment of parturient paresis. Recurrence of the disease was checked by advising use of calcium rich mineral mixture @ 50 gm/day orally.

References

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