5-1976

Diseases of the Pharynx

Charles W. Raker

University of Pennsylvania

Follow this and additional works at: http://repository.upenn.edu/vet_papers

Part of the Large or Food Animal and Equine Medicine Commons

Recommended Citation


This article was based on a presentation at the Annual Conference for Veterinarians, Cornell University, January 1976. Please note that pp. 297-398 contained full page advertisements and have been left blank.

This paper is posted at ScholarlyCommons. http://repository.upenn.edu/vet_papers/67
For more information, please contact libraryrepository@pobox.upenn.edu.
Diseases of the Pharynx

Keywords
pharyngeal lymphoid hyperplasia, pharyngeal cysts

Disciplines
Large or Food Animal and Equine Medicine | Medicine and Health Sciences | Veterinary Medicine

Comments
This article was based on a presentation at the Annual Conference for Veterinarians, Cornell University, January 1976.

Please note that pp. 297-398 contained full page advertisements and have been left blank.
PHARYNGEAL LYMPHOID HYPERPLASIA

Pharyngeal lymphoid hyperplasia (chronic pharyngitis) is the most common cause of upper airway obstruction or respiratory embarrassment. It occurs most frequently in horses under 3 years of age, with practically all viral or bacterial respiratory diseases. Many owners and trainers believe a horse has recovered when the cough, fever, or nasal exudate disappears. In many of these horses, however, endoscopy at this time reveals inflammation and varying degrees of follicular pharyngitis.

Young horses commonly have small follicles filled with lymphoid tissue scattered over the dorsal pharyngeal mucosa. At 2 or 3 years the size and number of follicles may decrease, and horses 4 to 5 years of age have only a few. Horses with active follicular pharyngitis have large, numerous follicles covering the dorsal wall of the pharynx and often extending to or below the level of the guttural pouch openings. Many follicles are glistening red and appear edematous, suggesting an acute inflammatory reaction; others appear firm, white, and fibrotic, suggesting a chronic situation. Large follicles often appear pedunculated.

The more extensive (number and size) the lymphoid follicular change the more apt the horse is to experience respiratory distress. The inflammatory lesion decreases airway size, thus increasing negative pressure during inspiration, which results in the dorsal wall of the pharynx being pulled down and the soft palate elevated. Additional airway restriction may occur if the horse is tense or "swallows his tongue," as pulling the tongue back into the oral cavity elevates the soft palate. Also, a horse "on the bit"—who wants to go on but is restrained by the rider—will carry the head in a flexed position, which further decreases airway size. With restricted flow of air, the increased resistance and turbulence may mechanically irritate the mucosa.

In acute lymphoid hyperplasia, biopsies reveal masses or aggregates of lymphocytes; in more chronic cases the aggregates are less dense, and there is more fibrosis. Cultures have not been particularly rewarding, a great variety of organisms having been found.

**Treatment**

Prolonged rest often results in sufficient regression of signs to allow the horse to train and race successfully. Sprays consisting of DMSO, Furacin solution, and prednisolone applied once or twice daily to the pharyngeal mucosa, through a nasal tube, may be of some benefit, as may systemic administration of large doses of corticosteroids and antibiotics. However, it has been difficult to conduct controlled studies, and the information available is based on clinical evaluation.

A plastic insemination pipette, with 1 end heat-sealed and 6 or more small holes placed around its periphery, has been satisfactory for administering medication to the nasopharyngeal mucosa. With a short length of rubber tubing and Luer-lock adapter attached to the opposite open end, 10-15 ml of medication is delivered through a syringe. Adequate restraint is required to prevent the horse from throwing its head and breaking the tube. Other more flexible plastic or polyethylene tubes may be used in a similar fashion.
ARYNX

is tongue," as the oral cavity of a horse "on but is re­
ery the head in other decreases low of air, the turbulance may coa.

alsia, biopsies of lymphocytes; nergates are less nosis. Cultures rewarding, a having been

sprays in sufficient the horse to Sprays consist­
ence daily to the a nasal tube, systemic ad­
ator steroids has been diffi­
ceed on clinical nective, with 1 end short length of stick adapter at­
ough a syringe. ed to prevent its head and be used in a

Page 397 is a full page advertisement and has been removed.
I administer Dopr am-V

For further information: contact your veterinary distributor if you have a question about Dopr am-V.

For additional technical information, contact Robert L. Miller, DVM, Director of Veterinary Medical Services, A. H. Robins Research Laboratories, 1211 Shortwood Avenue, Richmond, Virginia 23227 or call 804-257-2805.

Dopr am-V, when used following dystocias or cesareans, dramatically initiates and stimulates respiration in neonate dogs and cats without undesirable side effects. Administered subcutaneously or sublingually in neonatal puppies and kittens, Dopr am-V may also be given via the umbilical vein in puppies. More selective than the classical analeptics, it acts directly on the respiratory center in the brain.

You will also find Dopr am-V valuable for restoring normal respiration following general anesthesia, minimizing or preventing post-anesthetic respiratory depression and hastening recovery.

