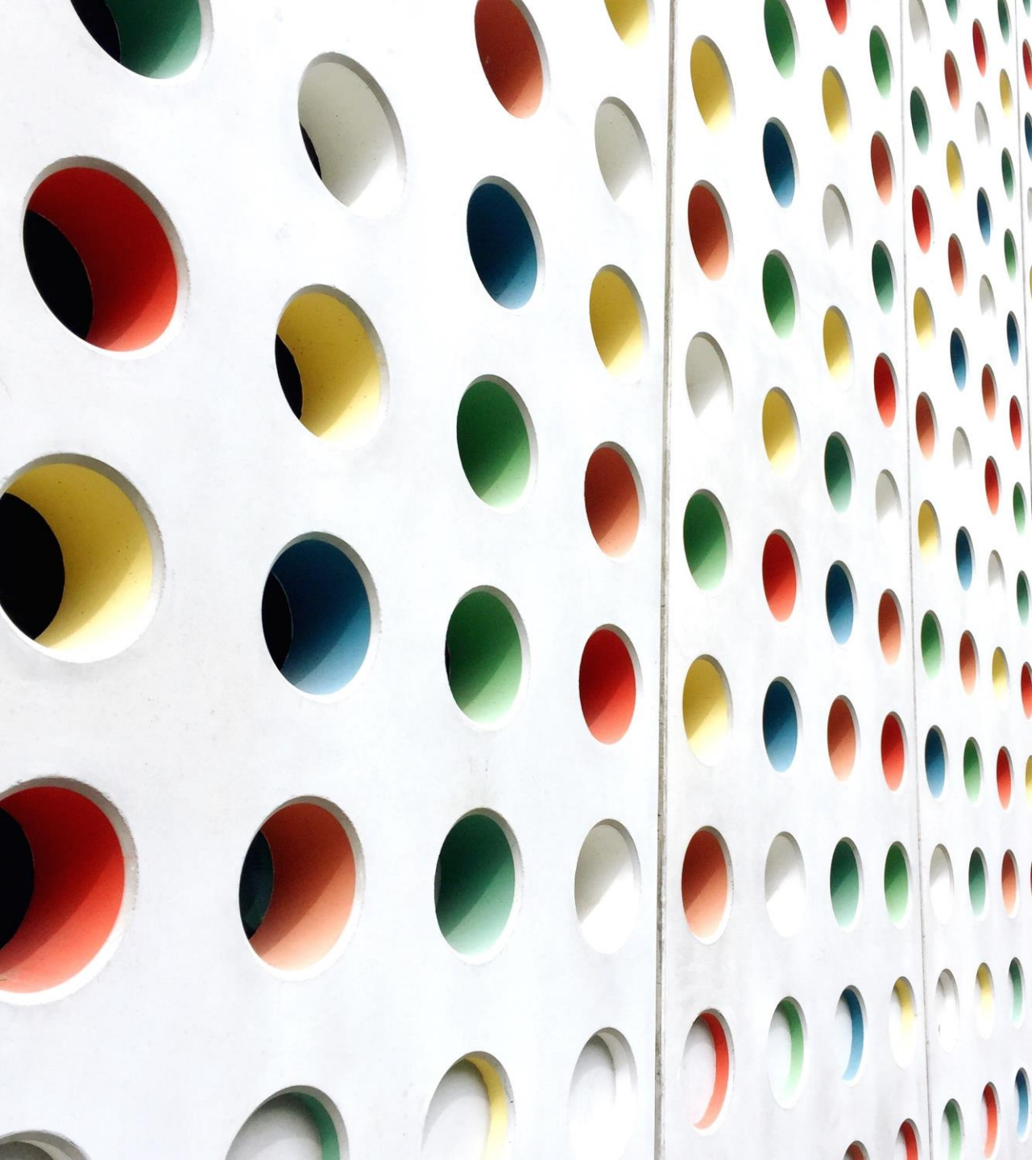

Rinderpest

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Introduction:

Otherwise known as "cattle plague," rinderpest was an acute or subacute highly contagious disease of cattle, domestic buffalo, and some other species of even-toed ungulates, including buffaloes, large antelopes, deer, giraffes, wildebeests, and warthogs, characterized by erosive or hemorrhagic lesions of all mucous membranes.

Introduction:

Species Rinderpest virus (RPV) is in the family Paramyxoviridae, genus Morbillivirus.

The virus is highly fragile under ordinary environmental conditions; it is incapable of surviving more than a few hours outside the animal body under normal circumstances.

The disease was eradicated from the planet, with the virus last detected in 2001 in wild buffaloes in Meru National Park in Kenya

Introduction:

The nasopharyngeal mucosa appears to be the main portal of entry in rinderpest.

