



African horse sickness

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African horse sickness

- Is an infectious but not contagious febrile seasonal disease of horses which is caused by a filterable virus (an **Orbivirus of the family Reoviridae**).
- It is characterized by fever, oedema of the lungs and subcutaneous tissues in the affected animals.
- Culicoides are responsible for its transmission to healthy horses from diseased ones. Standing or stagnant water and warm humid conditions give a suitable environment for the multiplication of these vectors

Pathogenesis

Horses is bitten by an infected insects

initial viral replication in regional lymph nodes

primary viremia

infection of target organs (endothelial cells and mononuclear cells of the lung, spleen, and lymphoid tissue)
secondary viremia

virally induced endothelial cell damage and activation of infected macrophages with subsequent cytokine production (IL-1, TNF α)

increased vascular permeability

edema

Types of the disease

• **Three types of African horse sickness are as follows :**

1. The subacute edematous or cardiac form

(marked by hydropericardium).

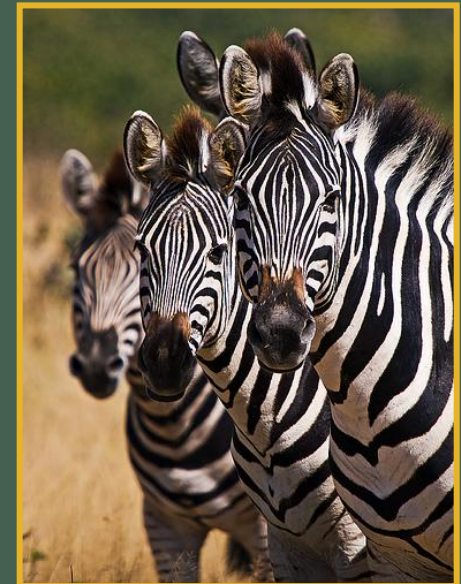
2. The peracute or pulmonary form

(marked by respiratory distress).

3. Mixed or Acute type.

Species Affected

- Equidae
 - Horses, donkeys, mules
 - Zebras
- Other
 - Camels
 - Dogs



Pulmonary & cardiac form



AHS - Foam from nares due to pulmonary edema



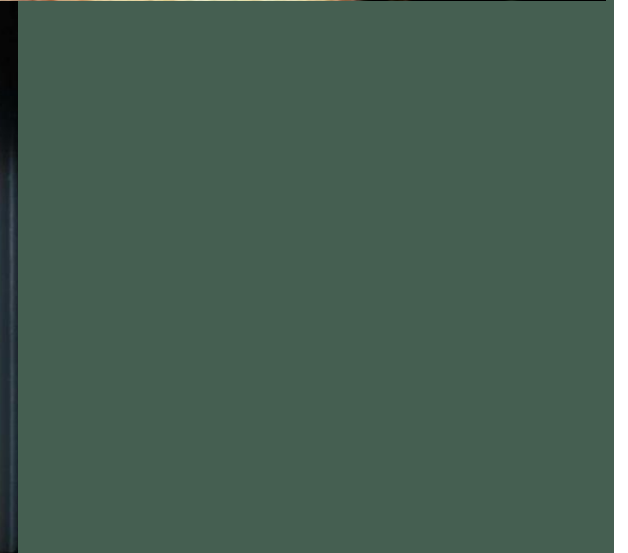
Bilateral supra orbital edema – cardiac form



