LADIS Case of the Month – May 2012

Submitted by: Dr. Mary Beth Whitcomb, University of California, Davis

History/Physical Exam

This 17 year old Appaloosa gelding presents with a 3 day history of fever, inappetance and tachycardia. The fever worsened to 105 this morning despite RDVM treatment with NSAIDs and antibiotics. Previously, the owner had noticed intermittent coughing and that he would occasionally stand with his neck outstretched. Physical exam reveals good body condition, mild bilateral nasal discharge, tachycardia (HR=92bpm) and tachypnea (RR=32).

Thoracic Radiographs

Additional History: Preliminary ultrasound (images not provided) prior to radiography revealed severe pleural effusion, and approximately 21 liters of amber fluid were drained from the right and left thorax. A trochar remained in situ on the left with a Heimlich drain attached.

Findings: There is moderate pleural effusion with multiple small gas opacities visible throughout the ventral thorax. A small pneumothorax is present caudodorsally.

Diagnosis: Pleural effusion with suspect abscessation. Differential diagnoses for gas trapping include pulmonary abscessation, pleural abscessation and fibrinous pleuritis or necrotic lung tissue. Pneumothorax is likely iatrogenic in nature.

Thoracic Ultrasound

Additional History: These ultrasound images were obtained one day after thoracic radiography.

Findings: Large bilateral accumulation of echogenic pleural effusion. The fluid is heterogeneous and appears similar to feed contents. A large pleural gas cap is visible dorsal to the fluid line (gas-fluid interface). Ventral lung consolidation versus atelectasis is also present bilaterally.

Diagnosis: Suspect diaphragmatic hernia with rupture of gastrointestinal contents and subsequent pleural effusion and feed accumulation, although no evidence of small or large bowel is visualized within the pleural space. Additional differentials include esophageal rupture due to intrathoracic pathology.

Outcome/Discussion

During the ultrasound exam, feed material began draining from the indwelling chest tubes. The horse was taken to surgery for exploratory laparotomy. No evidence of diaphragmatic hernia or other abdominal disorders was found. Thorascopy under general anesthesia revealed a large amount of pleural fluid, feed material and fibrinous exudate. The horse was euthanized, and necropsy revealed an intrathoracic rupture of the distal esophagus due to leiomyoma involving the esophageal wall.

Esophageal obstructions due to feed impactions are the most common esophageal abnormality in horses. Nasogastric intubation performed at initial presentation revealed no esophageal obstruction.
Endoscopy of the esophagus/stomach was not performed. At necropsy, the mass was more annular in appearance and did not obviously protrude into the esophageal lumen. Intrathoracic esophageal perforations due to hypertrophy of the tunica muscularis have been reported, including a recent report on 4 horses with similar presentations as this case. Intrathoracic esophageal neoplasms are infrequently reported. A single case report of gastroesophageal leiomyosarcoma was identified, in which diagnosis was made at exploratory celiotomy and necropsy.

References

