

# MEDS

## Quarterly



The inside track on the University of Florida's Mobile Equine Diagnostic Service



### Message from Porter...

MEDS completed the academic year of 2005-06 with a significant growth in case load. In addition, the Class of 2006 was the first group veterinary students with access to the MEDS rotation throughout their senior year. Due to the high demand from veterinary students for rotations on MEDS, the service will be expanding by a second MEDS clinician and vehicle for the summer of 2007.

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## Ethmoid Hematoma in a Mare

### Student Case Study #1

By: Rachel Davis, DVM Class of 2006

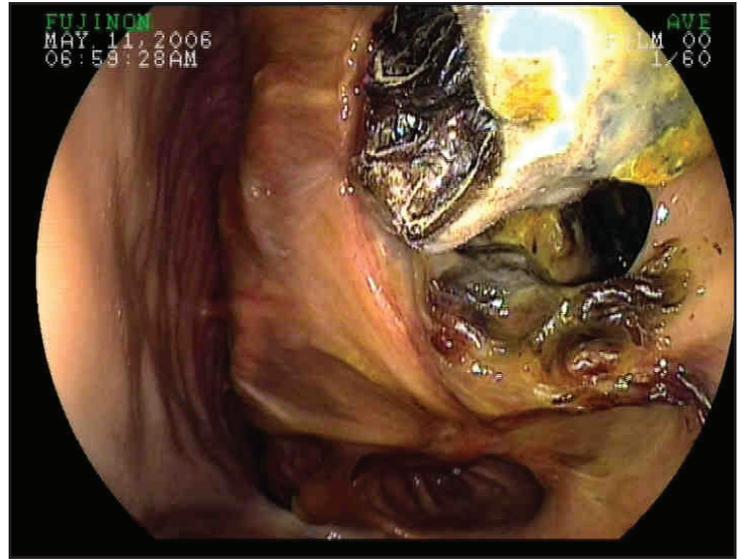
A 7-year-old Trakehner mare was referred for evaluation of a recurrent unilateral to bilateral serosanguinous nasal discharge. The mare had been diagnosed and treated several months previously with a sinus infection by the referring veterinarian. At presentation, a unilateral, mucopurulent nasal discharge was noted. Small amounts of blood were present within the discharge. Radiographs of the skull revealed a soft tissue mass in the area of the ethmoid conchae. In addition, endoscopy of the left nasal passage revealed a large, smooth, yellow-green mass within the area of the left ethmoid turbinate. A biopsy was performed through the endoscope and the results were consistent with an ethmoid hematoma.

This mare was treated with repeated injections of formalin directly into the mass through the endoscope. The treatments were approximately 30-45 days apart and several treatments were required before complete resolution of the ethmoid hematoma. Ethmoid hematomas are expansile masses that most commonly develop from the mucosal lining of the ethmoid conchae. The cause of the condition is unknown. Clinical signs include mild, intermittent epistaxis, mucopurulent discharge, facial swelling, stertorous breathing, and halitosis. If the hematoma reaches a large size it may extend into the pharynx and result in bilateral signs as well as coughing and dysphagia. Growth of ethmoid hematomas is generally slow and may take months to years before clinical signs are grossly evident. Diagnosis is dependent on endoscopy, skull radiographs, and biopsy of the mass. Treatment options include surgical resection, laser therapy, cryotherapy, and trans-endoscopic injection of formaldehyde. Formalin treatment is considered relatively safe and effective however at least 5 treatments are typically required for complete resolution of disease.

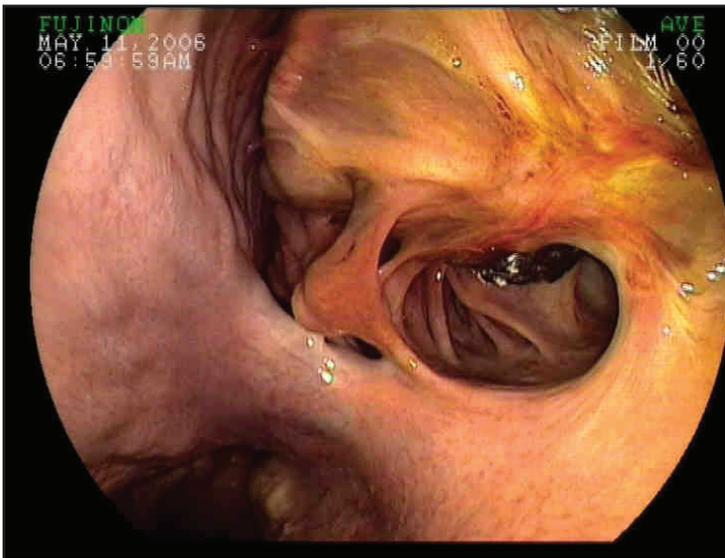
Please see page 2 for images related to this case study...