Congestion and edema of conjunctiva



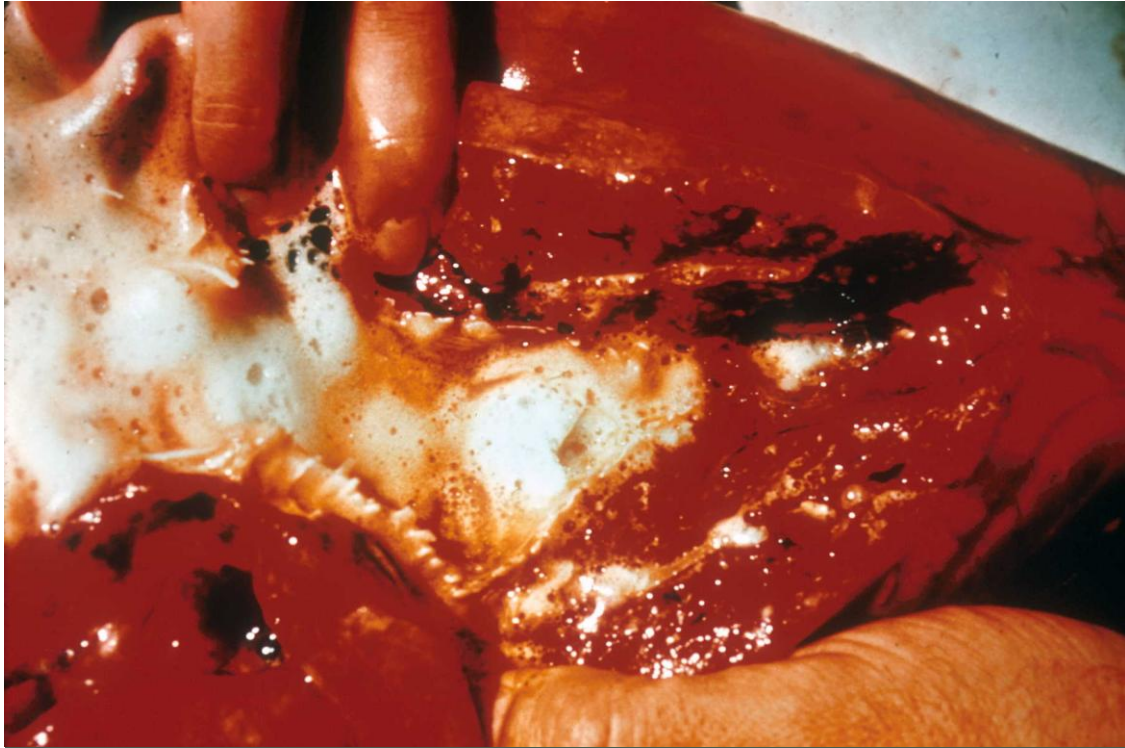
Supraorbital oedema is pathognomic lesion of disease





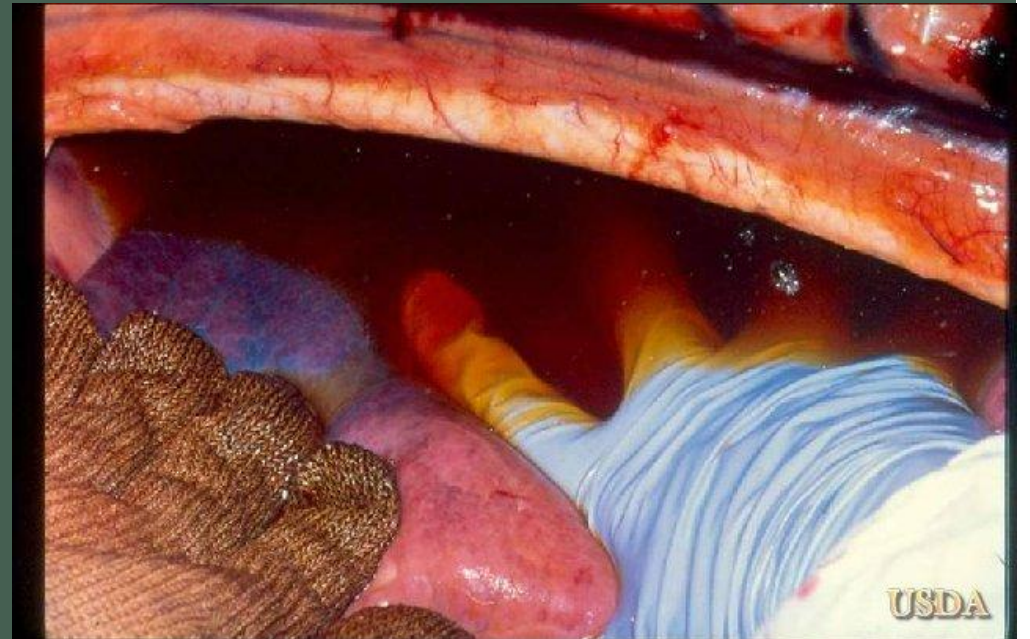
Abundant froth from the nostrils reflect severe pulmonary edema .