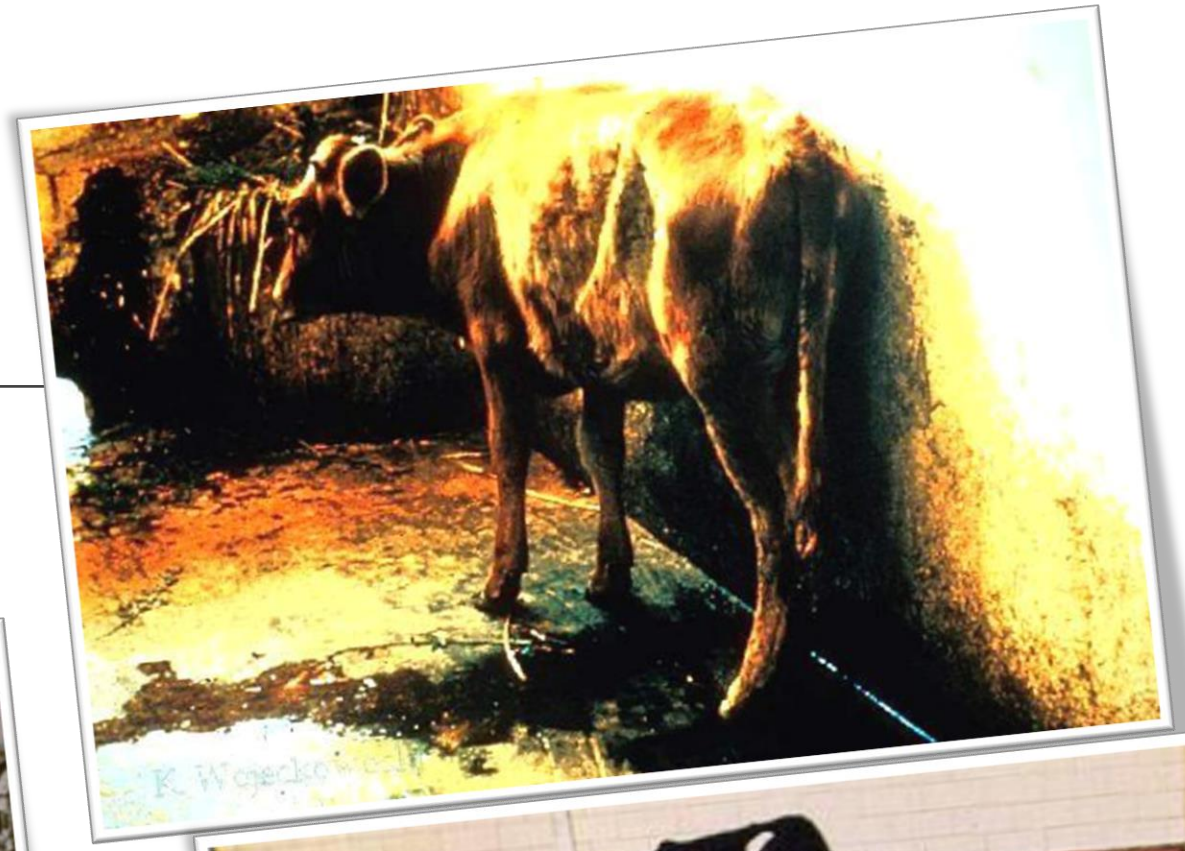
The virus replicates in all lymphoid tissues, the bone marrow, and the mucosa of the upper respiratory tract and gastrointestinal tract. Nasal, oral, and ocular secretions, as well as feces, contain high titers of the virus.

Explosive outbreaks with high morbidity and mortality were more likely to occur in naive populations. Vaccinated or recovered animals usually had lifelong immunity.

Secondary bacterial, viral, protozoal, and rickettsial infections were common.

Fever and its attendant signs usher in the clinical syndrome, with early leukopenia. Fever reaches its peak in ~3 days and falls with the onset of diarrhea, which may be bloody. There is severe abdominal pain, anorexia, ocular and nasal discharge, tachypnea, fetid breath, occasional cough, lethargy, severe dehydration and emaciation, and prostration. Death occurs in 5-8 days.

Diarrhea is one of the principal signs of RP



The lesions in the upper alimentary tract are necrotizing and erosive-ulcerative.

RPV has an affinity for the alimentary epithelium. Most severely affected areas in the oral cavity are those contiguous with lymphoid aggregates. Consequently, the caudal part of the oral cavity is affected preferentially.

Esophageal erosions are usually mild and affect the proximal portion. The forestomachs rarely exhibit any lesions.