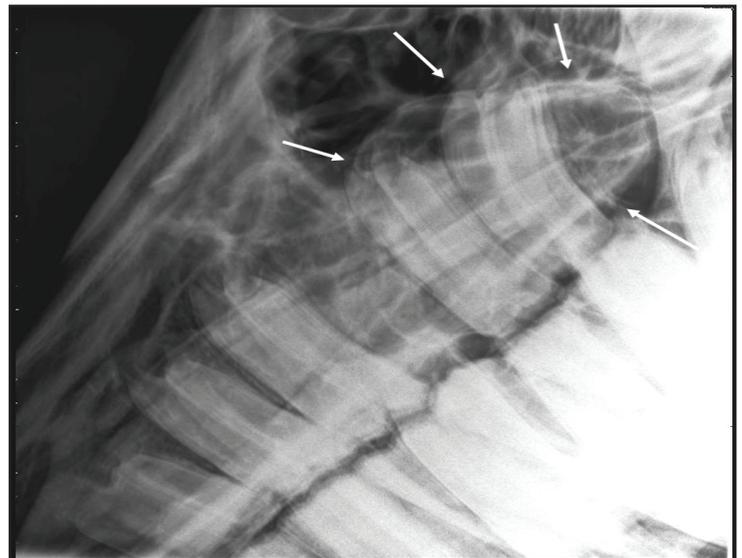
**Figure 1: Endoscopic approach to the left nasal passage. Note the smooth, yellow mass within the opening to the ethmoturbinates. Mass is consistent with an ethmoid hematoma.**



**Figure 2: The same ethmoid hematoma after 2 treatments with intra-lesional formalin injections.**



**Figure 3: The same ethmoid hematoma that has reduced in size following 2 treatments allowing for visualization of the ethmoturbinates.**



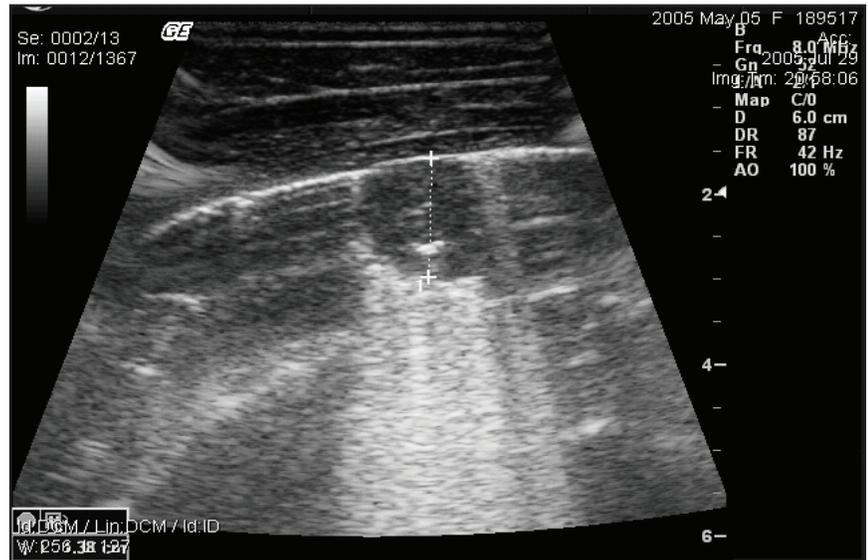
**Figure 4: Lateral radiograph of the skull noting a large, soft tissue mass in the caudal aspect of the nasal passage (white arrows).**