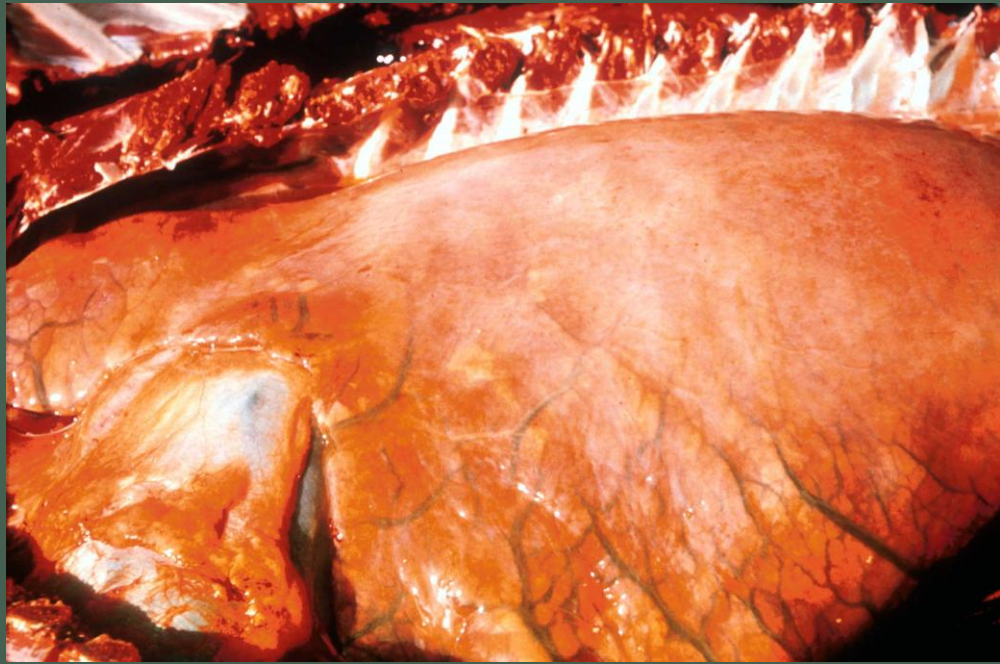




The trachea and bronchi are filled with frothy material.

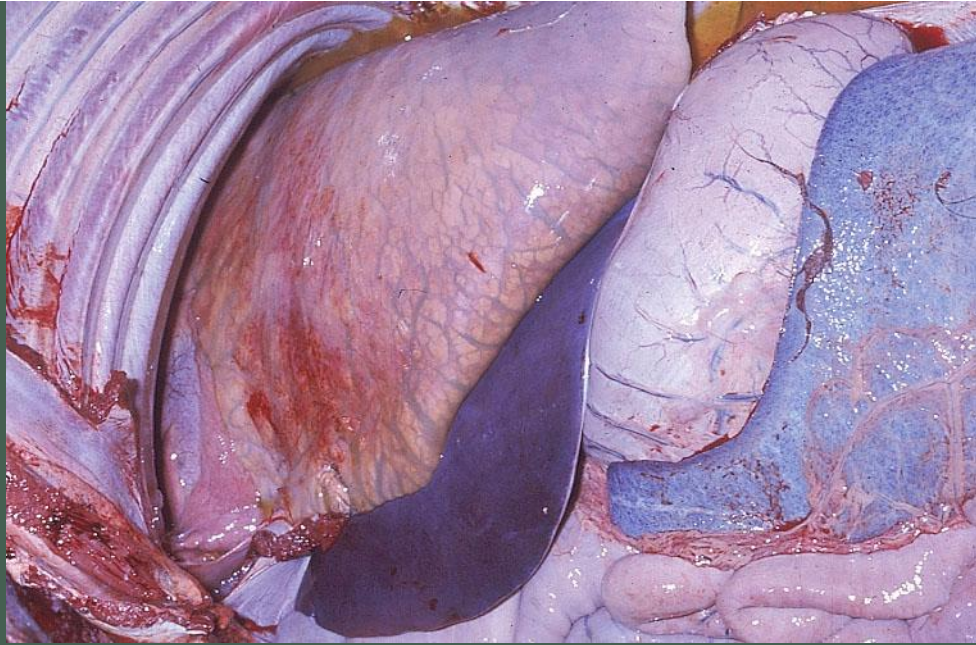
- Hydrothorax is also seen in such cases





