

How to Use a Foley Catheter to Treat Foals for Guttural Pouch Tympany

Jorge H. Gomez, MVZ, MS, Diplomate ACVS;
 Jim Schumacher, DVM, Diplomate ACVS; and
 Robert J. Hunt, DVM, MS, Diplomate ACVS; and Elizabeth Barrett, DVM*

Surgical correction of guttural pouch tympany in foals is technically challenging and requires special skills and equipment. Placement of Foley catheters into the guttural pouches of affected foals over a four to six week period is a simple method to achieve permanent resolution of the condition. Authors' addresses: Hagyard Equine Medical Institute, 4250 Iron Works Pike, Lexington, Kentucky 40511 (Gomez, Hunt); and Large Animal Hospital, University of Tennessee, 2407 River Drive Knoxville, Tennessee, 37966. (Schumacher); Auburn University, Vaughan Large Animal Teaching Hospital Auburn, Alabama 36849-5540 (Barrett); e-mail: ezb0021@auburn.edu (Barrett). *Presenting author. © 2010 AAEP.

1. Introduction

Guttural pouch tympany is the distension of one or both guttural pouches with air. The condition may be caused by redundancy of the pharyngeal ostium of the guttural pouch. When this structure becomes redundant, it allows air into the guttural pouch but does not easily allow its escape. Although guttural pouch tympany may not manifest until a horse reaches 1 yr of age or older, the condition is usually apparent soon after the horse is born. Tympany is usually unilateral but sometimes massive enlargement of a pouch can make distinguishing unilateral tympany from bilateral tympany difficult.

A horse with guttural pouch tympany has an elastic swelling in the parotid and laryngeal regions. Percussion of the swelling produces a tympanic sound and does not cause the horse to show signs of discomfort. Firm digital pressure on the swelling may result in expulsion of air and collapse of the

guttural pouch. Tympany can cause respiratory distress, and the degree of distress is related to the degree of distension. Severely affected foals may aspirate milk and develop inhalation pneumonia. Milk may enter the affected guttural pouch.

Several surgical techniques have been described to resolve tympany of the guttural pouch. Surgical correction requires special skills and sometimes the use of specialized equipment, and it can result in serious complications.

In this paper, we describe a simple method for treating horses for guttural pouch tympany, described to one of the authors (J.S.) by Geoff Lane^a, that has been successfully used in our practices. This method requires no surgical expertise and no specialized equipment.

2. Materials and Methods

The materials that we use to treat affected foals are a 22-Fr Foley catheter,^b Chambers catheter,^c fiber-

NOTES



Fig. 1. Filly with guttural pouch tympany.

optic or videoendoscope, and 10-ml syringe filled with water. The procedure is performed with the foal sedated or anesthetized in the foal's stall or an induction room. Using an injectable anesthesia agent is appropriate, because the procedure can be performed in less than 5 min.

The tip of the Chambers catheter is inserted into the orifice on the side of the tip of the Foley catheter, and the Chambers and the Foley catheters are introduced into the nasopharynx through the nasal cavity contralateral to the side of the distended guttural pouch. The endoscope is introduced through the ipsilateral nasal cavity until the pharyngeal ostium of the affected guttural pouch is visualized. Using endoscopic guidance, the tips of the Chambers and Foley catheters are passed through the pharyngeal ostium of the guttural pouch, the balloon on the Foley catheter is distended with water or saline solution, and the Chambers catheter is withdrawn. If both guttural pouches are affected, a Foley catheter is inserted into the contralateral guttural pouch using the same technique.

The tympany resolves immediately after the Foley catheter enters the guttural pouch, provided that only one guttural pouch is affected. If tympany of the contralateral guttural pouch becomes apparent after the guttural pouch is decompressed, a second catheter can be inserted through the pharyngeal ostium of that guttural pouch. The catheter is left in situ for 4–6 wk.

