Guttural Pouch

ANATOMY

Guttural pouches are paired tubes that connect the pharynx to the middle ear. they are found in equine.

the pouches are separated from each other on the midline by the rectus capitis ventralis and the longus capitis muscles and the median septum.

laterally with the parotid and mandibular salivary glands and auditory meatus.

functions of the guttural pouches include pressure equilibration across the tympanic membrane, contribution to air warming, a resonating chamber for vocalization, and a flotation device.

EXAMINATION
the guttural pouches are examined by external palpation, endoscopy, and various imaging techniques. Enlargement caused by empyema (purulent material in the pouches), but particularly by tympany (air engorgement), can be palpated externally. Guttural pouch endoscopy provides the most information regarding disease.

DISEASES OF THE GUTTURAL POUCH

Tympany

tympany, as the name implies, refers to the distention of the guttural pouches with air under pressure, sometimes accompanied with some fluid accumulation. This condition is usually unilateral but can be bilateral.

Clinical Signs
Affected guttural pouch is distended with air to form a nonpainful, elastic swelling in the parotid region.

although the swelling is most big on the affected side, it can extend across the neck and give the impression of bilateral involvement. Severe distention can cause dyspnea, dysphagia, and inhalation pneumonia.

Diagnosis
Diagnosis is based largely on clinical signs. on endoscopic examination, the pharyngeal openings usually appear normal, but the roof of the pharynx can be

collapsed. Guttural pouch enlargement with air and fluid can be seen on radiographs. Distinguishing between unilateral and bilateral tympany can be diffcult on radiographs.

Treatment

temporary alleviation of guttural pouch tympany can be achieved by needle decompression or by placing an indwelling catheter in the pharyngeal orifice.

Empyema

Empyema of the guttural pouches is defined as the presence of purulent material and chondroids within one or both guttural pouches.

Empyema can affect horses of any age but usually occurs in young animals. Upper respiratory tract infections (especially those caused by Streptococcus spp); abscessation and rupture of retropharyngeal lymph nodes into the guttural pouch infusion of irritant drugs.

Clinical Signs

clinical signs include intermittent nasal discharge in most cases, swelling of adjacent lymph nodes, parotid swelling and pain, extended head carriage, excessive respiratory noise, and difficulties in swallowing and breathing.

Diagnosis

on endoscopic examination, a purulent discharge can be seen at the pharyngeal orifce of the affected side, with pharyngeal collapse in some horses. Fluid accompanied by masses seen within the guttural pouch on standing lateral radiographs is suggestive of chondroids.

Treatment

In acute cases, daily irrigation with saline solution is usually effective. an indwelling catheter, devised from polyethylene tubing can be used for this purpose. the coiled end of the catheter is placed under endoscopic guidance within the pouch, and the free end is secured by a suture to the alar fold.

Guttural Pouch Mycosis

Guttural pouch mycosis affects the roof of one guttural pouch, rarely both. the cause of guttural pouch mycosis is unknown, although *Aspergillus spp* can be identified in the lesion, typically as the only fungus or in combination with another.

Clinical Signs

the most common clinical sign is dysphagia caused by damage to the pharyngeal branches of the vagus and glossopharyngeal nerves aspiration pneumonia may develop in severe or protracted cases. abnormal respiratory
noise can arise from pharyngeal paresis or laryngeal hemiplegia, the latter as a result of recurrent laryngeal nerve damage.

Treatment

the response to topical treatment is generally slow and inconsistent. Daily direct lavage through the endoscope. topical povidone iodine or thiabendazole, with or without dimethyl sulfoxide, has been used with mixed results (Nystatin, natamycin, and miconazole).