# Rhodococcus Pneumonia in a Foal

## Student Case Study #2

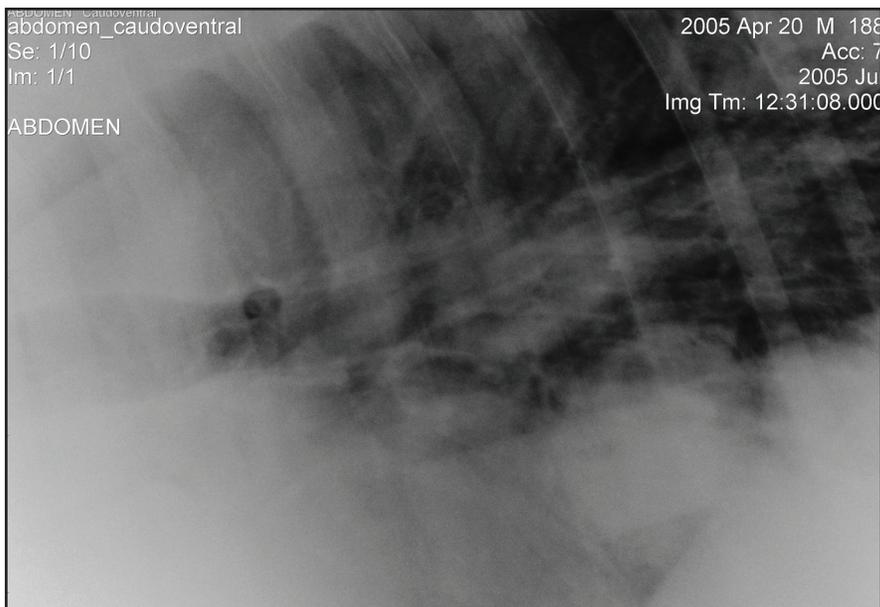
By: Allison Hiers, DVM Class of 2006

“Serenity Muris”, a 3 month old Arabian filly presented with a 3 week history of tachypnea, dyspnea, fever, lethargy, and an intermittent cough. Clinical signs failed to improve following a varied antibiotic treatment schedule, which included the use of Penicillin, Trimethoprim Sulfa, and Rifampin. Physical exam revealed Muris to be tachypneic, with an increased abdominal effort to respiration, tachycardic, mildly dehydrated, and poses a bilateral nasal discharge. Ultrasound revealed extensive abscessation with ventral consolidation of the lungs and increased echogenicity, indicating gas accumulation, was seen in the biliary tree of the cranial liver lobes. Significant abnormalities in the blood work included a neutrophilia, hyperfibrinogenemia, and increased liver enzymes and bile acids. Cytological analysis of a transtracheal wash revealed abundant mature nondegenerative neutrophils, of which, several contained intracytoplasmic coccobacillus, highly suspicious for *Rhodococcus equi*.



**Figure 5: Trans-thoracic ultrasound of a 3 month old foal: Note the large, fluid filled abscess along the pleural surface of the caudal lung lobe.**

*Rhodococcus equi* is a gram-positive coccobacillus that is an intracellular pathogen of macrophages. It is a saprophytic inhabitant of the soil and inhalation of *R. equi* laden dust particles is the most important route of acquisition. Along with



**Figure 6: Lateral radiograph of the same foal after 30 days of treatment: Note some improvement however an abscess-like structure remains evident in the caudal lung field.**

a chronic suppurative bronchopneumonia with abscessation and suppurative lymphadenitis, *R. equi* has been shown to cause multifocal ulcerative enterocolitis and typhlitis, non-septic polysynovitis, aseptic arthritis and osteomyelitis, uveitis, ulcerative lymphangitis, cellulitis, subcutaneous abscesses, panopphthalmitis, nephritis, cranial and renal abscesses. Hepatic abscesses have not been documented at this point, but may explain the liver disease present in this case. The combination of Rifampin with a macrolide, such as Clarithromycin, Azithromycin, or Erythromycin, is the treatment of choice for *R. equi* infections and has been shown to have an 88% survival success rate. Earlier recognition of the disease, followed by isolation and treatment, as well as decreasing the size of the infective challenge by proper environmental and management practices may be the best way to reduce losses associated with *R. equi* pneumonia.

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## *Friends of MEDS*

In 2004, the University of Florida's College of Veterinary Medicine unveiled plans to create a unique medical diagnostic and treatment system that could be put to use by any equine or food animal veterinarian in Florida. This system would mobilize the cutting-edge technology and the extensive medical expertise found at UF's Veterinary Medical Center and put it within the reach of veterinarians in the field. The new service would give veterinarians new resources, new tools, and new allies in their mission to improve animal healthcare.

Today, the Mobile Equine Diagnostic Service (MEDS) is a reality, and it is creating new treatment options for animal patients everywhere. MEDS works for your veterinarian, using digital and satellite technology to put the resources of the University of Florida and the experience of the Veterinary Medical Center faculty at his or her command. Thanks to the state-of-the-art MEDS truck, digital radiography, ultrasound, endoscopy, specialist consultations and more can now be utilized anywhere from urban veterinary hospitals to the most remote pastures of Florida.

Dr. Porter and MEDS are dedicated to keeping this service available and affordable for those who need it. The ingenuity and cooperation of veterinarians like yours has made MEDS possible, but it needs your support to succeed and expand. MEDS, the MEDS truck, and the veterinarians, specialists, students, and nurses who make it work, are all supported entirely by the care they provide and by donations from friends, animal lovers, and people who want to help make veterinary medicine better. We like to call these people "Friends of MEDS."

For more info regarding how to make a charitable donation to the Friends of MEDS Fund please contact:  
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Go Gators! Karen Hickok - Development Office, College of Veterinary Medicine, (352) 392-4700 ext 5213