Chronic form there is
severe pulmonary edema

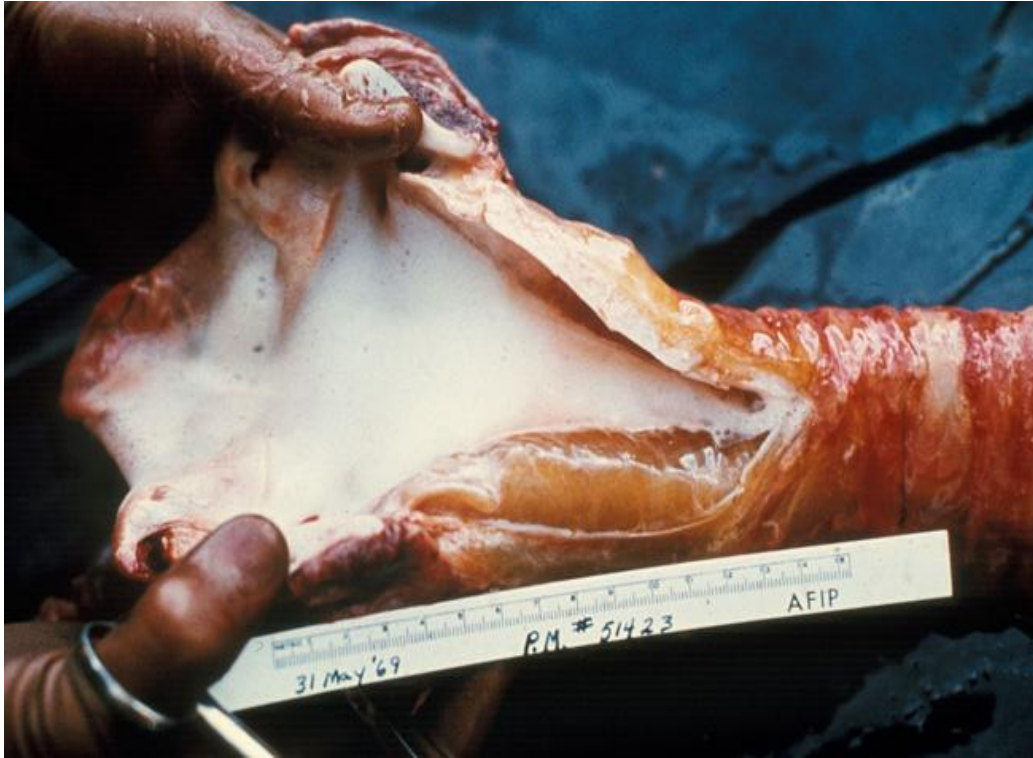




Pulmonary oedema is massive and the interlobular tissue is infiltrated with fluid of gelatinous consistency.

