

**MJF COLLEGE OF VETERINARY AND ANIMAL SCIENCE,
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DEPARTMENT OF VETERINARY PATHOLOGY

GANGRENE

TYPES

1. Dry gangrene
2. Moist gangrene
3. Gas gangrene

Dry gangrene

- **Etiology**
 - Freezing temperature
 - **Mycotoxins**
 - Ergot poisoning
 - Degnala disease

Site: Extremities

- **Macroscopic features**

- Dry, fragmented crusts
- Reddish brown, green, grey or black in color
- Hoof sloughing
- Blackening

- **Microscopic features**

- Necrosis (Stains pink)
- Invasion of saprophytes
- Acute inflammatory reaction at the junction

Dry Gangrene



Calf skin, leg

**Distal extremity
gangrene
and ischemic
necrosis**

Dry Gangrene



More than half of each of the ears are dark red and dry and almost brittle on palpation because of necrosis.

Pig ear, skin affected with gangrene

MOIST GANGRENE

- Etiology
 - Faulty Drenching (Lung)
 - Volvolus (Intestine)
 - Intussusception (Intestine)
 - Torsion (Intestine)

- **Macroscopic features**
 - Tissue is moist, red Greenish, blue or black discoloration
 - Putrefaction produces gas and intestine distended with gas.
- **Microscopic features**
 - Necrosis and invasion of saprophytes
 - Foreign material like milk, fibers, oil etc. in lung tissue.

Gangrenous Mastitis



Gangrenous mastitis in Goat

Mastitis cause by coagulase-positive *Staphylococcus aureus*. *S. aureus* can produce alpha toxin, a potent vasoconstrictor that is probably involved in the pathogenesis of gangrene mastitis.

GAS GANGRENE

- Etiology
 - *Clostridium chauvei*
- Macroscopic features
 - Oedema
 - Blackening
 - Presence of gas
 - Crepitating sound
- Microscopic features
 - Necrosis of muscles
 - Gram positive rod shaped Clostridia
 - Dissolution of muscle fibers