



Papular stomatitis nodules on tongue

Papillomatosis-Warts

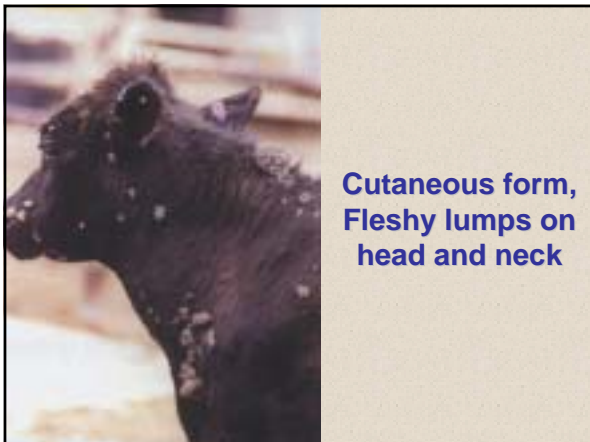
- Etiology: Papova group virus
- Clinical signs:
 - Characterized by single or multiple fibropapillomas of the skin, penis, vagina and esophagus.
 - Large pendulous warts may also be seen along brisket and sternum, and also teats, penis and in the bladder region.



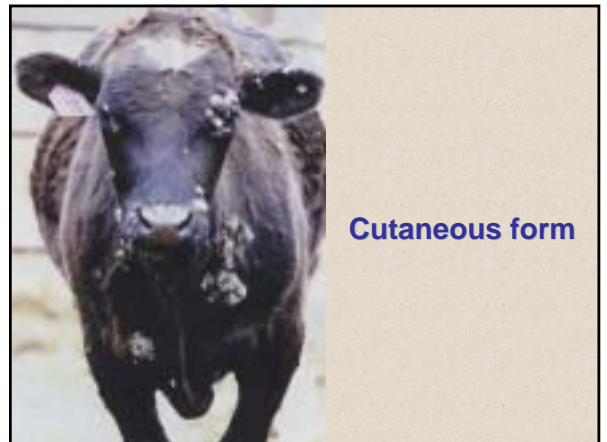
Muzzle



Muzzle



Cutaneous form,
Fleshy lumps on
head and neck



Cutaneous form



Caused by Rickettsia

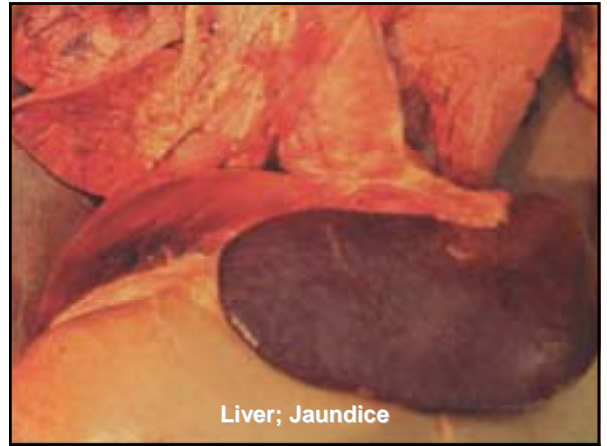
Anaplasmosis

- Etiology: *Anaplasma marginale*
(Intra-erythrocytic parasite)
- Clinical signs:
 - An acute blood cell infection characterized by fever, anemia, and icterus resulting in weight loss, medication costs, and death.





**Gallbladder –
thick bile**



Liver; Jaundice

Caused by Bacteria

Actinobacillosis-Lumpy Jaw

- Etiology: *Actinomyces bovis*
- Clinical signs:
 - Characterized by chronic deforming osteomyelitis of the mandible or maxilla with a surrounding soft tissue reaction and discharging sinuses.



Mandible soft tissue swelling



Mandible soft tissue swelling; Osteomyelitis

Diphtheria (Hard Breather)

- Etiology: *Fusobacterium necrophorum*
- Clinical signs:
 - Characterized by dyspnea, and roaring breathing with foul odor.



