

DEPARTMENT OF ANIMAL NUTRITION

Topic-Metabolic Disorders In Livestoks

Introduction

- During metabolism nutrients converted into energy and it is used for cells for normal body functions.
- Metabolic disorders are characterized by disruption of any metabolic activities.

Some common metabolic disorders are-

1. Ketosis
2. Milk fever
3. Downer cow syndrome
4. Post parturient haemoglobinuria

Milk fever

- Caused by low level of calcium .
- It occurs within 72hrs of parturition.
- Etiology
- Impaired calcium absorption
 1. Vit.D deficiency
 2. PTH insufficiency

Clinical features-

1. Stage 1

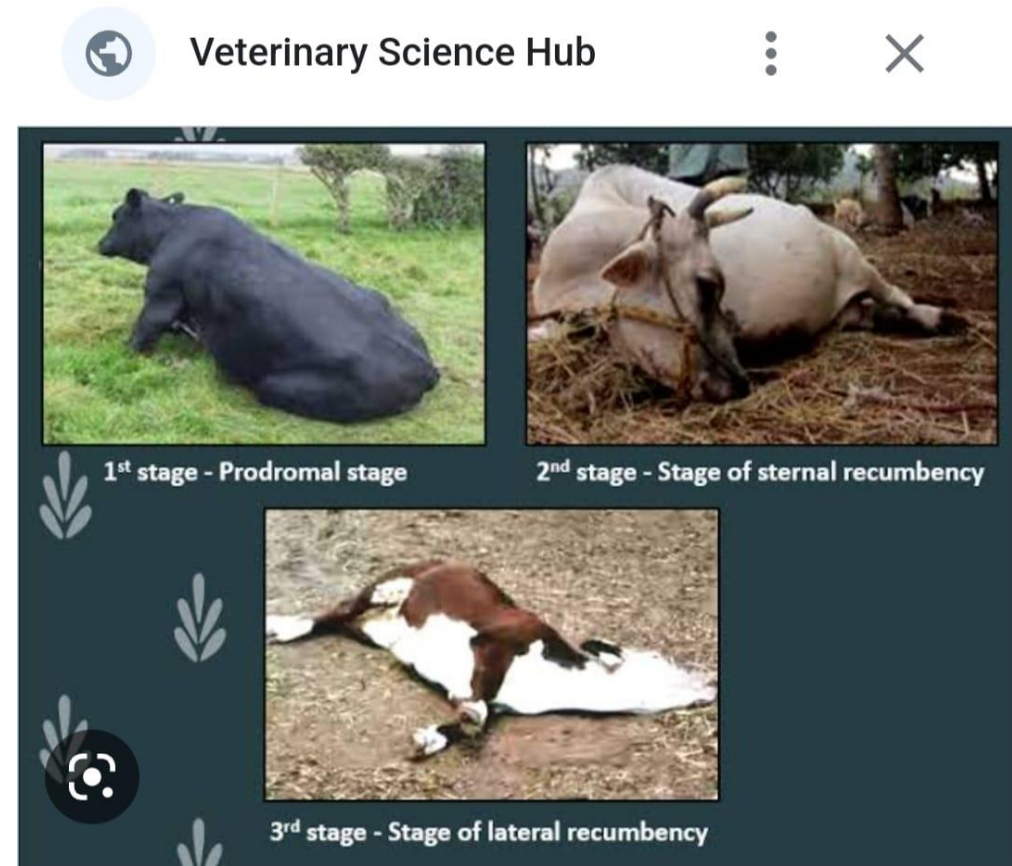
- Hypersensitivity
- Ear twitching
- Tremors

2. Stage 2

- Sternal recumbency
- Tachycardia

3. Stage 3

- Lateral recumbency
- Bloat
- Muscles paresis



- Diagnosis

It is confirmed by checking response to calcium injections

- Treatment

- Replacement therapy
- Hormonal therapy
- Supportive therapy
- Supplement therapy

Ketosis

Occurs due to accumulation of ketone bodies in body fluids.