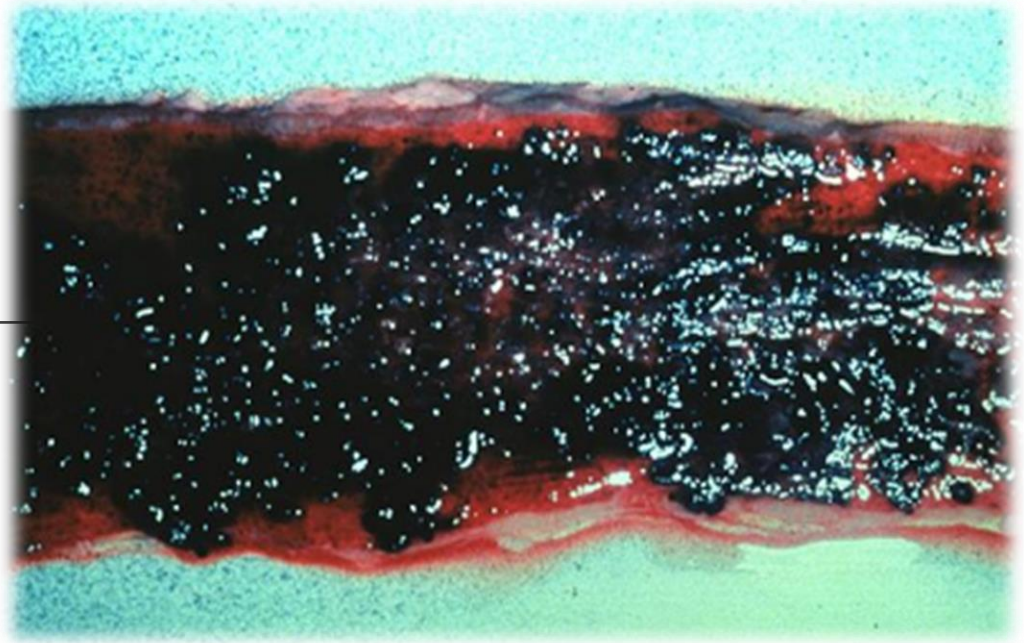
Ulcerative lesions on the gingivia

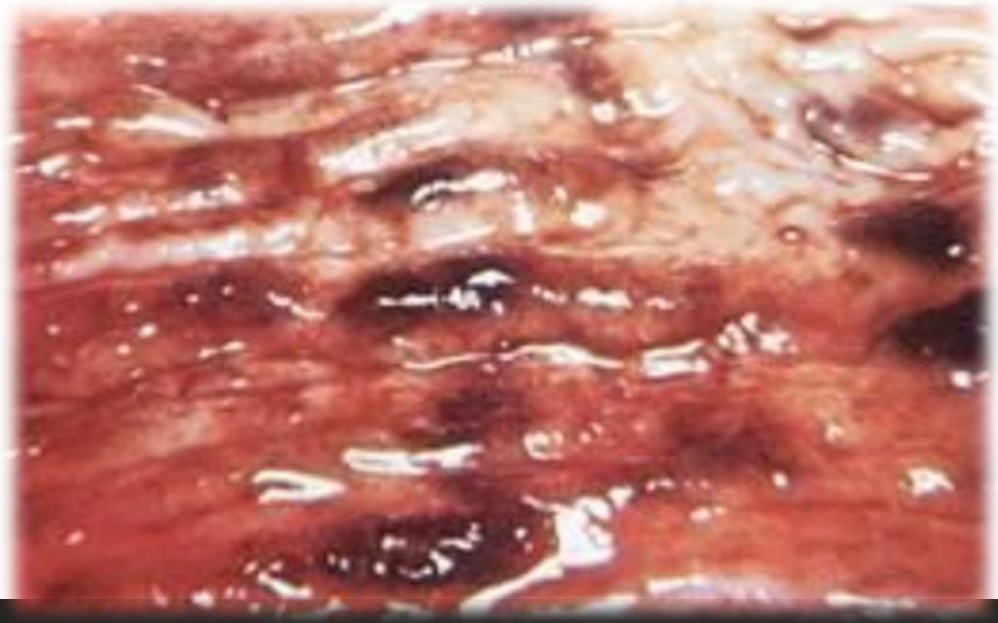
Ulcerative and necrotic lesions on the tongue