Distended head-neck; Edematous mandible



Epiglottitis; Granulation tissue



Epiglottitis; Granulation tissue



Bilateral infection;
early stages



Granulation tissue
restricting air
passage

- Etiology: Septicemia
- Clinical signs:
 - Pulmonary Embolic Aneurysm-Abscessed Vena Cava



Abscess in distended vena cava

- Etiology: Bovine Infectious Keratoconjunctivitis-Pink Eye
- Clinical signs:
 - Early cloudiness, peripheral vascularization in cornea resulting in ocular discharge and drainage.
 - Advancing into corneal opacity and ulceration which may perforate through aqueous resulting in permanent damage to eye.



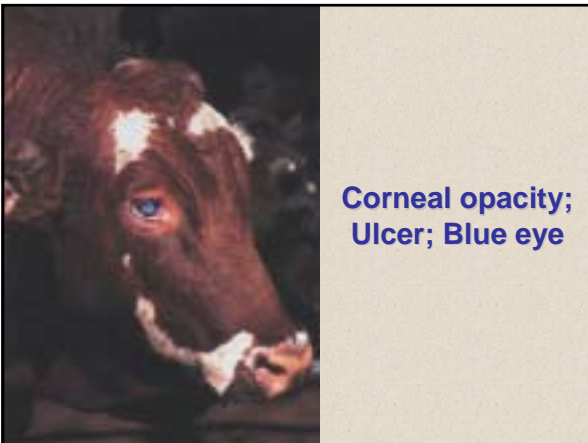
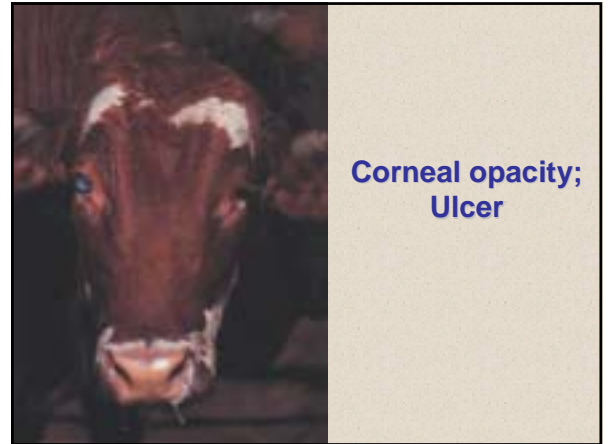
**Ocular discharge;
Early infection**



**Ocular discharge;
Early infection;
Cloudiness
cornea**

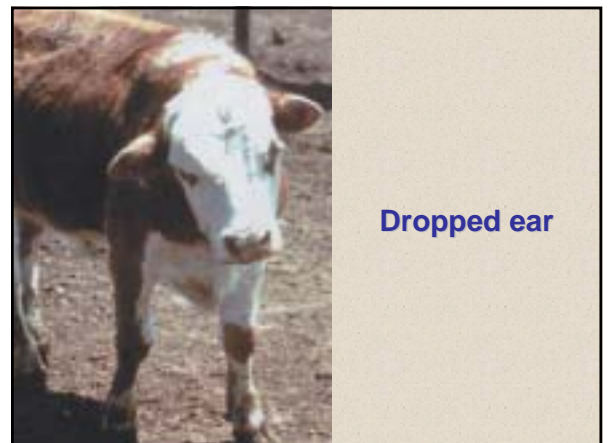


Corneal opacity



- Etiology:
 - Otitis Media-Droppy Ear Syndrome
 - Causative agent may be sequela to BRDC such as:
 - » *Pasteurella (Mannheimia)*
 - » *Mycoplasma*
 - » *Corynebacterium progenes*

- Clinical signs:
 - Slight head rotation with intermittent ear discharge.
 - Infection may damage the tympanic membrane resulting in infection in the inner ear and exudate accumulation.
 - In advanced cases the eye may become opaque and the animal lose eye vision.





Dropped ear; Head rotation

Caused by Fungi

- Etiology: Ringworm
 - *Trichophyton verrucosum*
 - *T. mentagrophyton*
- Clinical signs:
 - May occur on any part of the body.
 - Circular areas of alopecia in which the skin may become thickened and encrusted.



