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MEGAESOPHAGUS IN THE FRIESIAN HORSE: A HEREDITARY PROBLEM?

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Megaoesophagus occurs sporadically in horses, and can be acquired or congenital. Megaoesophagus is a chronic dilatation and atony of the body of the oesophagus. The atony results in accumulation of food and saliva in the dilated oesophagus. This often results in obstruction/impaction of the oesophagus and consequent regurgitation and in some circumstances aspiration pneumonia.

The initial presenting symptoms are often those attributable to oesophageal obstruction (choke) including anxiety, standing with the head and neck extended, gagging or retching, painful and repeated attempts at swallowing, bilateral frothy nasal discharge containing feed material and saliva, and coughing and drooling of saliva. In addition respiratory signs resulting from an aspiration pneumonia, halitosis, fever, dehydration, and signs of electrolyte and acid-base disturbances can be found. If the obstruction is in the cervical area of the oesophagus or the obstruction leads to feed accumulation in the cervical oesophagus, there may be a visible or palpable mass on the left lateroventral aspect of the neck.

Immediate treatment of an oesophageal impaction includes relaxation of the oesophagus with detomidine (0.01 mg/kg BW i.v.) and hyoscine butyl scopolamin (0.2 mg/kg BW i.v.). A combination of these two products is indicated as the muscular layer of the cranial part of the oesophagus is striated muscle and smooth muscle is in its more caudal portion. A further advantage of the use of detomidine is that the horse will lower its head below the level of the thorax which reduces the opportunity for aspiration of saliva and ingesta. Further, antibiotics can be given to prevent aspiration pneumonia and clenbuterol (0.8 μg/kg i.v.) for bronchodilatation and increase of ciliary beat frequency and therefore improvement of mucociliary clearance rate. Sometimes physical dispersal of the obstructed material is necessary using a stomach tube with air and/or water. This procedure can be performed under general anaesthesia using a cuffed endotracheal tube to prevent any aspiration of water and food material.

Oesophageal impactions may either cause a reversible dilatation of the oesophagus or may be the result of an oesophageal dilation / megaoesophagus. In the latter case the prognosis is poor. If, 2-4 days after resolving the oesophageal obstruction, the dilatation of the oesophagus is still visible endoscopically the suspicion of a megaoesophagus is strong, especially in Friesian horses.

Over the last decade the prevalence of megaoesophagus has appeared to increase, especially in Friesian horses. Megaoesophagus occurs in young foals (even as young as 1 week of age) as well as in older horses, but is mostly encountered in youngsters.

Between July 2002 and July 2007, 35 cases of megaoesophagus were diagnosed at the Garijp private practice and 10 further cases were presented at the Utrecht University clinic (Table 1).

<table>
<thead>
<tr>
<th>practice</th>
<th>n=</th>
<th>Friesian</th>
<th>gender</th>
<th>age between</th>
<th>mean age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garijp</td>
<td>35</td>
<td>31</td>
<td>3 stallion, 13 geldings, 19 mares</td>
<td>1 week – 19 years</td>
<td>7.0 ± 5.4</td>
</tr>
<tr>
<td>Utrecht</td>
<td>10</td>
<td>10</td>
<td>5 stallions, 2 geldings, 3 mares</td>
<td>1.5 – 8 years</td>
<td>2.9 ± 2.1</td>
</tr>
</tbody>
</table>

Table 1: Cases of megaoesophagus presented at the two centres between 2002 and 2007
In both centres the incidence of megaesophagus was much higher in Friesian horse than in other breeds and in both practices megaesophagus was over represented cases in the Friesian breed. In the Garyp practice, Friesian horses represented approximately 50% of the total cases and in Utrecht University approximately 20% of the total caseload. Further, a familiar predisposition was detected.

Horses with a megaesophagus do not always develop oesophageal obstruction, and may show other signs such as loss of appetite, wasting, salivation and mild colic. Megaesophagus can be diagnosed endoscopically and by using contrast radiography. Endoscopic diagnosis is quick and cheap: not only is the dilatation visible but also retrograde reflux of feed material and an abnormal structure of the lining mucosa can be immediately appreciated. Ingestion of beet pulp is by far the commonest cause of primary oesophageal obstruction in equine practice. However, in the Friesian horses presented here the cause of the obstruction was not only beet pulp but also grass, hay or silage. Treatment is therefore often more difficult as these feed material are more difficult to flush out and there is a consequent increase in more serious complications.

In conclusion: megaesophagus as a primary cause of oesophageal obstruction is often overlooked especially in the Friesian horse. After resolving an oesophageal obstruction it is always wise to examine the oesophagus endoscopically a few days later, preferably without sedation. As the Friesian horse has an alarming number of hereditary diseases and the number of horses is relatively small, elimination of megaesophagus from the breed will be very difficult.