Chronic feline rhinitis

Dr. Alexandra Galler, DECVIM-CA

Alexandra.galler@internevet.at

Introduction

Chronic nasal disease in cats is a frequently encountered problem in small animal practice. Typical signs include nasal discharge, sneezing, nasal stridor, dysphagia, open mouth breathing, facial deformations and cough. Chronic nasal discharge can be caused by many different aetiologies like nasal neoplasia, foreign body rhinitis, dental disease, congenital malformations (cleft palate), oronasal fistulae, nasopharyngeal polyps, nasopharyngeal stenosis mycotic infections or traumata. If an aetiological diagnosis cannot be established despite a thorough diagnostic work-up, the disease is classified as idiopathic chronic rhinosinusitis (ICRS). The most common cause for chronic nasal discharge with 30-50% of the cases is nasal neoplasia, but up to 30% of patients suffer from ICRS. 90% of nasal neoplasia are malignant in cats. Although they grow invasive, they rarely metastasize and are often locally restricted. In 90% of cats with nasal lymphoma the nose is the solitary location. Nasal lymphoma is the most often encountered nasal neoplasia, followed by adenocarcinoma. Other tumours (e.g. fibrosarcoma, chondrosarcoma, squamous cell carcinoma) may also be found. Cats with nasal neoplasia are commonly older (8-10years), more often have unilateral, haemorrhagic discharge, facial deformations and have a shorter duration of signs then cats with other nasal disorders. However there is strong overlap especially regarding cats with ICRS. The diagnosis of nasal neoplasia can only be confirmed by histopathology. If staging (thoracic radiographs and abdominal ultrasound) confirms local disease radiation therapy is the preferred treatment. If radiation is not available or the disease is not restricted to the nose cats should be treated by systemic chemotherapy (e.g. COP-based protocols in nasal lymphoma). The prognosis is fair, with complete remission in 70% and median survival times of up to 30 months.

ICRS is a chronic inflammatory disorder. The aetiology of this disease is by definition unknown. It is therefore important to rule out other causes of chronic rhinitis. Although herpesvirus and calicivirus infections may cause acute rhinitis, they do not presumably play a role in chronic nasal disease. However, previous infections with herpes virus and the resulting anatomical alterations in the nasal cavity with partial loss of mucociliary clearance capacity are under discussion as a possible cause of ICRS

development. Histological examination of samples obtained from ICRS patients mostly reveals a mixed-cell and in rare cases a lymphoplasmacytic infiltration of the nasal mucosa. Treatment is symptomatic with anti-inflammatory medications and antibiotics. Anti-herpes-virus therapies are not effective.

Juvenile nasopharyngeal polyps are benign pedunculated masses originating from the Eustachian tube or the tympanic bulla, growing into the nasopharynx. Young animals are most commonly affected by polyps; congenital defects or reactions to infections are being discussed as causes. Polyps can be removed by traction-avulsion, ventral bulla osteotomy or total ear ablation with lateral bulla osteotomy. Traction-avulsion is the most gentle procedure for removing a polyp. However, recurrence is possible and a transient Horner´s syndrome or vestibular signs may develop. Nasopharyngeal stenoses may develop as a sequela of inflammatory diseases or be present as a congenital defect, they can be treated by balloon dilatation. Nasal foreign bodies (most often grass awns or other plant-parts), which travel to the nasopharynx or the nasal cavities via the retrograde route, may also cause chronic rhinitis. While fungal rhinitis is rare in cats living in Central Europe, nasal cryptococcosis is quite common in other geographic regions of the world. Contrary to dogs nasal aspergillosis is uncommon in cats.

Diagnosis

Since a targeted therapy is dependent on the underlying disease, systematic diagnostic work-up is crucial. The history (age, indoor/outdoor cat, duration of signs, character of nasal discharge, former episodes of “cat flu”), physical examination, imaging techniques and rhinoscopy as well as cytological and histological examination of biopsy samples may shed light on the aetiology of the disease.

Blood work is usually unspecific. Testing for feline calicivirus, feline herpesvirus-1, FELV and FIV is of no value to the equal prevalence in healthy cats. Cytology of nasal is usually unspecific, but fungal organisms or neoplastic cells may be found. Bacterial culture of nasal discharge is of no value as it commonly yields a mixed growth of normal commensal microflora. Culture and sensitivity of nasal flushes or nasal biopsies resemble the mucosal bacterial infiltration more closely but the majority of the spectrum of microorganisms observed in cats with chronic rhinitis can also be identified in healthy cats. The role of Mycoplasma spp. in feline chronic rhinitis is under debate.

Imaging may reveal the extent (sinus affection) and character of the disease and help direct biopsy sampling. Disadvantages of radiographs include the need for proper

patient positioning and the superimposition of structures. Superimposition can be prevented by obtaining intraoral views. CT/MRI are superior, providing detailed images without the problem of superimposition. However there is substantial overlapping of imaging findings between cats with nasal neoplasia and those with ICRS.

Rhinoscopy can be performed with flexible or rigid endoscopes. The nasopharynx can easiest be assessed with a flexible endoscope and should be performed first. Lymphomas are often visible in the nasopharynx and samples can be taken under sight in this location. Rhinoscopy can be diagnostic (foreign bodies, polyps, nasopharyngeal stenosis, fungal plaques) as well as therapeutic (removal of foreign bodies, fungal plaques, flushing/suctioning excessive secretions). It allows for tissue sampling under direct visualization. If rhinoscopy is not available a thorough examination of the oral cavity with digital palpation of the soft palate an inspection of the nasopharynx, intraoral radiographs, nasal flush and blind biopsies can be performed. For blind nasal biopsies it is important not to pass the instrument further than the eye level to avoid damage to the cribriform plate.

Summary

Chronic rhinitis may have different aetiologies. Prognosis and treatment differ with the aetiology. A thorough work up is mandatory to reach a diagnosis. Treatment of ICRS may be frustrating, since there is no cure.