Intermuscular edema





In the pulmonary form
the trachea contains
large amount of froths

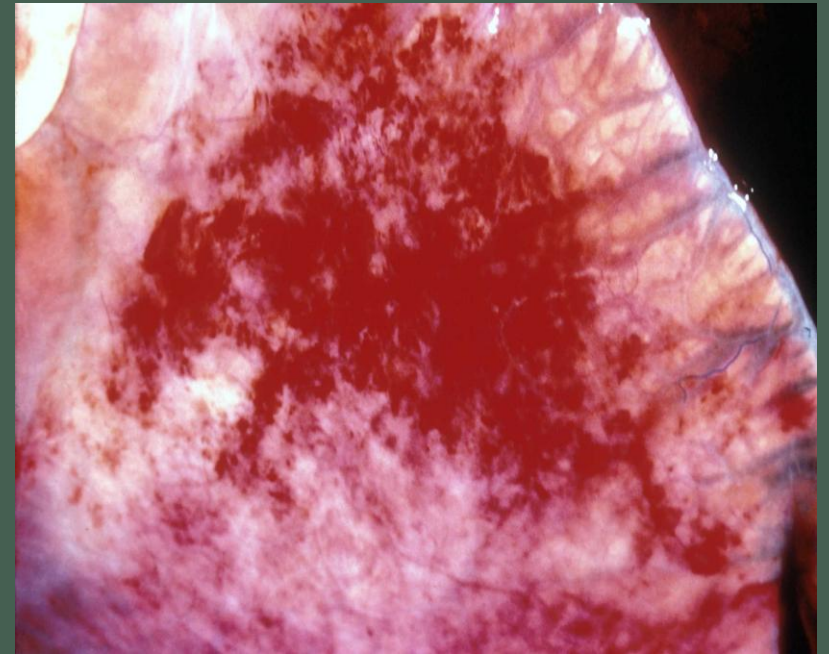
Severe edema of the
interlobular septa of the lungs





Froth and serofibrinous fluid which may be gelatinous in the trachea of a horse that died of the pulmonary form of the disease

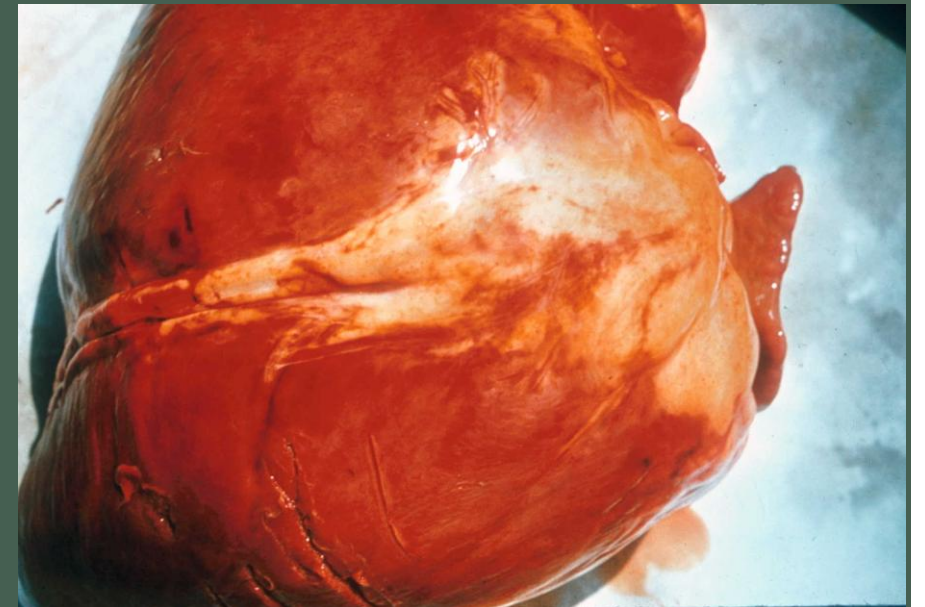
Pulmonary hemorrhage can be associated with other lung changes