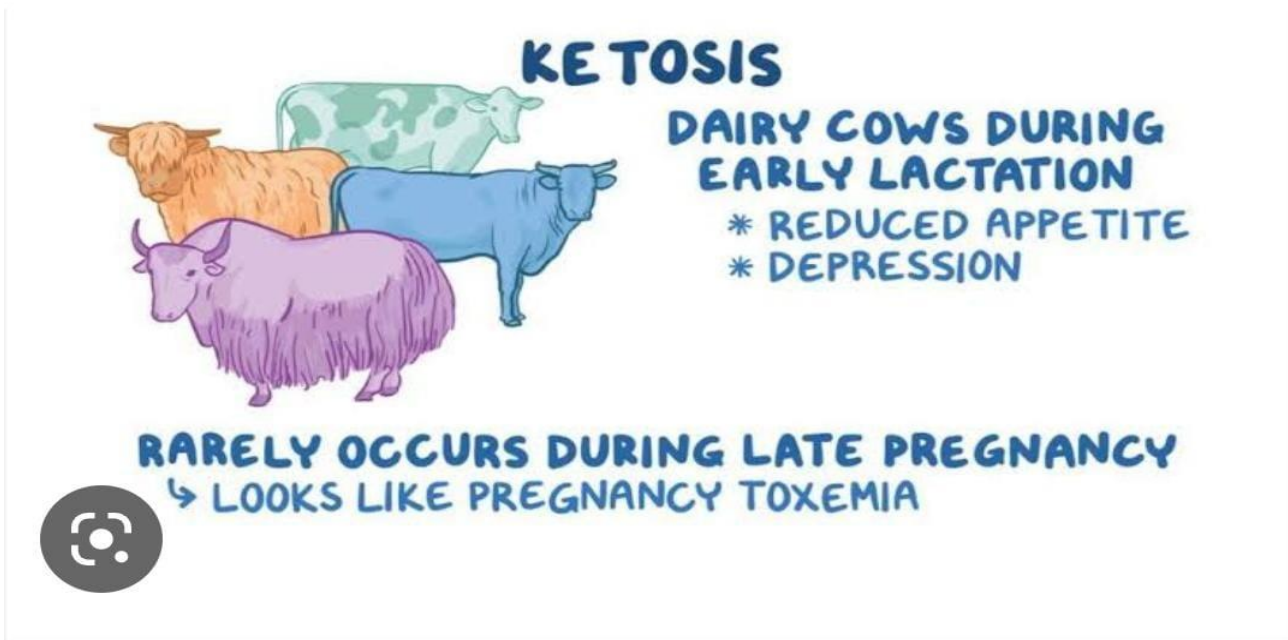
Etiology

- Glucose unavailability.
- Negative energy Balance.
- Fatty acid utilization.



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Ketosis in Cattle

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Classification

1.

- Bad season/starvation acetonemia.
- Good season /Well feed acetonemia.

2.

- Primary ketosis-due to starvation
- Secondary ketosis- Food is sufficient but appetite is depressed due to other problems.

Diagnosis

1. Rothera's test
2. Test for beta hydroxy Butyrate level

Treatment

- Oral administration of propylene glycol(250-400gm)Every 24 hrs for 5-6 days.
- Replacement therapy- Sodium acetate 110-500 g/day.
- Cysteamine-750mg i/v

Downer cow syndrome

- Affected animals remain alert but are unable to stand for a period of 12-24hrs with undetermined reason.

Etiology

- Persistent Hypocalcemia
- Resistant hypophosphatemia
- Hypomagnesemia
- Hypokelelemia



Clinical findings

- Blood calcium, sodium, magnesium level may be normal or not
- Low k⁺ or phosphorus
- Low glucose level
- High serum myoglobin level

Diagnosis

- According to the duration of recumbency

Treatment

- Slings can be used to lift cow on its forelegs
- Therapy-not specific

Post-parturient haemoglobinuria

- It occurs soon after calving and is characterized by intravascular hemolysis, haemoglobinuria and profound anemia.

Etiology

- Hypophosphatemia
- Dietary factor or low phosphorus diet.
- High drainage of phosphorus with milk.

Clinical features

1. Red or coffee colour urine.
2. Loss of appetite or anorexia.
3. Anemia.
4. Pale mucous membrane .
5. Low phosphorus level (0.5-3mg/Dl).



Facebook



ZyduS Farm Care

Phosphorus Deficiency Leads to...

The infographic features a central image of a cow with several green arrows pointing to various symptoms. A green path with circular icons leads from the bottom left to the top right, illustrating the progression of the deficiency. The symptoms shown are:

- Stiffness in gait
- Arching Back
- Blood in urine (PPH)*
*Post Parturient Haemoglobinuria
- Pica
- Reduced Milk Production
- Reduced Fertility

SOD

Convenient Solution to Eliminate Phosphorus Deficiency

Post Parturient... - Akros Vet Distributors Pvt. Ltd. |...

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Diagnosis

- History-advanced calving or Recent calving
- Clinical sign-Haemoglobinuria, Haemolytic anemia.
- Phosphorus level in blood.

Treatment

- Inj.Tonophosphan Dose-(10-15ml i/m per day)
- Dicalcium phosphate
- Ascorbic acid (vit.c)@5gm/aminal through i/v.
- Copper glycinate 1.5mg/kg BW.

Reference

- <https://www.pashudhanharee.com/metabolic-disorders-of-livestocks>
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Thankyou