



Milk Fever

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Milk Fever



It occurs blood calcium levels ↓ (hypocalcaemia)
a few days before or after calving.

postparturient hypocalcemia
parturient paresis.



Hypocalcemia



after calving, cow needs more Ca.
From bones, by mobilisation or
From digestive system, by absorption

PTH and Vit. D



Hypocalcemia



But in Milk Fever;

Although the level of this hormone is high, Ca cannot be given rapidly from the bones to the blood.



Hypocalcemia



Vitamin D shows their effect by increasing the absorption of Ca from digestive tract.

Blood Ca ↓ Vit D production ↑



Milk Fever



After a few days of calving = hypocalcemia



Milk fever

Retentio Secundinarum

Abomasum displacement

Mastitis



Symptoms



1. Stage: loss of appetite, drowsiness, constipation, and a rectal temperature of 0.5C decreasing.

Muscles flicker.

The animal swings while standing, falls to the ground and is removed from the ground with difficulty.



Symptoms



2. Stage: the animal lies on the ground and cannot get up.

Coma



Symptoms



Coma Stage: cow lies form of lateral.

Increase the tymphani in rumen

Paralysis in muscles of respiratory system

Death (Timpani)



Symptoms



A positive diagnosis is given when the blood calcium level goes below 8.5 mg/dl (or 2 mmol/l).



Treatments



Ca solutions (Ca gluconat)

-oral

-subcutaneous

-intravenous



Prevention



1. *Use of low-level Ca-containing rations*

-PTH

-Vit D

2. *Anion-Cation difference in rations (DCAD)*

-Na

-K

-Cl

-S

} mEq/kg DM



Prevention



Negative DCAD == acidic ration

Positive DCAD == alkaline ration

DCAD = 0 == balance of anion cation



Prevention



In Lactation = cationic = +300 +400 mEq

In dry period = anionic = -100 -150 mEq

Feeding with anionic salts in dary period

WHY?



Prevention



Reduce the blood pH

Increase the effectiveness of PTH



increase the synthesis of Vit D

To buffer the decreased blood pH, Ca is released from the bones and the blood Ca level is **increased**



Prevention



Anionic Salts



Ammonium sulphate

Ca sulphate

Magnesium sulphate

Ammonium chlorite

Ca chlorite

Mg chlorite

unpalatable

**Mix with silage or pellet
with melas**



Prevention



- 1. Use of low-level Ca-containing rations*
- 2. Anion-Cation difference in rations (DCAD)*
- 3. Vitamin D and Its Metabolite*
- 4. Ca preperates*

