

MILK FEVER IN DAIRY CATTLE AND ITS MANAGEMENT

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Milk Fever is an important disease found mainly in high milk-producing crossbred cows and buffaloes due to calcium deficiency. It is most common in the first 72 hours after parturition. Thus, an immediate response for disease management is desired. Dietary deficiencies in lactation cows and buffaloes are associated with a variety of productive diseases like ketosis due to lack of energy, milk fever due to calcium deficiency, and red urine disease due to phosphorus deficiency (post-purpura hemoglobin urea). These diseases reduce the milk production of sick animals, leading to the high cost of medication. In animals that have recovered from the illness, there is a chance of further economic loss due to reproductive disorders. Proper care, health, feeding, and lactation animals during the last stage of the gestation period and high milk production period after weaning can prevent productivity-related diseases and overall economic losses.

CAUSES

- Calcium deficiency is a major disease found mainly in high milk-producing crossbred cows and buffaloes.
- Outbreaks appear to be exacerbated during the first 72 hours post-partum.
- The incidence of this disease is 5 to 7% in high milk product crossbred cows. About 50% of cows have latency for milk fever.
- The disease is most prevalent in cows of 3 to 7 years age, usually between the ages of 5 to 10 years. The highest incidence of the disease in exotic cow breeds is in Jersey cattle.
- Milk fever leads to a difficult delivery, prolapse of the vagina, mastitis, fetal obstruction, stomach cramps, loss of immunity in sick animals, causing financial losses to farmers.
- Usually, about 23 g of calcium is excreted from a cow's body in the form of 10 kg of colostrums, which is nine times more than the total amount of calcium in the blood. This decreases the blood calcium level makes animals fall prey to milk fever.

SYMPTOMS

•In cows and buffaloes, the symptoms of milk fever can be seen in three stages.

•**The first stage:** This condition appears for a short time. Sick animals show increased movement, movement of head and legs, trembling, and salivation. The general activities and rumination by animals slow down. The animal stands still, eats teeth, and sticks out its tongue. Since this stage is very short, it goes unnoticed.

•**The second stage:** In the second stage of the disease, the animal sits on the stomach and becomes lethargic, the neck is bent towards the rumen, cannot get up, the nostrils become

dry, the body becomes cold, impaired uterine movement and the body temperature decreases (97-101°F). The decreased movement of the rumen causes bloating, dilatation of the anus, dryness of the eyes and impaired movement of the eyes. In late-stage pregnant animals, mainly in buffaloes, calcium is depleted, and the uterus prolapse is observed.

•**The third stage:** If not treated properly in the second stage, the animal goes into the third stage of the disease. In this phase, the animal lies down, and all the limbs become loose, the anus comes out/ dry, the animal is unconscious, the body temperature drops further, the heart rate is found to be weakened. In the third stage of the disease, if not treated immediately, such animals may die.



DIAGNOSIS AND TREATMENT:

- Diagnosis of the disease can be easily made from the first 72 hours after calving and the symptoms. Besides, laboratory tests of blood samples from sick animals show that calcium levels are low. The amount of calcium in the blood of a healthy animal is 8-12 mg/ dl.
- The disease is sudden onset and has a short duration, so immediate treatment is required. There are only two types of saline available 1) for only calcium or 2)calcium with magnesium, phosphorus, and glucose and readily increases the blood calcium level to 8-12 mg/dl. Thus, the symptoms of the disease disappear immediately.
- If calcium saline is given at a faster rate parenterally, the heart rate may increase, and the animal may die, so the disease should be treated by a veterinarian.
- Immediately after the treatment, the lying or sitting animal gets up, the muzzle becomes moist, and urinates. The animal begins to eat fodder and graze.

PREVENTIVE MEASURES:

- The animal in the late stage of pregnancy is to be kept observation for 2-3 days before and three days after parturition that helps to get diagnosis and treatment immediately.
- If the amount of calcium in the diet is kept balanced for 2 to 3 weeks before calving, the function of transporting calcium from the bones to the blood remains smooth. Therefore, even after calcium is secreted in the colostrums, the calcium is supplied from bones avoiding such animals not falling prey to disease.
- Inclusion of Ammonium Chloride, Calcium Chloride, Calcium Sulphate, Magnesium Sulphate, etc., in diet increase the stomach's acidity and help protect dairy animals from milk fever.
- Administration of 10 million units of vitamin

D intake in the last week before calving or 20 million vitamin D units daily for five days after calving reduces the incidence of this disease.

- Dairy fever can be prevented in milch animals by drenching 300 g of calcium gel daily for 24 hours before and up to 48 hours after calving.

CONCLUSION:

In view of present milk production by animal , if the right amount of calcium is supplied in the diet regularly, the milch animals will not fall prey to this disease again.

