

Inhalers for Respiratory Disease

Recurrent airway obstruction (RAO) is a common cause of coughing, nasal discharge and poor performance in many stabled horses. Whilst several therapies exist, the use of inhaled drugs plays an important role in the long term treatment of affected horses.



CLINICAL ADVICE

Medicines for RAO can be given orally, via injection or by inhalation using a nebulizer or inhaler. The use of inhalers has the advantage of delivering the drug directly to the lungs, allows lower doses, reduces the risk of adverse effects (such as laminitis), and can be used for prolonged (i.e. lifetime) treatments. With minimal training, horses generally tolerate the inhalers very well.

A number of different drugs can be used in the inhalers depending on the severity of the horse's condition:

- steroid anti-inflammatories (beclomethasone and fluticasone) – improve lung function by reducing inflammation and mucus production;
- bronchodilators (salbutamol and ipratropium bromide) – relieve airway constriction and enlarge the airways to allow greater subsequent penetration of other inhaled medications;
- inflammatory cell stabilisers (sodium cromoglycate) – used to prevent RAO for short periods;
- antibiotics (gentamycin and ceftiofur) – can be used in the treatment of pneumonia and pleuropneumonia.

Key points

- RAO is the commonest cause of coughing in the horse. This used to be called COPD (chronic obstructive pulmonary disease).
- Inhaled drugs are the most effective means of long term treatment.
- Drug doses and consequently costs are reduced due to the method of delivery.
- The risk of side effects is low.
- They are safe for long-term use

How to use an inhaler

To achieve good drug delivery it is necessary to use spacer masks which hold the drug aerosol until the horse breathes it into its lungs. Various models of spacers exist, the most common being a paediatric spacer modified for equine use.

To achieve effective medication it is very important to use the inhaler and spacer as follows:

1. warm the inhaler to body temperature;
2. shake the inhaler for 30 seconds before removing the cap;
3. discard the first spray;
4. attach the inhaler to the spacer upright and with an air tight seal;
5. watch the horse's breathing pattern – use the inhaler just before or after the horse begins to breathe in;
6. if tolerated, closing both nostrils for 5-10 seconds at the end of inspiration (i.e. breath holding) is beneficial;
7. wait 30 seconds before the next shake and spray again.

Wash the mask weekly in warm water and washing up liquid, do not rinse and allow to drip dry (do not towel).

Keep a record of the number of doses used, many inhalers will continue to 'puff' even though the drug has run out.

If using steroid anti-inflammatories and bronchodilators in treatment, use the bronchodilators 15 minutes before the steroid anti-inflammatories are administered.

REMEMBER:

- RAO is major cause of poor performance in competing horses;
- RAO is also a very common cause of deterioration in the performance of older horses;
- drug therapy is simple with multiple options;
- correct use of inhaler and spacer is vital.



Treatment of RAO

For complete treatment of RAO several factors need to be addressed.

1. Reduction of inhaled dusts/endotoxins by:
 - regular &/or full turnout
 - haylage or soaked hay
 - clean bed system
 - removal of inhaled allergens from environment (straw/hay/muck heaps).
2. Appropriate use of other medicines:
 - short use of oral bronchodilators
 - occasional need for antibiotics or oral corticosteroids

Discuss the most appropriate treatment regimen for your horse with your XLVets Equine vet.



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