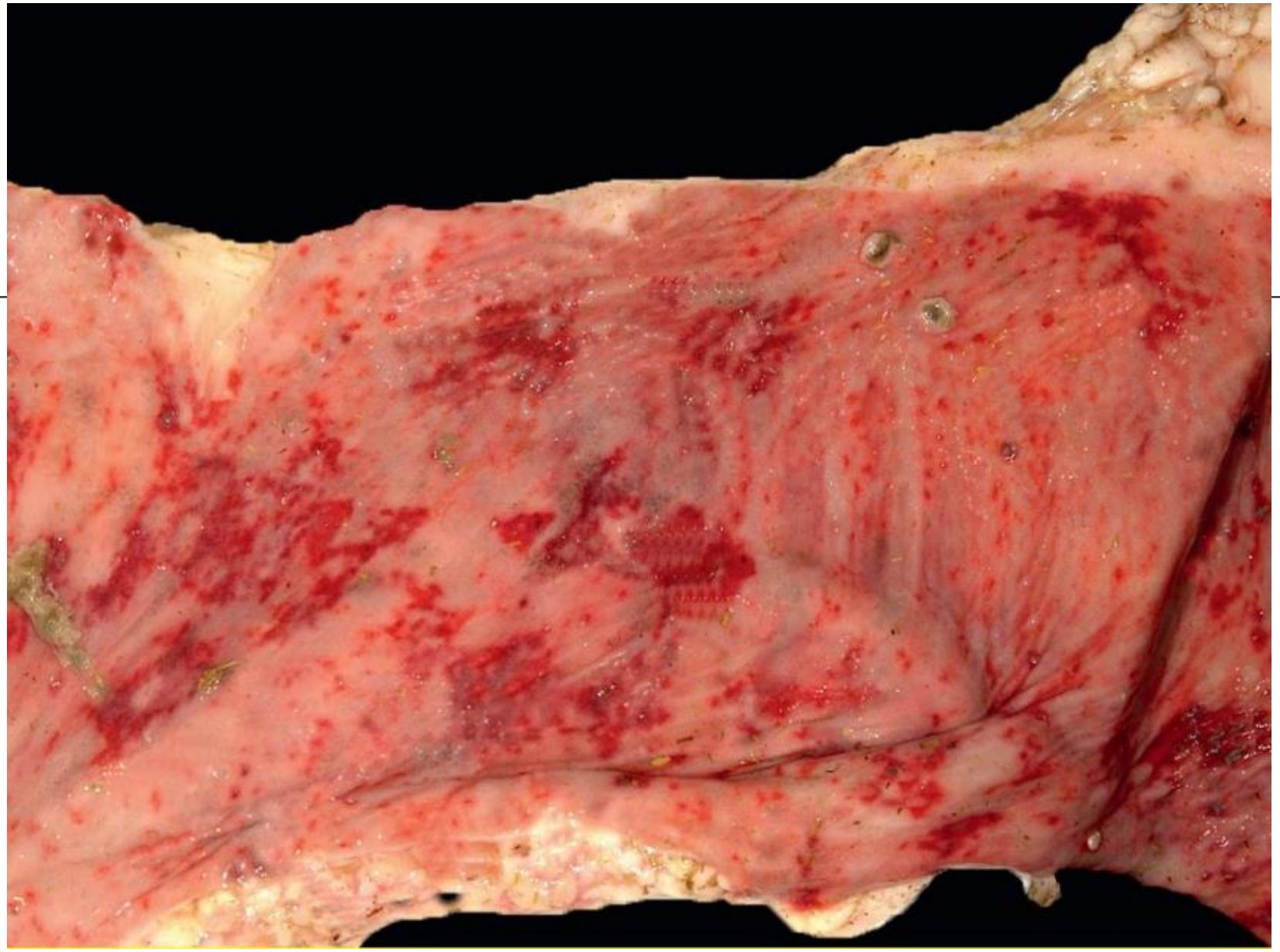

MVV

Post Mortem Lesions:

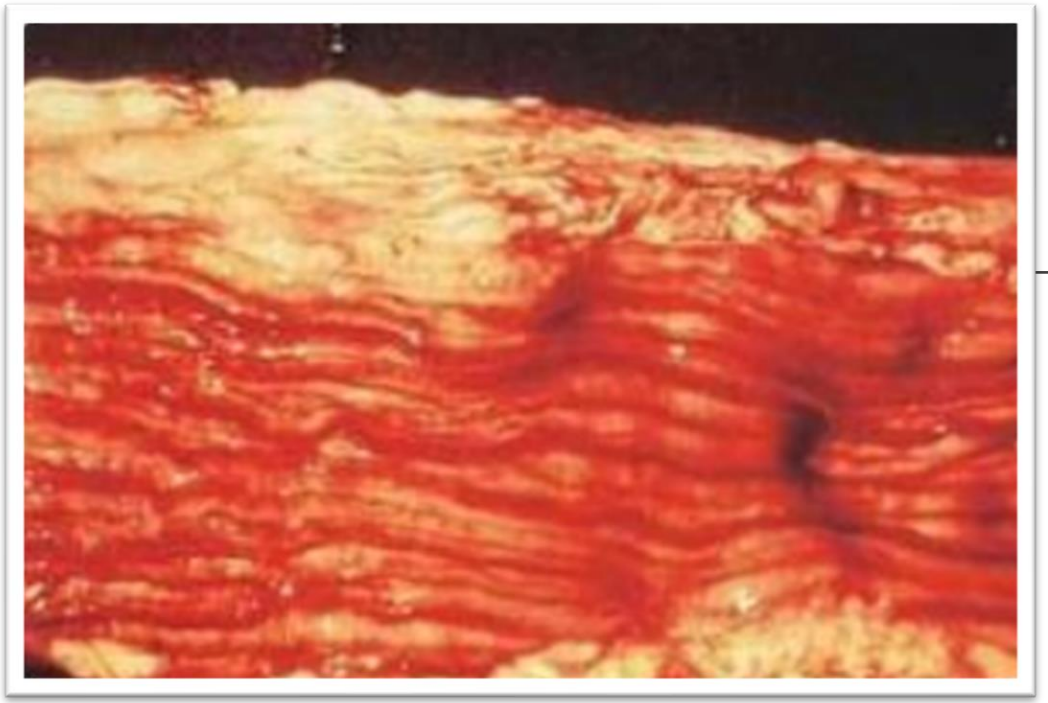
- Esophagus:
  Brown and necrotic foci.
- Omasum:
  Rare erosions and hemorrhage.
- Small intestine, abomasum, cecum and colon:
  - Necrosis, edema and congestion "Tiger striping"