Circular areas of alopecia



Circular areas of alopecia



Muzzle fungus infection-undiagnosed

Miscellaneous

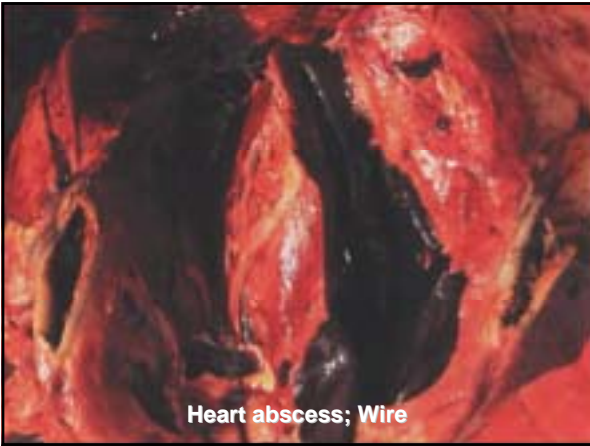
Hardware

- Etiology:
 - Hardware
 - Traumatic reticulitis; mechanical injury to the forestomach
 - The foreign material perforates the wall of the reticulum (forestomach) causing localized or generalized peritonitis, hepatic abscessations or septic pericarditis.
 - Congestive Heart Failure
 - Right side heart impairment failing to pump blood to the lungs.

- Clinical signs:

- Jugular (venous) distension.
- Submandibular, presternal (brisket) and ventral edema.
- Congested lung and liver
- Wire, etc in wall of the heart and or reticulum.

