

Equine Asthma

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As we have all noticed lately, allergy season is upon us! From watery eyes to coughing, this time of year can be difficult for humans and horses alike. A good understanding of airway disease is crucial for effective control.

Equine asthma or heaves, the layman's term, is a chronic recurring airway disease of the horse. Clinical signs of asthma include cough, expiratory push, increased respiratory rate, and exercise intolerance. Asthma is inflammation caused by environmental allergens. This constant inflammation can result in thickening and spasm of the airway lining and eventual scarring of the lung tissue.

Diagnosis of Equine asthma can be made based on rebreathing examination and identification of diffuse wheezes, crackles and often coughing during the examination. Sampling of the fluid from the lower airway with a bronchoalveolar lavage (BAL) is a definitive way to diagnose RAO. Both of these diagnostics can be performed on the farm. Further evaluation of the lungs can be performed at a referral center with lung function testing and radiographs of the chest. Lung function testing reveals the severity of the problem and the degree of scarring that may have occurred, as it determines the compliancy of the lungs during breathing. This also shows effectiveness of treatment. Radiographs can also be helpful in identifying the degree of scarring in the lungs in advanced cases.

The mainstay of therapy for RAO is focused on environmental control. This can be accomplished by soaking of hay or eliminating hay from the diet, changing to a hypoallergenic bedding (pelletized), stabling the horse away from stored hay or an indoor arena, and most radically, moving the horse to a new environment. Without proper environmental control, no medications will be effective, so this is vital in the treatment and prevention of further recurrences.

Medications used in treatment of RAO include corticosteroids and bronchodilators. The most commonly used systemic steroids are prednisolone and dexamethasone, both of which are given on a tapering dose. The goal of the steroids in treatment of RAO is to decrease inflammation of the airway lining. This both improves the horse's ability to move air effectively through the airway and helps the horse to naturally combat lower airway infections.

Steroids can also be given in an inhaled form with an aerosol delivery system (aeromask). This mode of delivery allows the horse to receive a dose of steroid directly in the lower airway without the systemic effects of steroids. This would be especially useful in the case of a horse with both RAO and Cushing's Disease, where systemic steroids would be contraindicated. Generally, when a horse is placed on inhaled steroids, they are also placed on inhaled bronchodilators to improve delivery into the lower airway. Unfortunately, this mode of treatment is generally cost prohibitive.

Oral bronchodilators such as albuterol and clenbuterol have been used to open the airways; however, these drugs should be used in combination with steroids, as they do not effectively control inflammation and airway thickening.

Other therapies have been employed including serum allergy testing and hypo sensitization. This is thought to help the horse respond to local allergens that may be the source of their RAO, although there is no scientific data to back up this claim.

Treatment of RAO is an ongoing process, as the disease is recurrent in nature. The mainstay of therapy is environmental control and the use of steroids. RAO is a treatable disease early on, but if left untreated the disease can progress to a permanent state.