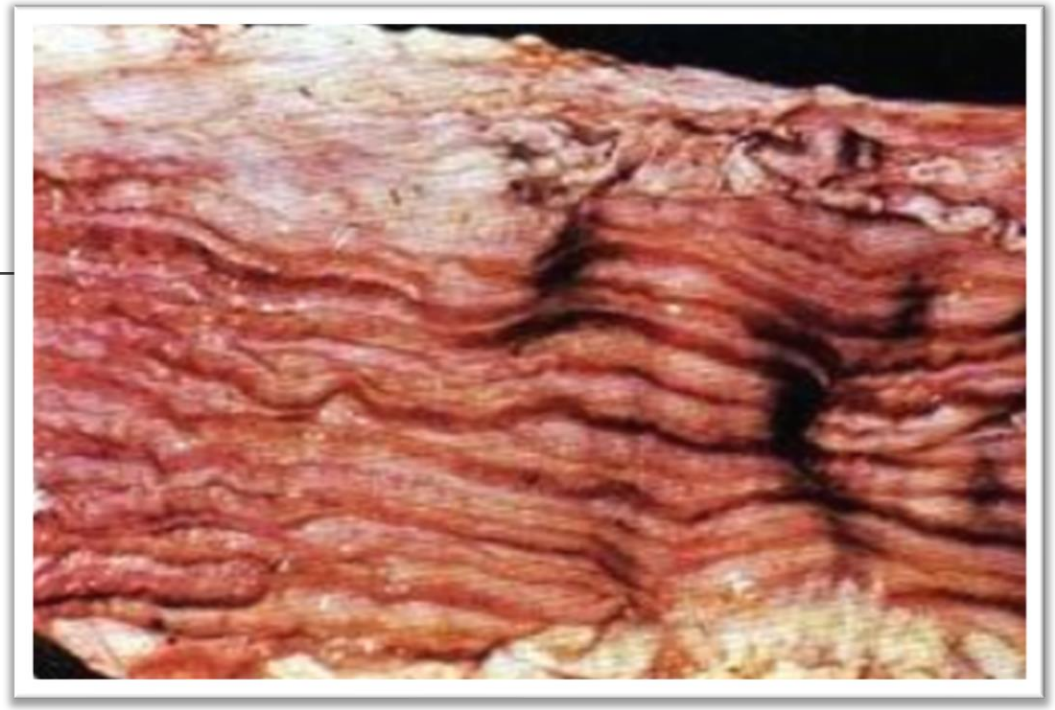






Rinderpest in a cow. Multifocal to coalescing fibrinohemorrhagic colitis





Zebra marking in large intestine

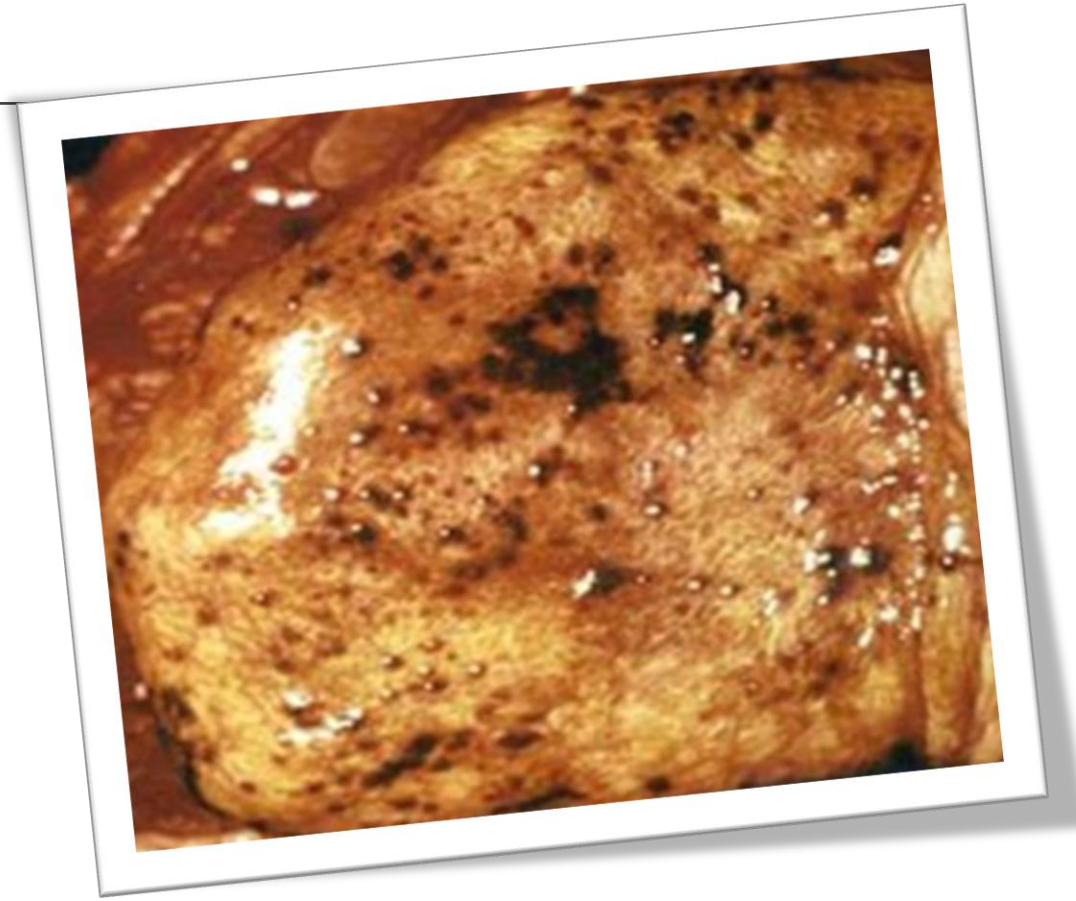
Rectum

Hyperemia of the longitudinal folds (Zebra striping)