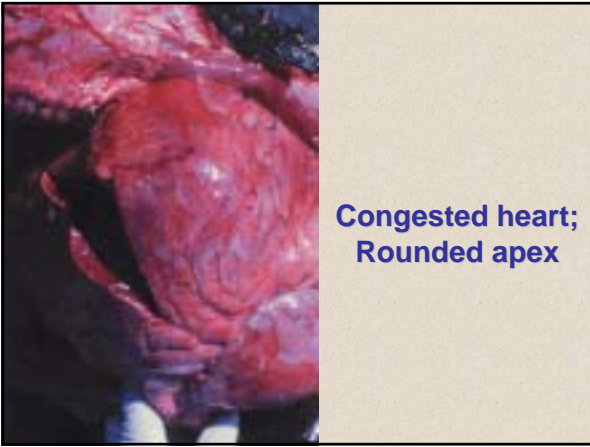




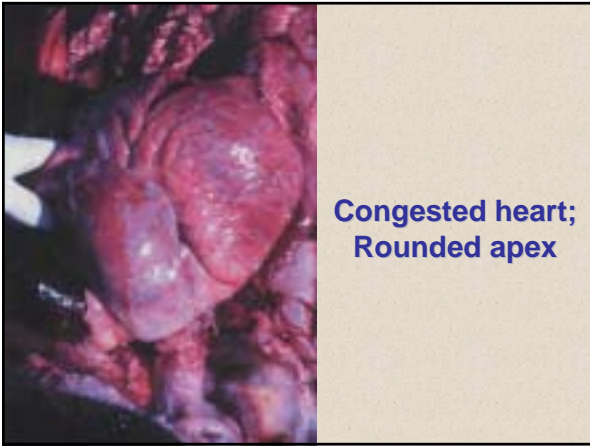
Heart abscess; Wire



Heart abscess; Wire



Congested heart;
Rounded apex



Congested heart;
Rounded apex



Pulmonary congestion



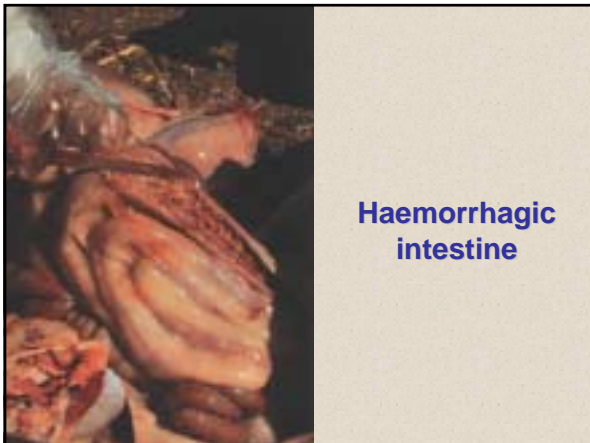
Congested, swollen, friable liver

Organophosphate Toxicity

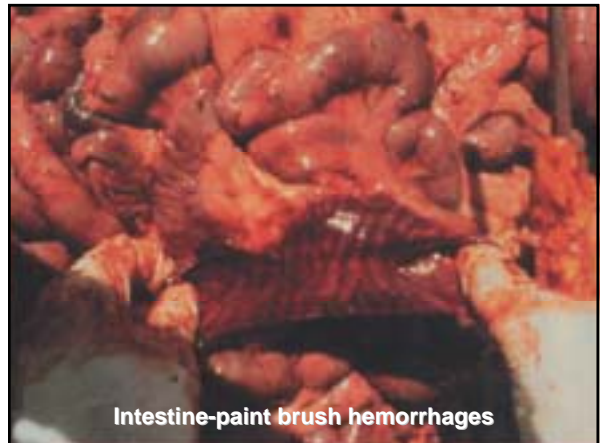
- Etiology: Organophosphate Poisoning
- Clinical signs:
 - Watery salivation, excessive bronchial secretions and rapid, difficult respiration.
 - Pupils constricted.
 - Necropsy will show pulmonary edema and paint brush hemorrhages of the intestinal mucosa.



Exposed calf; Salivation; Difficult respiration



Haemorrhagic intestine



Intestine-paint brush hemorrhages



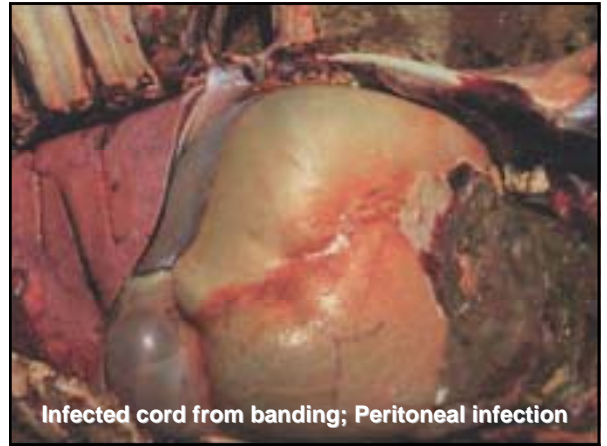
Intestine-paint brush hemorrhages

Peritonitis

- Etiology:
 - Peritonitis; Various causes:
 1. Castration (Banding)
 2. Peritoneal injections
 3. Blister Beetle-uncommon in cattle
- Clinical signs:
 - Abdominal pain and swelling resulting in death within 48 hours.
 - Necropsy: perforated abomasum ulcer resulting in severe peritonitis.
 - No rumen and or intestine involvement.



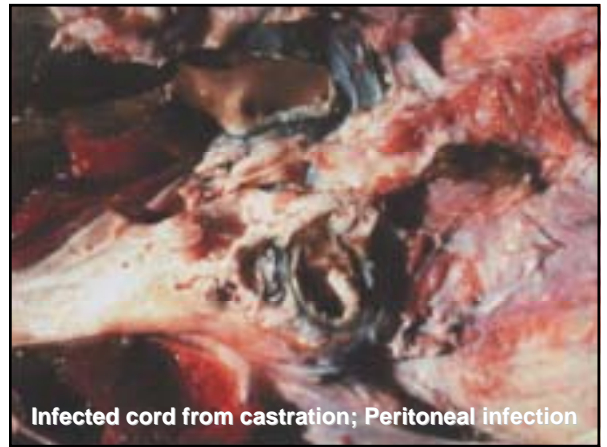
Banding; Swollen scrotum



Infected cord from banding; Peritoneal infection



Peritoneal infection



Infected cord from castration; Peritoneal infection



General peritonitis



Intraperitoneal injection peritonitis



Calves hospital with swollen abdomen;
Excessive salivation, Blister Beetle



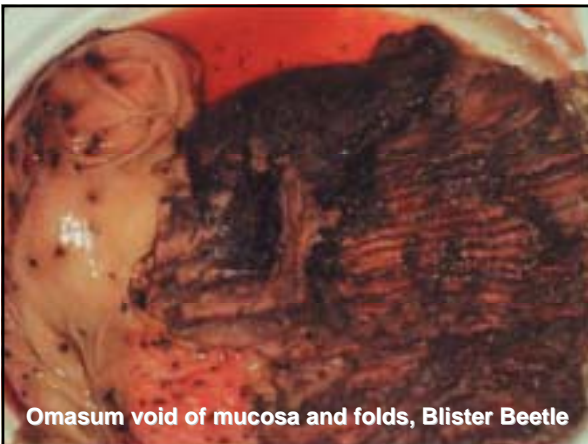
Swollen abdomen; Salivation, Blister Beetle