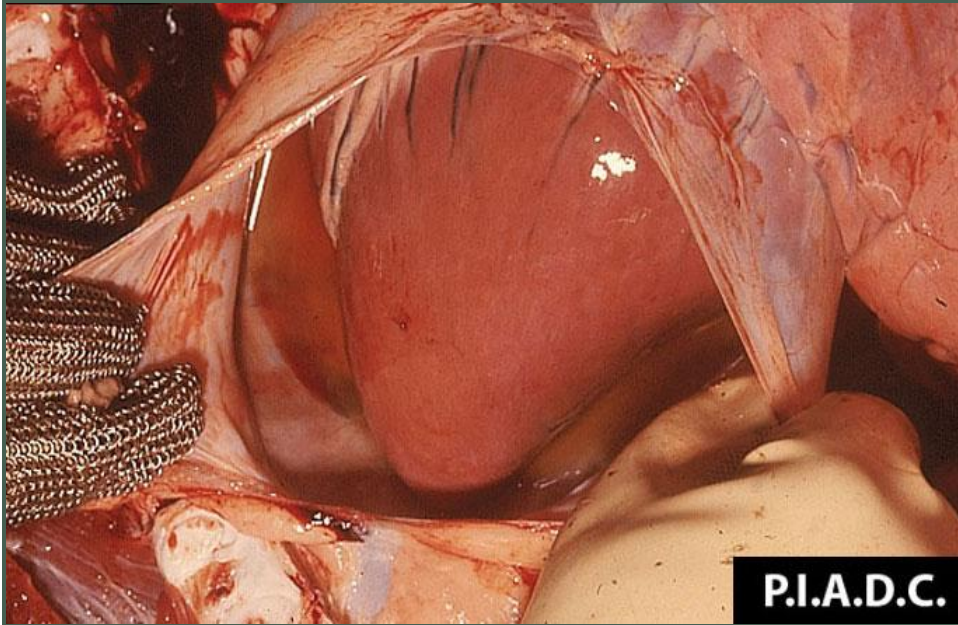




There is serosal petechial hemorrhage on the apex of cecum

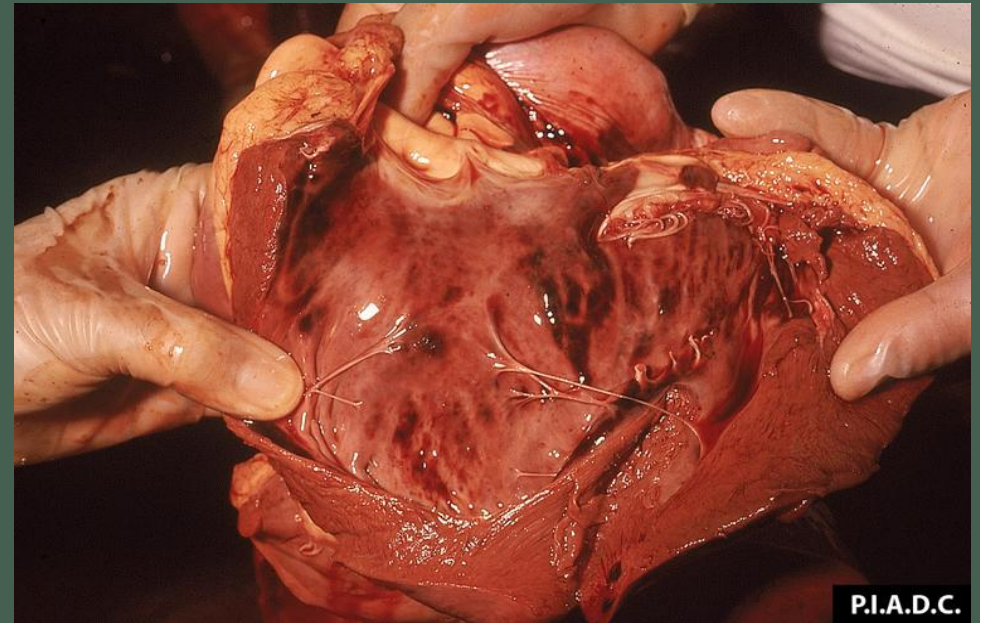
Epicardial ecchymosis indicative of endothelial damage .





The pericardial sac contains excessive slightly turbid straw colored fluid

There is many subendocardial hemorrhages



Differential Diagnosis

- Equine viral arteritis
- Equine infectious anemia
- Hendra virus infection
- Purpura hemorrhagica
- Equine piroplasmosis
- Equine encephalitis virus
- Anthrax
- Toxins