



December 2007

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Pleuropneumonia - when shipping fever turns into a nightmare

For anyone that works at an equine hospital in Florida, a breeding season is preceded by “pleuropneumonia season” which begins in the fall and extends into middle of spring. Pleuropneumonia is inflammation in the lung and the chest cavity, most frequently caused by bacterial infection as a consequence of shipping fever. It is seasonal for us due to the fact that a large number of horses are shipped from the North to sunny Florida during this time period, however, it can affect a horse anytime of the year.

Horses suffering from pleuropneumonia often become seriously ill. Uncontrollable high fever, loss of appetite and rapid weight loss are all very common. Inflammation in the chest cavity is known to cause extreme pain among human patients; and our equine patients appear to have similar pain. They move slow and stiff, stand with elbow abducted and are reluctant to take deep breathes. They may grunt after coughing. Accumulation of fluids, which can reach up to over 5 gallons, in the chest cavity inhibits the lung to fully expand and sometimes lead them to fall into severe respiratory distress.

Recovery from severe pleuropneumonia takes weeks to months—and some of them never recover. As the disease progresses, draining fluid by a chest tube becomes more and more difficult owing to fibrin or abscess formation. If drainage by chest tube is ineffective, opening the thorax by resecting a part of the rib is necessary; we then can even insert our hand into the thoracic cavity to scrape out gallons of thick pus and fibrin. Antimicrobial penetration into pleural or pulmonary abscess can be rather poor, thus the bacteria continue to thrive in some cases despite of correct selections of antibiotics.

The bacteria that cause this disease are not “super-bugs”. Rather, they are commensal bacteria in horses’ upper airway.



Fluid removal by a chest tube

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Long distance transportation has several factors which turn a horse's thorax into a Petri dish for these bacteria that are normally harmless. First, stress caused by transportation suppresses horses' immune function. Second, the continuous head elevation by cross-tying during transportation inhibits the clearance mechanism of the respiratory tract, resulting in accumulation of bacteria in the lower airway. Finally, increased humidity and reduced ventilation in a vehicle provide the best environment for the bacteria to grow. In addition, race horses are over-represented in shipping fever due to irritation of the airway by inhaled dirt and alteration of immune function by strenuous exercise, both of which they may have experienced prior to transportation.

Prevention and early recognition of shipping fever are the keys to reduce the incidence of pleuropneumonia. Shipping only healthy horses is perhaps the most important and the easiest way of prevention. Avoidance of short-tying, in-

creased amount of rest, cleaning of interior of vehicles during rest stops and proper ventilation to reduce dust in a vehicle have also been suggested by researchers based on their studies to decrease morbidity.

Early recognition of shipping fever is not rocket science. Taking temperature and careful observation of their behavior will identify early cases. As a resident veterinarian for a large Thoroughbred farm in Japan, I



Abscess occupying the thoracic cavity

have examined hundreds of horses at the time of unloading. I remember only a few of them came off a van dragging their feet with high fever. It was more common that horses developed fever 6-24 hours after arrival, yet, even with a normal temperature upon arrival, they usually showed slight decrease in alertness. I typically rechecked these horses in 6 hours, and treated as needed according to their temperature and the findings on thoracic auscultation.

If caught early, a short course of antibiotics and nonsteroidal anti-inflammatory drugs are sufficient to treat the disease. Left unnoticed, the disease advances with amazing rapidity. A wait-and-see approach is not advisable for a horse that has been just shipped and is exhibiting slight signs of sickness. Instead, checking their temperature and calling a veterinarian are strongly recommended to avoid this possible life threatening disease.

- April 2006 - Exercise-induced pulmonary hemorrhage
- March 2006 - The use of high speed treadmill to diagnose upper respiratory tract disorders
- February 2006 - Common medications used to assist breeding, cycle regulation and pregnancy maintenance of the mare
- January 2006 - Managing high risk pregnancies
- December 2005 - Affording the unhealthy horse
- November 2005 - Strangles
- October 2005 - The "dummy" foal
- September 2005 - New medications

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