



The Guttural Pouch - An Often Overlooked Structure

By Dr. Ruth-Anne Richter

Each horse has two of these structures which have openings that look like small flaps or slits into the upper airway. They communicate with the middle ear and the pharynx (upper airway). The function of these is not fully understood, but believed to play a role in pressure stabilization, much like the human Eustachian tube. Each guttural pouch is, in fact, a small pouch divided into two compartments by a bone (stylohyoid), and supported by muscles in the throat region. Importantly, vital blood vessels including the internal carotid artery and branches of the external carotid artery, and cranial nerves run through the pouches, and can be involved in some disease processes. Lymph nodes in the retropharyngeal region lie beneath these pouches.

Because these structures are located in the upper airway, they are not completely 'sterile' and normally contain some bacteria (much like the nasal passages). While the guttural pouches are not frequently a problem, there are some conditions that can affect them.

Guttural Pouch Tympany

Not a common problem, this generally affects young horses from birth up to 18 months. The clinical signs include soft distension of one or both sides of the throatlatch area, which can come and go. Periodically the horse will have some respiratory discomfort/distress, and is often seen stretching the neck out. This condition can be treated by needle decompression, but often returns and requires surgery to alleviate the problem.

Guttural Pouch Mycosis

This is a very serious problem and can start with mild, intermittent nosebleeds. Mycosis refers to the horse having a fungal infection, the fungus involved adheres to and invades the blood vessels that course through the pouch. Because this can also affect the nerves in the region, the horse may exhibit difficulty eating (dysphagia). The nosebleeds can appear mild to start with, but can escalate to the point that the horse may hemorrhage and die if the wall of the carotid artery becomes eroded. Diagnosis is made with upper airway endoscopy with the 'scope being placed into each pouch to directly view the affected site(s). Treatment is aimed at eliminating the fungal plaque that develops using a catheter to administer medications. Systemic antifungals and antibiotics as well as anti-inflammatory agents are also necessary. Medical treatment is long-term, and the risk of fatal hemorrhage remains. Surgical intervention offers the best prognosis and involves reduction of blood flow through the carotid artery. This can be accomplished by tying the vessel off, or through transarterial coil embolization, which induces thrombus formation and stems the flow of blood at the site of infection. This procedure requires specialized equipment and must be done under general anesthesia, but has had good reported success rates.

Guttural Pouch Empyema

Commonly, this means infection of the guttural pouch, and occurs through spread of bacteria from the upper airway, or from the local lymph nodes. Pus accumulates in the pouch and drains through one or both nostrils when the horse's head is lowered. The bacterium that causes "strangles" can be involved making this a condition that should not be taken lightly as this ("strangles") is a reportable disease. Should the pus become chronically trapped within the pouch it becomes hardened and forms round masses known as chondroids that require surgical removal. Guttural pouch empyema is diagnosed based on the clinical signs and endoscopy of the pouch. Treatment of a guttural pouch infection is aimed at the bacteria involved, it is best to obtain a culture of the pus to ensure antibiotic sensitivity so that the correct antibiotic may be used. In addition, the pouch is flushed to remove accumulated material

and reduce the potential for chondroid formation. It is important to know which bacteria are present, as some horses can harbor the “strangles” bacterium in its pouches and become a carrier of the disease.

There are other less common conditions that can affect the guttural pouches that may present with similar signs. And there are other conditions that present with similar signs to guttural pouch disease, including sinusitis, which makes it important not to ignore them. Horses that develop intermittent and persistent nosebleeds or nasal discharge should always be evaluated by a veterinarian. They would do a thorough physical examination including radiographs of the skull, and upper airway endoscopy with particular attention being paid to entering the pouches in addition to taking samples for culture.

Contact Brandon Equine Medical Center at 813-643-7177 or email info@brandonequine.com with any questions regarding this topic.

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