



Management of Milk Fever in Cattle and Buffalo

**Hariom^{1*}, Sonu² and
R.P. Diwakar³**

¹Department of Veterinary
Gynaecology and Obstetrics,
LUVAS, Hisar, Haryana, India

²Department of Veterinary
Medicine,

LUVAS, Hisar, Haryana, India

³Assistant Professor Department
of Veterinary Microbiology,
C.V.Sc.& A.H., A.N.D.U.A.T.
Kumarganj Ayodhya, U.P



*Corresponding Author

Hariom*

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INTRODUCTION

Parturient paresis is production diseases of dairy animals. It an acute to per acute condition. It is characterized by hypocalcaemia flaccid paralysis, depression of consciousness of mature dairy cows. It occurs 48 hr to 72 hr after parturition.

Etiology and precipitating

- i) High milk yield
- ii) Decreased calcium absorption from GIT
- iii) Decreased calcium resorption
- iv) Inactivity of parathyroid Gland –As parathormone along with vitamin D3are responsible foe proper absorption and resportion of calcium in body

Associated factors

- i) High calcium diet during pregnancy >100 mg /day because high calcium during pregnancy make parathyroid gland quiescent. As parathyroid gland remain active during decreased ca level .So when parturition occur parathyroid remain inactive as it take time to make gland active .this lag time makes the diseases to develop.
- ii) Prolonged dry period
- iii) Presence of oxalates in feed
- iv) Hypophosphatemia – Ca and P level should be balanced
- v) Dietary potassium
- vi) Normal Ca concentration 9-12 mg/dl
- vii) Sub clinical Below 7.5 mg/dl
- viii) Animal will be recumbent -2.5 mg/dl
- ix) Breed predisposition- Jersey more susceptible
- x) Usually occur 5th to 8th lactation

Clinical Sign:

STAGE 1 (Stage of excitement)

Very brief duration last for 0.5 -2hr. It may be overlooked due to short duration. There is hyper aesthesia to normal stimuli, tetanic spasm, shaking of head and limbs.

STAGE 2 (Stage of sternal recumbency)

In this stage animal appears drowsy, distinct appearance of unconsciousness. Classical feature of milk fever animal lying on sterna recumbency with head turn toward flank. Extremities are cold body temperature found subnormal, heart rate high with low intensity sound.

STAGE 3 (Stage of Lateral recumbency)

Cows are often unresponsive and almost in coma. The animal will lay on her side with complete flaccidity with legs stretched out. There may be tympany due to GIT immobility and no eructation of gases.

Treatment:

- Principal of treatment: Give treatment as soon as possible'
- Standard treatment: calcium borogluconate 25%- Given slowly I/V because it cause cardiac arrest. This salt contains 8.3% calcium.
- If there is insufficient response / no response to first dose then a 2nd dose given after 6-8 hour either by s/c or half s/c or half i/v route.

Signs of recovery:

- It will suddenly start bellowing

- Pulse rate become high and amplitude of pulse rate increase
- Animal start defecating and stands up

Prevention:

If the incidence of diseases is higher in hard > 10% then specific control program is required

- a) Estimation of metabolism profile of animals
- b) Take corrective measures accordingly
- c) If case are sporadic then go for individual examination of animals
- d) Dietary calcium administration to pregnant animals is ideally 30 gm /day /animals if given 100gm/ day predispose to disease to occur
- e) This dose should be 20 gm /day after parturition
- f) Dietary cation- anion difference should be negative: a negative DCAD promote absorption and resorption of calcium. So for this purpose administration of Ammonium sulphate to animal @ 100 gm each daily starting prior to parturition.
- g) Avoid over fattening of animal during pregnancy
- h) Avoid stress to animal during pregnancy

Note:-

- On day of calving to prevent occurrence of disease 250gm of $CaCl_2$ and 105 gm of tricalcium phosphate give orally and repeat after 12 hours
- 2-8 days before parturition, anytime give vitamin D₃ injection.



Fig. 1: Animal Suffering from Milk Fever