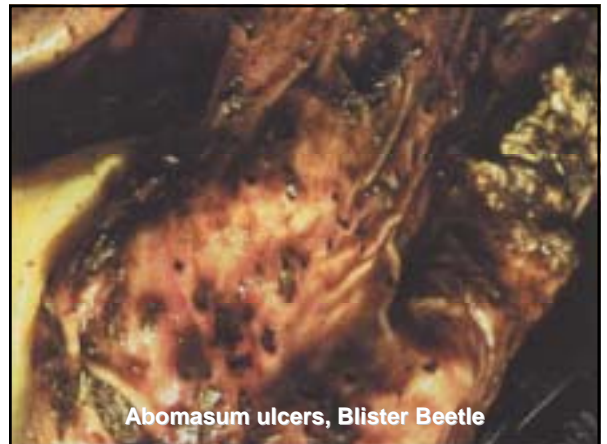
Subcutaneous hemorrhage, Blister Beetle



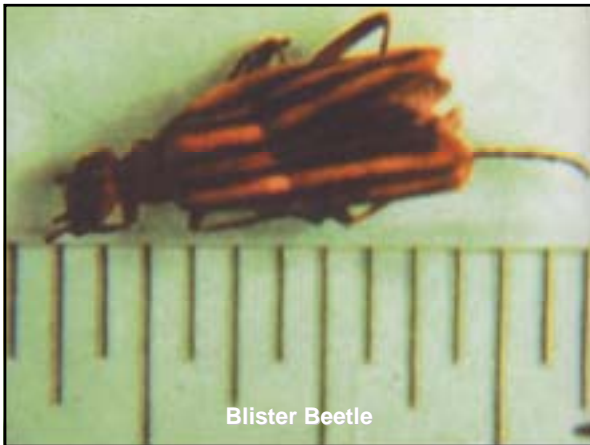
Peritoneal infection; Hemorrhage, Blister Beetle



Omasum void of mucosa and folds, Blister Beetle



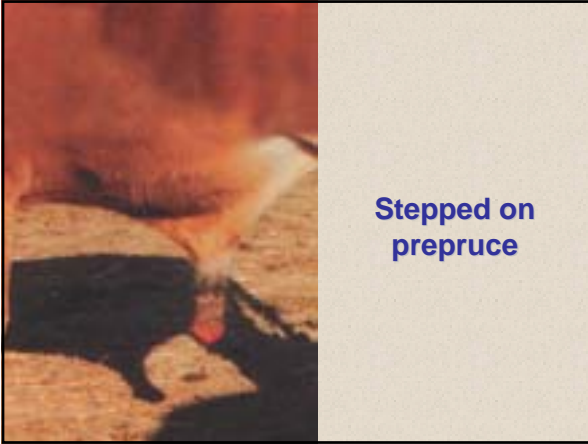
Abomasum ulcers, Blister Beetle



Urinary Calculi

- Etiology:
 - Urinary Calculi-Waterbelly; Urolithiasis
 - Possible causes are reduced fluid intake, mineral balance, and high concentrate intake.
 - Formation of microcalculi in kidneys then calculi obstruct the urethra, which can cause rupture and subcutaneous swelling, and/or bladder rupture thus resulting in swelling of abdomen due to urine and peritonitis.
- Clinical signs:
 - Constant straining attempting to urinate
 - Calculi may be seen on sheath.





