PULMONARY DISTRESS IN AN EQUINE – WHAT IS THE CAUSE?

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Ebony Gilbreath, DVM, PhD
Case

- 25 years of age female American Quarter Horse
- Presented with a history of congestive heart failure
- Increased respiratory effort with abdominal effort and foamy exudate from both nostrils
- Treated with furosemide
- Clinical signs abated some
- Found dead ~3 hours after presentation
Gross Description

- Laryngeal hemorrhage and edema
- Longitudinally linear trachea mucosal hemorrhage
- Hydrothorax (200 ml)
- Lungs had diffuse thick, meaty consistency
- Multiple 0.2-0.5 cm round, tan, nodular foci throughout the pulmonary parenchyma in both lung lobes
Primary Differentials

- Equine multinodular pulmonary fibrosis
Ancillary Diagnostics

- EHV-5 PCR of fresh lung tissue - Negative
Equine multinodular pulmonary fibrosis

- Cause (EHV-5) identified and published in 2007
- Progressive nodular fibrotic lung disease in adult horses
Equine multinodular pulmonary fibrosis

- **Gross lesions:**
  - Multiple nodules of fibrosis throughout the lungs

- **Histo lesions:**
  - Marked interstitial fibrosis
  - Alveloar-like architecture lined by cuboidal epithelial cells
  - Neutrophils and macrophage infiltrate
  - Rare eosinophilic intranuclear inclusion bodies in macrophages
Diffuse nodular form

- Similar appearance to our case, but our case was not as severe

Discrete nodular form

**Additional Differentials**

- Hypersensitivity pneumonitis
- Reaction to lung worms
  - *Dictyocaulus arnfieldi*
  - Chronic *Parascaris equorum* larval migration

- Multifactorial viral and hypersensitivity component**
Additional diagnostics to consider

- Submit FFPE tissue samples with lesions for EHV-5 PCR. (Adequate tissue sample may not have been tested)
- Submit lung tissue for *P. equorum* and *D. arnfeldi* PCR
Comments/Suggestions?

THANK YOU!!