3. Results: Case Studies

Case 1

A 3-wk-old American Quarter Horse filly (Fig. 1) was presented because of bilateral swelling of the parotid and laryngeal regions. The foal also made an easily audible, abnormal respiratory noise during examination. The horse was bright, alert, and nursing normally. Caretakers stated that the foal was normal at birth; the swelling was first noted on



Fig. 2. Foley catheters in place and resolution of the tympany.

the previous day and had gradually increased. Based on clinical signs, guttural pouch tympany was diagnosed.

The horse was anesthetized with IV anesthesia, and a 22-Fr Foley catheter was placed into each guttural pouch as described. Each guttural pouch decompressed immediately after the catheter was inserted. The foal was discharged after it recovered from general anesthesia and was confined to a stall and small paddock. One of the catheters became dislodged 5 days after insertion and was replaced in the same manner as described. The catheters were left in place for 2.5 more wk (Fig. 2) and then were removed by deflating the catheters' balloon. Tympany did not recur.

Case 2

A 7-wk-old American Quarter Horse filly was presented for evaluation of swelling in the throat region that had been present since birth. Swelling was first noted to be present on the left side and then became present on both sides. During examination, the foal had a tympanic swelling caudal to the right and left ramus of the mandible. The swelling was greatest on the left side. During endoscopic examination of the foal's nasopharynx and larynx, collapse of the left side of the roof of the nasopharynx was observed. The foal's soft palate was displaced dorsal to the epiglottis during most of the examination. Based on clinical signs, guttural pouch tympany was diagnosed. The left guttural pouch was thought to be the only pouch affected.

The foal was treated by instillation of two 22-Fr catheters through the pharyngeal ostium of the left guttural pouch with the filly sedated, but when swelling was still observed on the right side of the throat after the left guttural pouch was deflated, a 22-Fr Foley catheter was inserted through the right pharyngeal ostium into the right guttural pouch. The balloons on the catheters were filled with water.

Tympany did not return after the owner removed the catheters 5 wk later.

Case 3

A 2-wk-old Thoroughbred foal was presented with bilateral swellings in the parotid and laryngeal regions that had been present since birth. Radiographic and physical examination revealed marked distention of both guttural pouches with air. The horse was anesthetized with IV anesthesia, and a 22-Fr Foley catheter was inserted into each of the guttural pouches. The swelling resolved after insertion of the catheters. The balloons on the catheters were filled with water. Tympany did not return after the catheters were removed 3 wk later.

4. Discussion

We describe a simple method to treat horses affected with guttural pouch tympany. Although distention accompanying guttural pouch tympany can be resolved immediately by placing a catheter into the affected guttural pouch, most clinicians believe that to resolve tympany permanently, surgical treatment is necessary.

Leaving a Foley catheter in the affected guttural pouch for a prolonged time can resolve the tympany permanently. Pressure necrosis of tissue surrounding the catheter enlarges the pharyngeal ostium of the guttural pouch, resulting in unobstructed passage of the air into and out of the guttural pouch. The catheters placed into one or both guttural pouches of the foals in this report were left in place for at least

3 wk. Tympany recurred in one foal when a catheter was removed accidentally 5 days after it was inserted, but tympany did not recur after the reinserted catheter was removed 2.5 wk later.

To surgically resolve guttural pouch tympany, surgical expertise and sometimes specialized equipment are required and the surgery is often associated with complications. Surgical complications include sealing of a surgically created fenestration between the guttural pouch and the nasopharynx and aspiration pneumonia and dysphagia resulting from nerve damage associated with the surgical procedure. The technique that we report does not require specialized training and is significantly less expensive than surgical techniques. All three of the horses treated at our practices had successful outcomes and the owners were completely satisfied with the results.¹⁻³

References and Footnotes

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^aLane G. Personal communication, 2002.

^bFoley Catheter, Jorgensen Laboratories, Loveland, CO 80538.

^cChamber Catheter, Jorgensen Laboratories, Loveland, CO 80538.