



# VET NOTES

October 2008

## Previous VET NOTES

- September 2008 - The yearling sales
- August 2008 - Eastern Equine Encephalitis—have you vaccinated
- July 2008 - Castration complications
- June 2008 - The use of acupuncture as a diagnostic aid in the equine lameness exam
- April 2008 - Current parasite control recommendations
- March 2008 - The use of Oxytocin in the post-partum mare
- January 2008 - Preparing your mares for the breeding season
- January 2008 - Proximal hind limb suspensory desmitis (PSD): Part II: Treatment
- December 2007 - Pleuropneumonia - when shipping fever turns into a nightmare
- November 2007 - Proximal hind limb suspensory desmitis (PSD): Part I: Diagnosis
- August 2007 - Intramuscular injections
- June 2007 - A hard pill to swallow
- April 2007 - The advantages of high fat/low carb diets
- March 2007 - Bandaging
- February 2007 - Single screw compression V.

## Interstitial pneumonia - a different kind of lung disease

The term “interstitial pneumonia” is being heard more and more. Perhaps this is because veterinarians have received recent continuing education on the diagnosis and treatment of this group of lung afflictions. However, it remains a misunderstood disease because there is very little definitively understood about what causes it. We know that experimentally there are known causes such as certain toxins and silicon dioxide. However, many clinical cases are idiopathic – meaning that no cause is definitively identified. It seems that there is the strongest support for viral causes and for it to be a hypersensitivity reaction (like an allergy to) certain bacteria, viruses, and parasites. In foals 3 to 6 months old, migrating roundworms through the lungs can cause an interstitial response. In the case of a hypersensitivity reaction, it is postulated that the body over responds to a bacteria or virus and causes too much inflammation trying to rid itself of this pathogen. The result is lung inflammation that not only is in the airway but also in the interstitial space. The interstitial space can be thought of as the framework or “meat” of the lungs. It is what the walls of the airways are made of – where the lungs are not air, they have interstitium.

There appears to be several presentations of interstitial pneumonia: Adult, Foal, Acute, and Chronic. The most serious of clinical signs results when the walls of the alveoli, which are where the gas exchange occurs, are affected. Inflammation or swelling in this area directly affects the animal’s ability to breathe. The resulting signs are respiratory distress. The lung sounds may have “crackles and wheezes” characterizing small airway obstruction. The horse will appear short of breath. Unlike a “heaves” case, the horse takes brief, rapid, low volume breaths. In “Heaves” or Chronic Obstructive Pulmonary Disease (COPD), the breaths are generally higher volume but have an increased expiratory effort.

What makes this disease so dangerous is that by the time clinical signs are apparent, severe damage has occurred. The inciting cause damages the cells

*(Continued on page 2)*

**Carol K. Clark, DVM, Diplomate, ACVIM**

lining the alveoli. The alveoli respond with edema and inflammatory cells. The alveoli cells thicken and can form an extra membrane which makes air exchange even harder. In the chronic form, scar tissue, or pulmonary fibrosis actually forms. The horse begins to breathe even harder.

Clinical signs in horses can appear different than a regular bronchial pneumonia because the presence of fever, nasal discharge and coughing are variable. The horse may just suddenly have an increased, labored or rapid way of breathing. It may suddenly appear like a horse with "Heaves". Sometimes the only presenting signs are weight loss and decreased appetite and upon closer inspection, the horse is noted to be breathing slightly harder than it should be.

The diagnosis in early and mild cases is based on the clinical signs and lung sounds. Often a history of a recent regular pneumonia has preceded it in foals. In these cases, a hypersensitivity response is suspected to the original bacteria or virus. In more serious cases a transtracheal wash, chest radiograph, and/or lung ultrasound exam may be required. The definitive diagnosis is a lung biopsy. This procedure is not entered into lightly and can have serious complications. It is reserved for cases which are severe enough to warrant the procedure because other diagnostics or trial therapeutic courses have failed. One specific cause of interstitial pneumonia appears to cause nodules in the chest cavity. It is termed Equine Multinodular Pulmonary Fibrosis. The chest radiographs can resemble cancer or a fungal infection. A lung biopsy is needed for diagnosis. Equine Herpes Virus 5 has been implicated in this disease but not all cases are positive for this virus.

Treatment for interstitial pneumonia is focused at potent anti-inflammatory drugs and often anti-viral or antibiotics if indicated. For roundworm associated pneumonitis, treatment for the parasite in addition to anti-inflammatory drugs are indicated. The anti-inflammatory drugs indicated are usually corticosteroids. They may be administered via the inhaled, oral, or injectable routes. Treatment is tailored to the severity of the disease and what microbe, if any, is suspected or cultured. Mildly affected foals may just have antibiotics with some dexamethasone added. Ventipulmin (Clenbuterol) is an orally administered bronchodilator which can be added for symptomatic support. This drug can also increase mucus clearance of the lungs.

The prognosis is good for complete recovery in mild to moderate cases. Some of the most severe cases present very acutely and leave little time for response. They have Acute Respiratory Distress Syndrome (ARDS). We see this syndrome most often in foals and the prognosis is poor. It seems that the milder and more insidious the onset, the better the prognosis.

Screws and wire  
(Transphyseal bridging)

- January 2007 - The dental health of young performance horses
- December 2006 - Neonatal Isoerythrolysis in foals
- November 2006 - Upper respiratory infections of young Thoroughbreds in training
- October 2006 - Eastern equine encephalitis—time to vaccinate!!
- September 2006 - Gastroscopy
- August 2006 - Rhodococcal pneumonia
- July 2006 - Managing limb deformities in foal with dynaslants
- June 2006 - Disaster preparedness
- May 2006 - Mare reproductive loss syndrome (MRLS)

We're on the web:  
[www.petersonsmith.com](http://www.petersonsmith.com)



4747 SW 60th Avenue  
Ocala, FL 34474

Phone: (352) 237-6151  
Fax: (352) 237-0629  
Email: [PSEH@petersonsmith.com](mailto:PSEH@petersonsmith.com)

*A Tradition of Leadership and  
Excellence in Equine Medicine*