

# Viral Infectious Diseases

## Most important

- Equine viral rhinopneumonitis
- Equine influenza
- Equine viral arteritis (EVA)
- Hendra virus

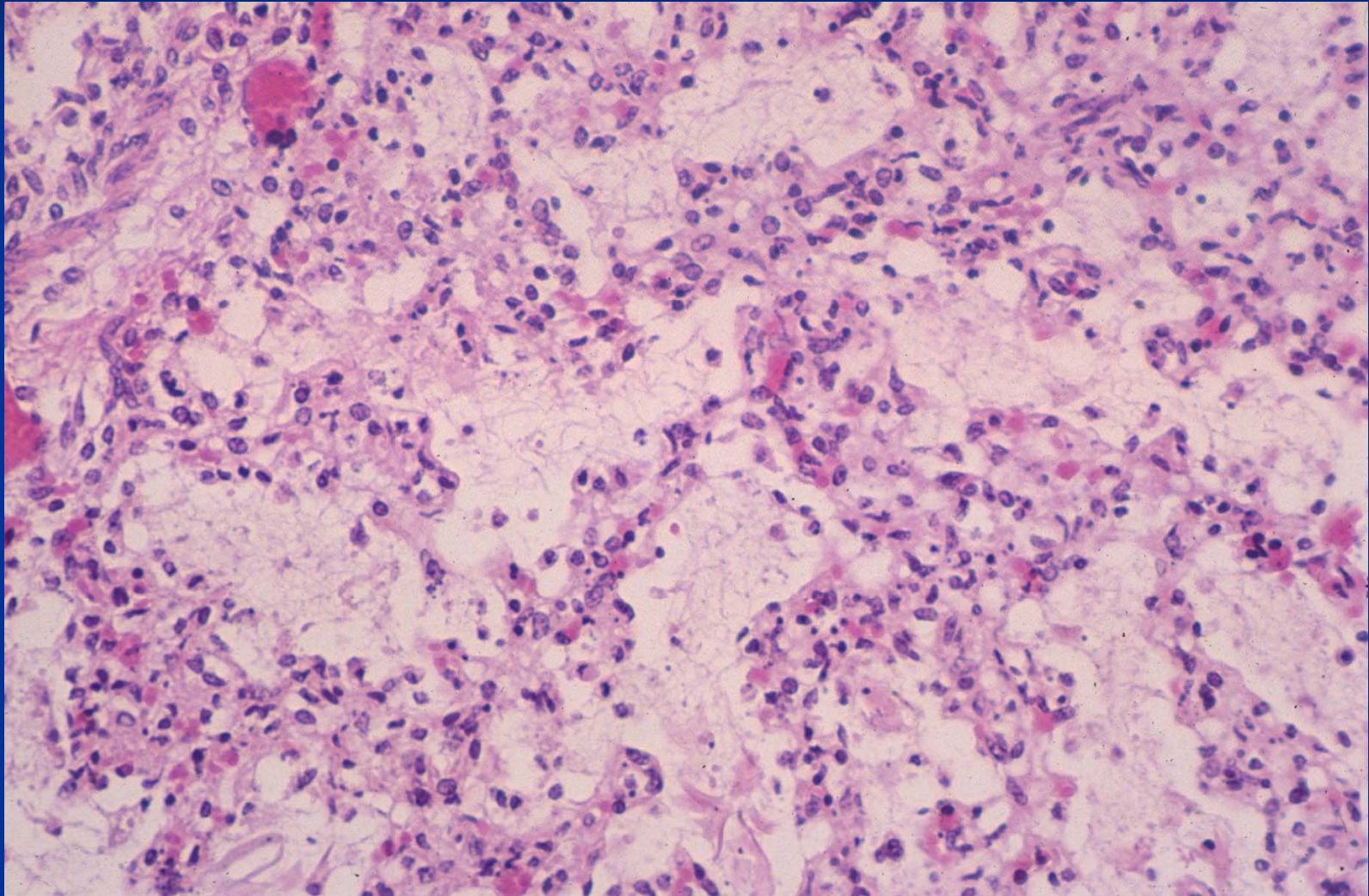
## ■ Other

- Adenovirus
- Parainfluenza
- Rhinovirus
- African horse sickness

# Equine Viral Rhinopneumonitis

- Equine herpesvirus 1 and 4 (EHV-1, EHV-4)
- Diseases
  - Respiratory (generally EHV-4)
    - Weanling foals and young race horses
  - Reproductive – abortions (generally EHV-1)
    - Fetuses/neonates infected in utero – severe disease – bronchointerstitial pneumonia with necrosis and inclusion bodies
  - Neurologic – recent racetrack outbreaks in USA
- Virus persists latently in trigeminal ganglia till activated by stress or immune suppression.

# Equine Viral Rhinopneumonitis – Fetal – Interstitial Pneumonia



# Gamma-Herpes Virus in Donkeys

- Interstitial pneumonia
- Syncytial cells even in chronic lesion
- No inclusion bodies
- Kleiboeker et al, 2002, JVDI 14: 273-280

# Equine Influenza

Type A strain (A/equi-1 and A/equi-2)

Generally in 2-3 yr olds at racetrack

High morbidity, low mortality

Clinical signs: fever, cough, oculonasal discharge

Recently mutated and “jumped” to dogs

# Equine Influenza

## Pathology

- Mucopurulent exudate in airways
- Multifocal atelectasis (checkerboard pattern)
- Broncho-interstitial pneumonia
- Secondary bacterial anteroventral bronchopneumonia possible

# Equine Viral Arteritis (EVA)

- Arterivirus found worldwide
- Disease - pansystemic -foals and horses
- Virus infects macrophages and endothelial cells
- Clinical signs – fever, respiratory distress, abortion, diarrhea, dependent edema

# Equine Viral Arteritis (EVA)

- Pulmonary pathology
  - Interstitial pneumonia
  - Fibrino-necrotic vasculitis
  - Edema and hemorrhage
  - Hydrothorax
- Other organ pathology related to vascular lesions



# Equine Viral Arteritis (EVA) – Fetus

Interstitial pneumonia with rib impressions



# Equine Viral Arteritis (EVA)

Mild interstitial pneumonia with meconium