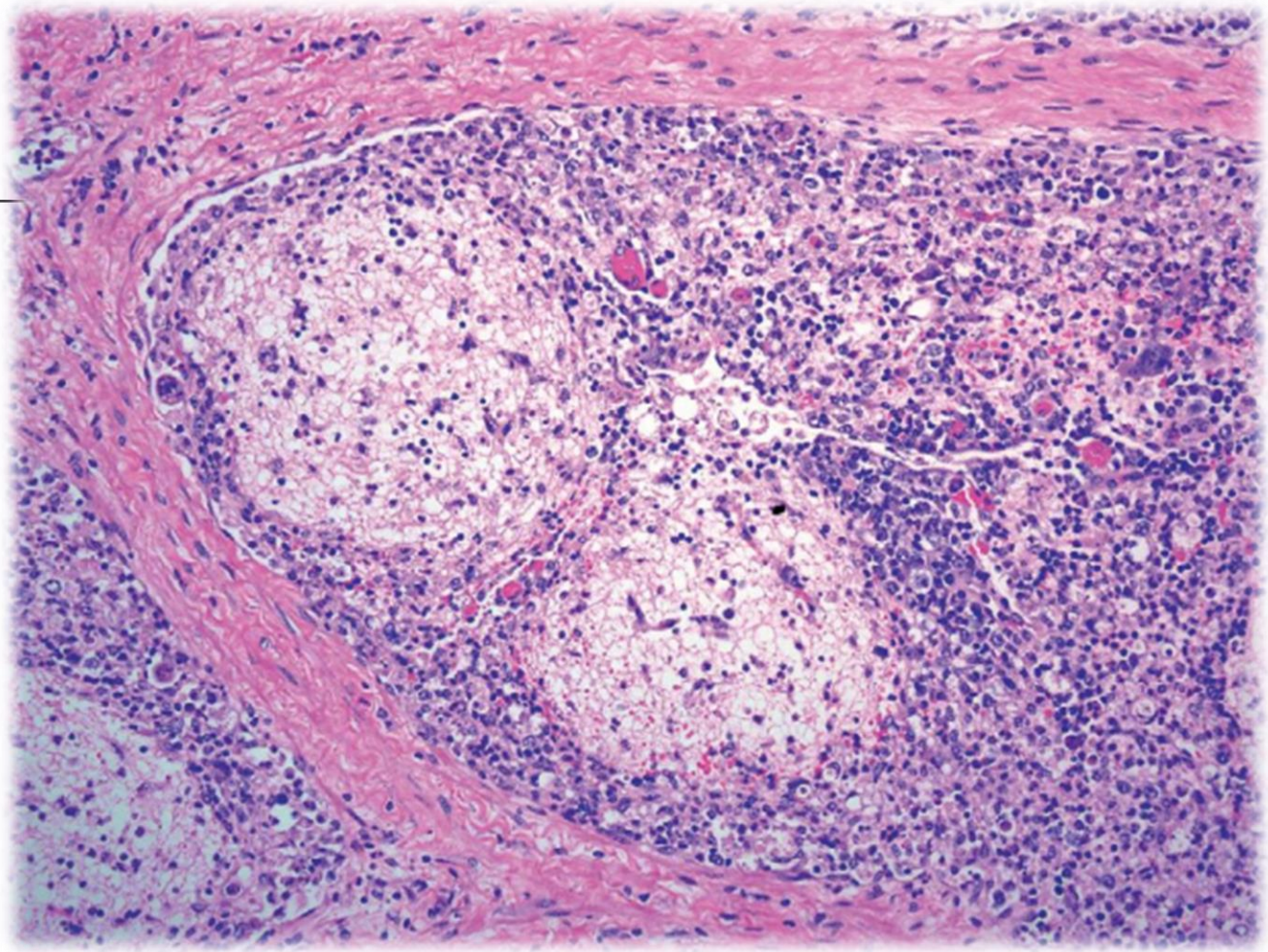

L.Logan


LLogan

Lymph nodes:
Swollen and edematous.
Gall Bladder:
Hemorrhagic mucosa.
Respiratory system:
Emphysema, congestion and areas of pneumonia. Petechiae are common in the mucosa of the upper respiratory tract, which is usually covered with mucopurulent exudate.

