



South Shore Equine Clinic & Diagnostic Center
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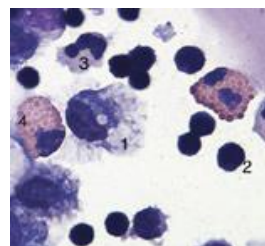
INFLAMMATORY AIRWAY DISEASE (IAD)



Many horses are affected by noninfectious respiratory diseases such as Recurrent Airway Obstruction (RAO) and Inflammatory Airway Disease (IAD). Typically airway inflammation is caused by small particulate matter that is deposited deep in the lungs. For IAD, the exposure to airway allergens, which stabled horses are especially predisposed to, causes varying degrees of cough, excess mucus in the airways, exercise intolerance, poor recovery from exercise, or increased respiratory rate and effort. There continues to be much debate about what differentiates an IAD horse from an

RAO horse; and therefore research is ongoing. Clinical signs of airway hyperreactivity are variable depending upon the typical use of the horse (racehorse vs. pleasure horse) and of course, patient individuality. Pleasure horses with IAD may demonstrate clinical signs at the beginning of work, and may be older in age; whereas racehorses typically show subtle clinical signs or have a poor recovery from intense exercise, and are often younger in age.

A Bronchoalveolar Lavage (BAL) is performed to help diagnose IAD. The BAL is a “lung wash” where saline is instilled into the small airways of the lungs and then a sample of the lung wash fluid is aspirated out. This fluid sample is examined cytologically to confirm the presence of certain inflammatory cell types. Depending upon which cell type predominates on the lung wash (BAL), will help determine the horse’s diagnosis as well as the prognosis.



BAL fluid cytology



Management of the horse’s environment is extremely important with horses that have IAD. It is essential to reduce the horse's exposure to potential allergens. Ideally the horse should be turned out 24 hours a day to eliminate exposure to high concentrations of particulate matter within the barn. Small particulate matter from dust, dirt, mold, and endotoxin when horses are stabled are all potential risk factors for the development of IAD. In addition to simply improving ventilation in

the barn, owners must consider stabling the horse in the last stall of the barn- closest to the door, do not stable the horse at the time of stall cleaning, do not store hay above the horse’s head, remove all urine from the stall often, as ammonia is a noxious gas and can compromise respiratory health; and all indoor arenas should have a dust suppressant used daily. Air quality testing can be performed by specialized agencies, if necessary. Because it is often difficult for owners to make all the desired management changes to their horse’s environment, compliance with medical therapy is extremely important.



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**Endoscopy showing
tracheal mucus**

The treatment of IAD often consists of a tapering dose of an oral (systemic) corticosteroid called prednisolone. This medication improves airway function by decreasing inflammation and reducing airway responsiveness. The prednisolone is used at a tapering dose over a four week course. During the course of treatment, inhalant therapy is often added. Inhalants are extremely useful in managing horses with IAD because they deliver a high concentration of drug directly to the airways, which decreases the incidence of side effects from systemic absorption (such as with oral steroids). The inhalant therapy typically consists of an inhaled corticosteroid and a bronchodilator; the latter which opens the airways. If the horse responds well to treatment, he/she can often be maintained on inhalants alone; and at times they are often needed only prior to exercise. Of course this is

all dependent upon the individual patient, and whether or not changes in environmental management can be met.