

# Strangles

## Pathology

- Purulent rhinitis
- Lymphadenitis/abscesses
  - Regional
  - Systemic

# Strangles

## Potential Sequella

- Guttural pouch empyema
- Internal dissemination - “bastard” strangles
- Bronchopneumonia
- Facial paralysis and Horner’s syndrome (sympathetic nerve)
- Laryngeal hemiplegia (recurrent laryngeal nerve)
- Purpura hemorrhagica (AbAg deposition)

# Glanders

- Etiology: *Burkholderia mallei* (*Pseudomonas mallei*)
- Source - infected feed and water, rarely air droplets
- Eradicated except for North Africa, Asia, Eastern Europe, Brazil
- Zoonosis (potential bioterrorism agent)
- Contagious systemic disease
- Transmission to carnivores via ingestion of affected horses

# Glanders

## ■ Pathology

- Nasal - pyogranulomatous rhinitis that ulcerates
- Lung - may see miliary granulomas due to hematogenous spread
- Skin (legs and ventral abdomen)- may have suppurative lymphangitis (“equine farcy”)

# Melioidosis (Pseudoglanders)

- Etiology: *Burkholderia pseudomallei* (*Pseudomonas pseudomallei*)
- Source - infected feed and water
- Associated with clay soils
- Southeast Asia, Europe, Northern Australia mainly
- Zoonosis (potential bioterrorism agent) – Aboriginal communities
- Also in donkeys, goats, sheep and macropods
- Contagious systemic disease with wide host range including rodents

# Melioidosis (Pseudoglanders)

- Disease – similar to glanders
- Pathology
  - Systemic
    - Suppuration and abscesses
    - Creamy to caseous, yellow to green
  - Lungs
    - Embolic bacterial pneumonia with abscesses
    - Ulceration of abscesses lead to pleuritis

# Lower Respiratory Tract

- Lungs
  - Non Infectious Diseases
  - Infectious Diseases
  - Neoplasia
- Pleura and thoracic cavity

# Lung - Non Infectious Diseases

- Abnormalities of Inflation
  - Congenital atelectasis
  - Emphysema
    - Alveolar
    - Associated with COPD
- Metabolic Disease
  - Pulmonary mineralization (“calcinosis”) - toxicosis
- Circulatory Disease
  - Pulmonary hemorrhage (EIPH)
  - Pulmonary edema e.g. cardiogenic, anaphylaxis
- Aspiration pneumonia



# Congenital Atelectasis

- Alveoli incompletely distended
- Implies abortion or stillbirth
- Lung fails to float in formalin/water
- Lack of thrombosis in umbilical cord
- Can also occur following live birth
  - Aspiration of amniotic fluid and meconium
  - Surfactant abnormality – “barker foals” – see hyaline membrane (ARDS)

# Pulmonary Mineralization

- Diffuse lesion (“pumice lung” , “calcinosis”)
- Lung does not collapse, may be gritty
- Capillary basement membranes mineralized
- Other organs affected