



ACVIM

Large Animal Internal Medicine
Fact Sheet

ACVIM Fact Sheet: Inflammatory Airway Disease in Horses

Overview

IAD stands for Inflammatory Airway Disease. IAD is typically a respiratory disease that affects young horses, as early as one year of age. Cough, poor performance and excess mucus within the airways on endoscopy is characteristic of IAD. This disease differs from other horse respiratory conditions like heaves, in that affected horses typically do not show increased respiratory efforts at rest. The exact cause is unknown, but is thought to be associated with inhalation of irritants such as barn dust and air pollution.

Signs & Symptoms

Most horses with IAD will develop a cough that lingers more than one month but no fever. Affected horses may be training fine but don't perform well in competition and take longer to recover normal breathing. As the disease progresses, horses may show increased breathing efforts especially during exercise and become exercise intolerant. Some horses may display mild, watery or white nasal discharge especially after exercise. Otherwise, horses with IAD maintain a good appetite and appear bright and alert.

Diagnosis

Your veterinarian will begin with a thorough physical examination and history. Diagnostics tests are required to differentiate IAD from other diseases such as heaves, bacterial infections, viruses and sometimes parasitic infections that can have similar symptoms. One common test is to pass an endoscope in the airways after exercise to see if excess mucus is present. Another helpful test is to perform a lung wash (bronchoalveolar lavage or BAL), which samples the cells lining the airways deep in the lungs. Alternatively, mucus and cells may be collected from the wind pipe (tracheal wash). These tests will help your veterinarian rule out infections and distinguish between possible causes. Sometimes, more advanced testing can be performed to confirm IAD. Often these tests can only be performed at specific referral centers.

Treatment & Aftercare

The approach to IAD treatment is three fold:

1. Decrease exposure to irritants horses are exposed to in the environment (e.g. barn and arena)
2. Treat airway inflammation
3. Expand the airways that are abnormally constricting

1. The most important factor in improving your horses' health is to decrease environmental irritants. Completely removing hay from the diet can help accomplish this goal. Horses manage well on pelleted complete feeds or soaked hay cubes. These feeds provide sufficient fiber levels in a horses' diet such that they can be maintained without any supplemental forage. Other dust reducing techniques include changes in housing,

ventilation, bedding and lifestyle. Horses with IAD manage better on paper or wood shavings bedding versus straw or hay. An IAD horse would benefit from being out on pasture regularly, with 24 hour turnout being ideal. This may be impractical, however, as many IAD horses are in active training. If it is impractical to house a horse on pasture, the following changes can be made to help reduce dust exposure:

- Remove horses from the barn prior to cleaning stalls and feeding.
- Keep horses out of the barn until at least 1 hour after chores are completed.
- Bed horses on wood shavings, cardboard or pelleted bedding versus straw or hay.
- Feed hay from the ground and wet it down
- Provide good ventilation.
- Keep stall windows and barn doors open to allow fresh air flow.
- Pick up clutter in the barn and tack room to decrease areas where dust can settle in the environment.

2) Corticosteroids are the most frequently used anti-inflammatories for the treatment of IAD. These drugs can be given orally (prednisolone), injected (dexamethasone, triamcinolone acetonide) or inhaled (beclomethasone or fluticasone) by your horse. Several commercially available equine inhalers exist. Another therapy that recently showed promise is supplementation of feed with omega-3 fatty-acids.

3) The drugs typically used to expand airways are called bronchodilators and can be given orally (clenbuterol hydrochloride) or by inhalation (albuterol, ipratropium bromide).

Prognosis

The prognosis for full recovery is good with most horses responding well to management changes aimed at decreasing exposure to irritants but signs of improvement may take one to two months to be realized. Treatment with anti-inflammatories and bronchodilators will hasten recovery. If environmental changes are maintained, horses usually will return to previous level of performance and relapses are uncommon.

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