Case 14-2406: Equine

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Signalment & Presenting complaint

• 18 year old warm blood gelding
• Originally presented for acute worsening of a 3-week history of respiratory distress with increased respiratory effort and a cough
Clinical workup & Case progress

• CBC, chemistry panel, venous blood gas: unremarkable
• Thoracic ultrasound: bilateral pleural effusion
• 56 L of serous, proteinaceous fluid removed by thoracocentesis
• Fluid analysis: suppurative inflammation with dysplastic mesothelial cells

• Repeated, therapeutic thoracocenteses performed and eventual chest tube placement while hospitalized
• Pleurodesis treatment attempted
• Initial response to pleurodesis
• Remained stable over several months
• Unchanging, low volume of pleural effusion appreciated with recheck ultrasound examinations
Case progress continued

• 4 months following initial presentation, clinical signs of respiratory distress returned
• Ultrasound revealed increased pleural effusion
• Fever (101.7 F) also noted

• Chest drain tubes and repeat pleurodesis treatment were not impactful
• Euthanasia elected
• Complete necropsy performed

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Lymph node
Morphologic diagnosis:

Pleura, pericardium: Malignant mesothelioma (epithelioid type) with lymph node metastasis
Equine Mesothelioma

- Uncommon in veterinary species
- Small number (<10) of reports of mesothelioma in the horse
- Pericardial, pleural, and/or peritoneal mesotheliomas are described
- Often involve multiple sites
- Multicentric origin versus transcoelomic metastasis is debated
- Lymph node metastasis is rare
Mesothelioma

- 3 morphologic subtypes:
  - Epithelioid
  - Sarcomatoid
  - Biphasic
- Many epithelioid variants are described in humans
  - A lipid-rich peritoneal mesothelioma has been reported in the horse
- Positive immunoreactivity for vimentin, pancytokeratin, and calretinin
- Associated with asbestos exposure in humans
  - No known carcinogen determined in horses
Questions?

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References