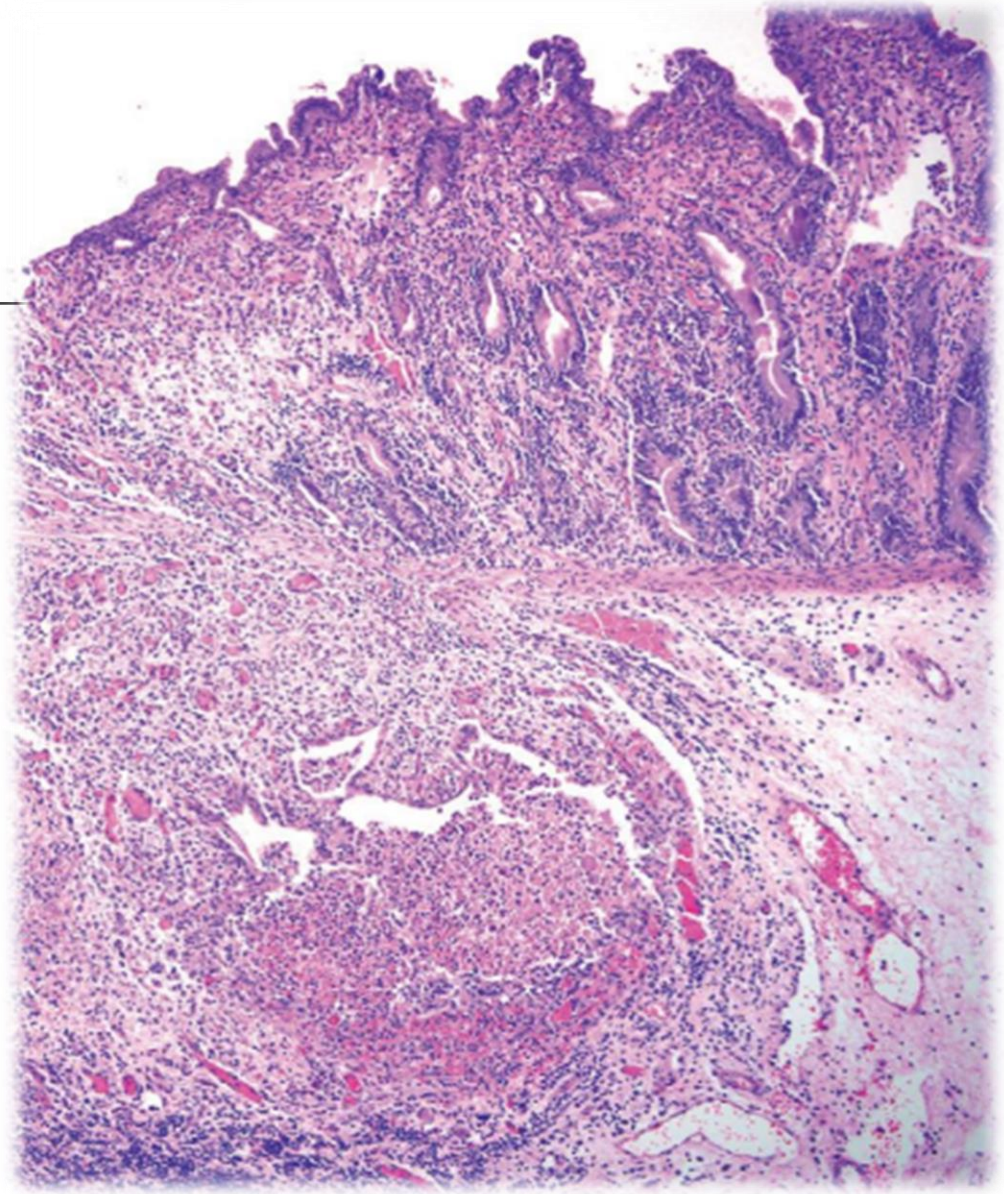


Rinderpest in an ox.
Necrosis of germinal centers in a lymph node.

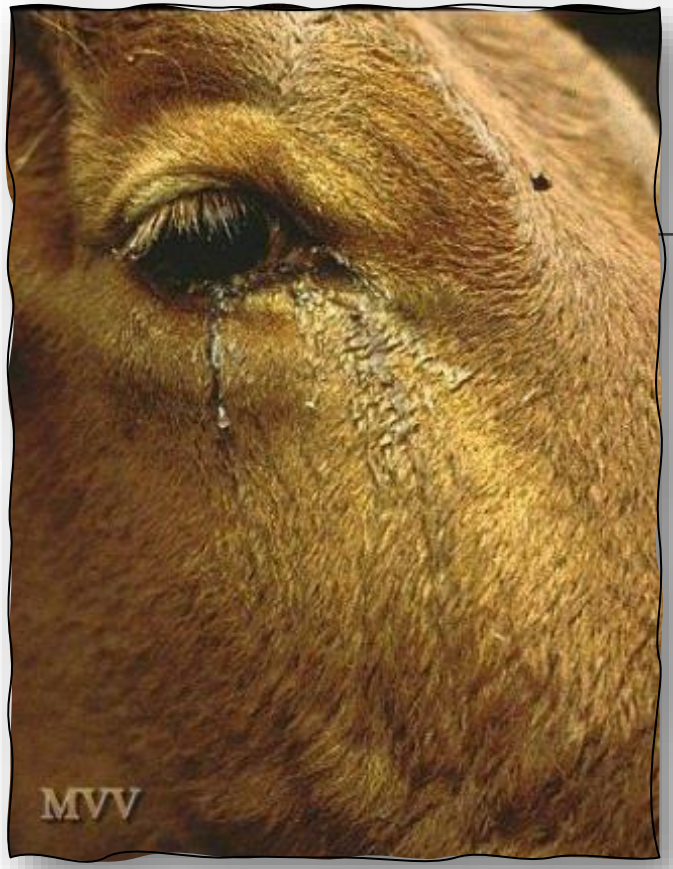


Lesions in the intestine are severe and severity correlates with amount of lymphoid tissue in subjacent areas. Consequently, greatest mucosal damage is seen in ileum and the proximal colonic patch.

Rinderpest in an ox.
Necrosis of Peyer's
patch in ileum.



Peyer's patches
are almost universally involved.
These areas become hemorrhagic and necrotic, and are associated with necrosis of the overlying mucosa,
leaving deep ulcers.



Acute congestion and edema of the conjunctiva may be followed by purulent conjunctivitis and corneal ulceration.

Differential Diagnosis

- Infectious bovine rhinotracheitis
- Bovine viral diarrhea
- Malignant catarrhal fever
- Foot and mouth disease
- Bluetongue
- Salmonellosis
- Paratuberculosis
- Peste des petits ruminants