Special Solutions for Special Problems

Fig. 1. Grade IV lymphoid hyperplasia with a large number of lymphoid follicles in the dorsal pharyngeal wall.

Several chemical agents were used to cauterize the nasopharynx with limited to negative results. A 2-year-old electrocautery was used as a focal point, through a standard approach. If necessary to prevent regrowth of the nasopharynx, the body of the pharynx is severed. Using a surgical unit with a long ball-tipped electrocautery with a setting of “55,” the entire dorsal surface and walls of the nasopharynx can be cauterized to a light tan color.

Overzealous application of the cautery may result in scar tissue formation which should be retracted to protect the mucosal surface. The swallowing reflex may be obscured for several minutes.

The swallowing reflex may be restored (obtained in part by the general anesthetic) with a topical anesthetic on the soft palate of the animal. If necessary, a topical anesthetic is administered at the end of the procedure.

During the first week, a postoperative cautery is conducted in 30-minute intervals. Healing is nearly complete by 15 days. Training may be conducted 45 days after the procedure.

PHARYNGEAL CYSTS

Pharyngeal cysts are diagnostically challenging, particularly in the Standardbred racehorse, the most common in North America.
Several chemical agents have been used
to cauterize the nasopharyngeal mucosa,
with limited to negative results, and about
2 years ago electrosurgery was initiated. The
procedure has been performed under gen-
eral anesthesia in the dorsal recumbent po-
sition, through a standard laryngotomy ap-
proach. If necessary to obtain increased
working space, the body of the thyroid car-
tilage is severed. Using a Bovie electrosur-
gical unit with a long ball-tip applicator at
a setting of “55” the entire mucosa on the
dorsal surface and walls of the pharynx is
cauterized to a light tan or copper color.
Overzealous application may result in ex-
tess scar tissue formation. The arytenoid
cartilages should be retracted as required to
protect them from being cauterized.

The swallowing reflex must be abolished
(obtained in part by the general anesthesia)
with a topical anesthetic drug. Preparation
of the patient and aftercare are as described
for standard laryngotomy. Each follicle ade-
quately cauterized has regressed. Postop-
erative endoscopy is repeated once or more
during the first week. A progress examina-
tion is conducted in 30-45 days at which
time healing is nearly if not entirely com-
plete. Training can usually be resumed in
45 days.

Pharyngeal Cysts

Pharyngeal cysts are diagnosed more fre-
quently in the Standardbred than the Tho-
roughbred, the most common location being
beneath the epiglottis (subepiglottidal cyst)
probably as an embryonic remnant of the
thyroglossal duct. One cyst seen on the dor-
sal pharyngeal wall probably was a remnant
of Rathke’s pouch. Pharyngeal cysts prob-
ably represent a congenital defect, having
been diagnosed in foals 1 day of age, but
they are usually not brought to the vet-
erinarian’s attention until the animal is put
into work or placed under stress.

The clinical signs are those of upper air-
way obstruction. A noise and respiratory
distress are evident on both inspiration and
expiration; at times the horse may appear
to be “choking to death.” It may be more
are made to seal it by clamping with a clamp and the tissue is dissected from the depths of the tissue.

If the cyst is accidentally ruptured, efforts are made to seal it by clamping with a hemostat; a collapsed cyst is difficult to remove. If the secretory lining is not removed the areas should be swabbed with a chemical debriding agent such as Lugol's iodine. Avoid spilling the iodine on adjacent delicate mucous membranes. Excess mucosa may be removed and the wound left to heal by granulation. If possible, apposing the mucosal edges with 00 gut sutures is preferred, and all ends of the suture material should be buried. Exposed suture material may result in a granulomatous reaction. The body of the thyroid cartilage is not sutured, and no complications (chondromas) have been observed. Sutures placed through the cartilage may even be contraindicated.

The laryngotomy incision may be left open to heal by granulation, or it can be partially closed, leaving a small central area for drainage. The cricothyroid membrane may or may not be sutured, but sutures should not be placed through the mucosa. The sternothyrohyoid muscles are tacked together, and the skin edges are incompletely approximated. The operative field is no longer sterile, and a suitable drainage tube should be placed beneath the muscles next to the ventral surface of the larynx if the incision is completely closed. The ends should be brought through stab incisions made through the skin and securely anchored. The drain may be removed in 5 to 7 days or when no longer functioning.

The prognosis is favorable. The most serious complications are adhesions, which may restrict movement of the epiglottis.

The horse should be kept from work for about 30 days. The results of surgery and healing should be evaluated by endoscopy as required. Antibiotics, for 3 to 5 days after surgery, and tetanus antitoxins are indicated. An emergency tracheotomy set should be available at stall side for the first 24 hours. Seldom does sufficient airway obstruction develop to warrant the use of a tube. Giving 2 g phenylbutazone at the time of surgery appears to control the immediate inflammatory response. Difficulty in swallowing may be encountered for a few days, as indicated by presence of food at the external nares. These signs usually disappear within 72 hours.

Based on a presentation at the Annual Conference for Veterinarians, Cornell University, January 1976.