



# VET NOTES

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Dr. Travis Miller grew up in a small community just outside of Opelousas, LA. He received his bachelor's degree in animal science from Southern University in Baton Rouge. He then went on to attend veterinary school at Tuskegee University, graduating with honors in May 2018 and joined Peterson and Smith as a hospital intern in June.

His interests include surgery, lameness, and neurology. When Travis isn't at the clinic he enjoys hunting, horseback riding, cookouts with friends, and anything involving sports and his nephews

## **Pleuropneumonia by Dr. Travis Miller**

Pleuropneumonia is infection of the lungs and pleural space resulting in buildup of pleural fluid. Pleural infection most commonly develops secondary to bacterial pneumonia or penetrating thoracic wounds. The healthy horse is equipped with pulmonary defense mechanisms that protect it against bacterial infections. However, when these protective mechanisms are impaired by things such as viral respiratory infections, long-distance transportation, general anesthesia, and strenuous exercise, bacterial infections commonly occur. Recently at Peterson and Smith, we have had numerous pleuropneumonia cases whom all shared a history of recent long distance transport. Restraint of the head in an elevated position results in bacterial contamination and multiplication within the lower respiratory tract within 12–24 hours.

Horses with pleuropneumonia commonly present with fever, depression, lethargy, and inappetence. The condition is also painful and may lead to the horse becoming reluctant to move, hyper-reactivity to palpation of the chest, and shallow respirations. The horse may also stand with abducted elbows and be reluctant to lie down. Edema between the front limbs may be seen in cases with a large amount of pleural effusion. Lung sounds will likely be absent in the ventral fields, and crackles may be ausculted dorsally. Cardiac sounds are commonly muffled or absent and may radiate over a wider area.

In cases of suspected pleuropneumonia, your veterinarian will likely run bloodwork and ultrasound the horse's chest to confirm his/her suspicion. Thoracic ultrasound makes it possible to visualize fluid within the horse's chest. The appearance of the fluid gives details about the characteristics of the fluid and also gives the veterinarian an idea about the amount of fluid present. Ultrasonography also highlights pathology such as abscessation and consolidation present at the periphery of the lungs. Once enough evidence has been found to confirm the diagnosis, it is time to employ treatment.

Drainage of the chest is one of the most important steps in the management of pleuropneumonia. A sterile chest tube is placed into the thoracic cavity to establish drainage (video on Peterson and Smith's Facebook page). Depending on the severity of the case, single drainage may be adequate or intermittent or continuous drainage may be required. An indwelling chest tube makes continuous drainage possible, as was implemented in this case. In addition to drainage, the use of broad-spectrum antibiotics, NSAIDs, and analgesics are also indicated. Performing culture and sensitivity on fluids collected from a transtracheal wash and thoracocentesis allows your veterinarian to tailor the course of antibiotics based on these results. In chronic, non-resolving cases a thoracotomy, via a rib resection or lateral thoracotomy without rib resection, may be required. This allows manual removal of organized fibrinous material and necrotic lung. It is important that your veterinarian confirms that a walled off abscess is present prior to the procedure in order to minimize the risk of pneumothorax. The procedure is only indicated in stable patients.

Prognosis for pleuropneumonia has improved in recent years with advances in treatment protocols. Some literature reports the survival rate to be as high as 90%, with a 60% chance to return to athletic performance (Merck veterinary manual). Early initiation of treatment provides the best chance of return to athletic performance, therefore it is important to get your horse to a veterinarian sooner than later when any of the described clinical signs are observed.

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