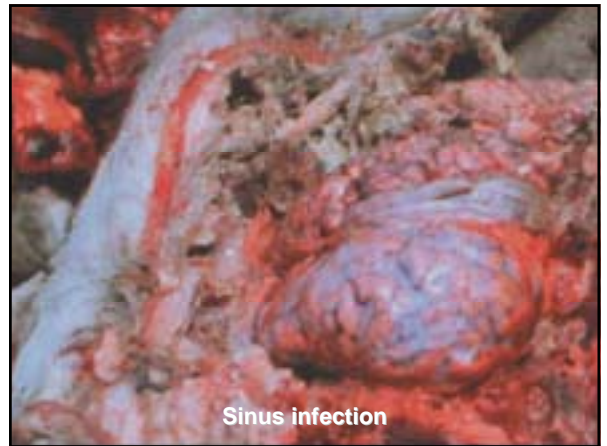
Horn Infection

- Etiology:
 - Horn infection from improper dehorning or dehorning too large of horn.
- Clinical signs:
 - Sinus drainage and foul odor.





Infected sinus from infected horn



Sinus infection



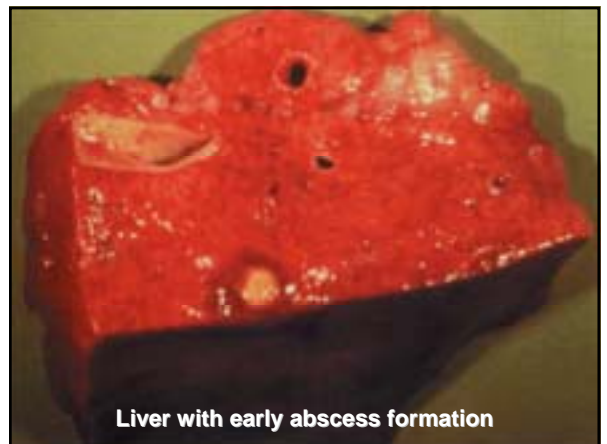
Sinus infection

Internal-Hepatic Abscessation-Liver Abscess Complex

- Etiology:
 - Acute and/or chronic rumenitis sometime during feeding program.
 - Acute rumenitis is primary whereas the hepatic infection is secondary.
 - Causative agents are:
 - » *Fusobacterium necrophorum*
 - » *Actinomyces*

Internal-Hepatic Abscessation-Liver Abscess Complex

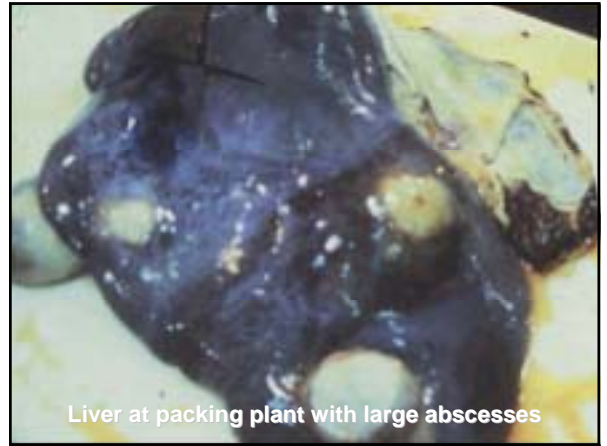
- Clinical signs:
 - Unthriftiness, poor doers?
 - Abdominal pain?
 - Anorexia and weight loss
 - Liver abscesses of different stages
 - Rumen scarring
 - Possibility of posterior vena cava thrombosis



Liver with early abscess formation



Anorexia, unthrifty calf during rotation change



Liver at packing plant with large abscesses

Acute Interstitial Pneumonia

- Examples:
 - Atypical Interstitial Pneumonia (AIP)
 - Bovine Pulmonary Emphysema
 - Dust Pneumonia
- Etiology: Unknown
 - Dust associated with several antigens, toxins in feedstuffs, Intoxication with 3-Methylindole, Chronic effects of acute bronchopneumonia, etc?

Acute Interstitial Pneumonia

- Clinical signs:
 - Acute respiratory distress with drooling saliva.
 - Open mouth breathing.
 - Lungs edematous and emphysematous
 - Interlobular emphysema



Edematous, emphysematous lung



Edematous, emphysematous lung

- Etiology: Knuckler

- Resulting from combined Vitamin E and Selenium deficiency and possible stress.

- Clinical signs:

- Usually see knuckling at the fetlock and hock joints with occasionally involvement of the shoulder joint.

