

Standing Equine Surgery of the Upper Respiratory Tract

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KEYWORDS

- Equine • Upper airway • Guttural pouch • Endoscopy • Laser • Epiglottis • Larynx • Pharynx

KEY POINTS

- Upper respiratory surgery can be successfully performed in the horse.
- Appropriate case selection and equipment are imperative to successful outcome.
- Accessibility to the upper respiratory tract is improved in the standing horse due to appropriate anatomic positioning and superior visibility.

INTRODUCTION

The purpose of this article is to review the literature and personal experiences of equine surgeons so as to describe procedures that can be performed in the standing sedated horse to alleviate conditions that result in upper respiratory tract obstruction. Performing many upper respiratory tract surgeries in the standing sedated horse is advantageous because accessibility to the head is improved, the anatomy is in the appropriate position, and visibility is superior. However, these advantages must be weighed against the fact that upper respiratory tract surgery requires attention to detail, meticulous planning, and careful dissection and execution with little room for error. The ability to flex and extend the head, and move the head and neck to the left and right, can facilitate better accessibility to various parts of the upper airway, and procedures can be performed with greater ease. Although standing upper airway surgery is very appealing to the surgeon and the animal owner, as it eliminates the need for general anesthesia and thereby the associated

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costs and risks, it often requires special equipment, such as a videoendoscope and laser.

This article describes a selection of standing upper airway procedures, the indications for and possible complications of these surgeries, and advantages and disadvantages of a particular method.

NASAL SURGERIES

Surgical Extirpation of Nasal Atheromas (Epidermal Inclusion Cysts of the Nasal Diverticulum)

Dissection and en bloc removal

The local area is infiltrated subcutaneously with local anesthetic solution (2% mepivacaine-hydrochloride; Zoetis, Kalamazoo, MI) over the cyst (**Fig. 1**). A linear incision is made directly over the cyst extending 0.5 to 1.0 cm rostrally and caudally. Careful dissection with Metzenbaum scissors is performed around the margin of the cyst making every effort to leave the thin cystic wall intact. Although rupturing of the wall is not a significant complication (**Fig. 2**), it does make removal of the entire cyst more difficult. Following complete removal, the site is lavaged with saline and the skin closed in a routine fashion.

Removal with a laryngeal burr

Schumacher and Dixon¹ described a technique that involves making a stab incision into the rostroventral aspect of the cyst via the nasal cavity and inserting a laryngeal burr. The burr is then rotated to engage the lining of the cyst. Once the lining is firmly engaged, the burr is slowly everted, exposing the attached lining that can then be transected and removed. The incision is then left to heal by secondary intention. This procedure is performed following either local anesthesia of the ipsilateral infra-orbital nerve or local infiltration of the cyst with a local anesthetic solution (2% mepivacaine-hydrochloride). The latter is preferred to desensitize the rostral aspect of the cyst within the nasal diverticulum.

Chemical ablation

Regression of epidermal inclusion cysts can be achieved by injecting 2 to 4 mL of a 10% formalin solution into the lumen of the cyst.^{1,2} After initial enlargement, the cysts generally disappear within 2 weeks after the injection. Local anesthesia is not required for this procedure.



Fig. 1. Nasal atheroma. (Courtesy of R. Ordidge, North Yorkshire, UK.)

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