INTRODUCTION

Chronic rhinitis is a common finding in small animal companion animal practice. The signs are usually obvious and include all or some combination of sneezing, nasal discharge and noisy breathing. We make the assumption that chronic signs are NEVER caused PRIMARILY from bacteria, but instead are caused by foreign bodies, masses, fungal infection (crypto), tooth root infections, nasal anatomy distortion from herpes infection or immune mediated, non-infectious inflammation with lymphocytes and plasma cells. In these cases, routine immunologic defenses within the nasal cavity are altered and commensal bacterial species can “infect” the nasal cavity to cause secondary signs of green/yellow nasal discharge and congestion.

Cats with chronic rhinitis have a single significant different etiology compared with dogs, and that is Feline Herpes Virus –1 (FHV-1).

WORK-UP

A thorough workup for both species includes nasal radiographs +/- CT, endoscopic evaluation of the caudal nasopharynx and right/left nasal cavities, appropriate biopsies, and an aggressive nasal flush. Absent neoplasia, the typical biopsy microscopic findings include; “rhinitis, lymphoplasmacytic, neutrophilic, segmental, moderate to severe, with turbinate remodeling and multi-focal intra-epithelial intranuclear eosinophilic inclusions”. In general, biopsy findings such as this remind the clinician of lymphocytic plasmacytic bowel disease or IBD. The nature and course of the inflammatory rhinitis parallels the course of IBD in dogs and cats, and it is often convenient to consider chronic rhinitis as “IBD of the nose”.

TREATMENT

Treatment of nasal malignancy is determined by the nature and extent of the malignancy. The reader is directed to our specialists in oncology for further assistance. Absent malignancy, our therapeutic strategy is to clear the opportunistic bacterial infection, evaluate the efficacy of corticosteroids, and facilitate patient comfort with nasal decongestants. If turbinate destruction / remodeling and denuding of the epithelium is present, it becomes a disorder we can only hope to manage, but never cure. Once masses, fungal disease, tooth root abscesses and foreign body material are all ruled out as the primary cause of nasal symptoms, you can assume the presence of lymphocytic plasmacytic rhinitis and begin the protocol outlined below. If this is not effective it is reasonable to rethink the diagnosis and etiology of these chronic nasal signs.

The following protocol is meant as a guideline, not as a definitive treatment for every patient.

1. **Antibiotics:** I generally use a 10 day course of enrofloxacin (5mg/kg PO sid) or marbofloxacin (3-5 mg/kg PO sid) and clindamycin (10mg/kg PO bid) to clear up bacterial infection. Although bacteria are not the primary problem, secondary bacterial infection is common in the nasal cavity of patients with chronic nasal symptoms regardless of the primary problem. If patient has been on multiple antibiotics previously, marbofloxacin is recommended for resistant pseudomonads in place of the enrofloxacin.

2. **Corticosteroids:** Once the nasal discharge is resolved or has become serous in nature (vs. mucopurulent), a 5-day trial of prednisolone (0.5mg/kg po bid) is recommended. If the clinical signs are steroid-responsive (patient remains stable or is improved at all), then Flovent therapy bid is recommended for chronic management (as oral prednisolone is tapered over a 2 week period). Flovent is available as a metered dose inhaler (MDI) and is administered through a mask
and spacer combination. The presence of significant nasal congestion of course limits the functionality of this system of administration of corticosteroids. Inhaled steroids will be discussed in more detail during the lecture.

3. Decongestants: “Little Noses” (phenylephrine HCL ¼%) nasal decongestant drops are easily used and rotated on a 3-day cycle with saline drops (i.e. 3 days decongestant then 3 days saline). This facilitates drainage from the sinuses, resulting in greater patient comfort. When administering the decongestant, the patient's nose is pointed up and one drop is given in each nostril. The saline drops are rotated with decongestant drops to prevent a significant “rebound effect” of nasal congestion. An alternative to commercially available decongestants is dilute epinephrine drops. If you use 1 cc of 1:1000 epinephrine and dilute with 9 cc saline, you have a 1:10,000 dilution of epinephrine. This dilution can be used in the same way as “little noses” described above.

- In patients with severe turbinate destruction, chronic antibiotic therapy may be needed to adequately manage the patient. One reasonable regime would include marbofloxacin, azithromycin and minocycline, for weeks 1, 2 and 3 followed by a rest week. This cycle is repeated on a monthly basis.

Prognosis

Chronic nasal disease can result from multiple different etiologies, including neoplasia, tooth root abscess, foreign material above the soft palate, fungal infection (aspergillosis most commonly), and chronic distortion of the nasal anatomy from herpes infection. If lymphocytic plasmacytic inflammation is the primary cause of chronic symptoms, the treatment strategies outlined in this manuscript can minimize exacerbations and maximize time in between symptoms.