







Unit: Hypocalcemia In Cattle

Lesson: 2

Pathogenesis and Clinical findings

Dr.S.Kavitha, Ph.D.,

Professor and Head Department of Veterinary Clinical Medicine, Madras Veterinary College, Chennai - 600 007. Tamilnadu









Pathogenesis

Cell membrane stability

nerve cells more excitable

Muscle contractility

affect muscle contractility

Release of acetylcholine hamper the signal transmission at the level of the neuromuscular endplate

twitching observed in the early stages of milk fever in cattle

flaccid paresis

advanced stages

ensuing increased excitability

decreased

membrane

stability

disturbed muscle fiber contractility

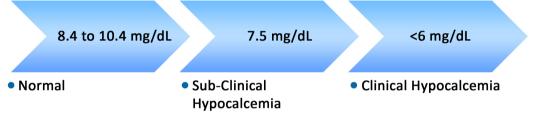
Disturbed neurotransmitter release







Serum calcium levels











STAGE 1

- Standing
- 4.9 to 7.5 mg /dl

STAGE 2

- Sternal Recumbency
- 4.2 to 6.8 mg /dl

STAGE 3

- Lateral Recumbency
- 3.5 to 5.7mg /dl



Stage 1 (STAGE OF EXCITEMENT)

- Cow is still standing
- Muscle tremor of the head and limbs
- The rectal temperature is usually normal to slightly above normal
- Disinclination to move & eat
- Grinding of teeth
- Protrusion of tongue
- Agalactia
- Rumen stasis
- Scanty feaces





Stage 2 (Sternal Recumbency)

Sternal recumbency with lateral kink of head & neck

- Cold skin & extremities
- Subnormal temperature (36-38°C)
- Dilated pupils & absence of reflexes
- Heart rate-80bpm & decreased heart sound
- Pulse weak & Difficult to raise the jugular vein
- Bloat, Constipation











Thank you