Feline stomatitis—the role of retroviruses

Screening for retroviral infection, particularly feline leukemia virus (FeLV) and feline immunodeficiency virus (FIV), is important in understanding the underlying cause of stomatitis in cats, a clinical presentation that most veterinarians are very familiar with. Stomatitis is specifically used to describe widespread oral inflammation in order to distinguish it from other terms used to describe localized oral lesions, including gingivitis and periodontitis. Chronic stomatitis is 1 of the most common problems in cats with FIV.

Although being classified as an outdoor cat increases the risk for infection with FeLV and FIV, even cats classified as indoor may spend time outdoors. In 1 study of lost cats, 41% were reportedly housed strictly indoors and not typically allowed outside.

CLINICAL PRESENTATION

Chronic stomatitis, which is characterized by persistent inflammation and sometimes ulceration of the oral mucosa (see Clinical Signs of Chronic Stomatitis), is typically found in adult cats. The condition can be debilitating, frustrating to treat, and in some cases may result in euthanasia.

Stomatitis Case Example: 3-Year-Old Cat*

Sally, a 3-year-old, spayed female, domestic shorthaired cat, was rescued as a stray and presented for examination, vaccination, and well-being testing. On physical examination, gingivitis and stomatitis were noted, as well as submandibular lymphadenopathy.

Results of a CBC, serum biochemical profile, and urinalysis revealed mild neutrophilia and hyperglobulinemia. In addition, retrovirus serology results were positive for FIV antibody and negative for FeLV antigen.

After full dental assessment, including whole-mouth radiography, perioperative antibiotic therapy with clindamycin was administered, 2 premolars with resorptive lesions were extracted, and all teeth were scaled and polished.

Sally was discharged on a 10-day course of clindamycin. At follow-up evaluation 2 weeks later, the extraction sites had healed well and the oral inflammation was markedly reduced. Home dental care was instituted and further evaluation scheduled for 3 months.

*From the author’s case files

†Retrovirus serology is indicated in cats that present with stomatitis; when evaluating a cat’s risk for infectious disease, consider the following risk factors: outdoor access, exposure to other cats, presence of bite wounds, multicat household, and signs of illness (eg, anemia, vomiting)

AAT = azidothymidine; CBC = complete blood count; FeLV = feline leukemia virus; FIV = feline immunodeficiency virus
The etiology of chronic stomatitis is unknown but is suspected to be multifactorial. Genetic predisposition, domestication, diet, and infection have all been proposed, while others have proposed that the disease is an immune reaction to plaque and the tooth structure itself or to the periodontal tissues. In addition, various viruses and bacteria have been associated with stomatitis.

Several investigators have found an association between FIV infection and oral inflammation in cats. The degree of stomatitis in FIV-infected cats is often more severe when concurrent infection with calcivirus or FeLV is documented. Calcivirus has long been implicated as a causative factor in cats with stomatitis and is more prevalent in affected cats than in unaffected controls in many studies, but evidence linking Bartonella infection to stomatitis in cats is contradictory and uncertain.

Since all these infectious agents may be found as well as clinically ill cats, causal relationships are difficult to determine (see Stomatitis Case Example: 3-Year-Old Cat, page 53) and some reports have failed to document associations between various agents and stomatitis.

Testing Protocols

When oral disease is found in cats, testing should be done to determine their infectious disease status. Regardless of their age and despite previous negative test results or vaccination, cats with evidence of oral disease should be tested for retroviruses. Testing should also include a minimum database consisting of a complete blood count (CBC), serum biochemical profile, and urinalysis. Common findings include leukocytosis and elevated total protein from increased gamma globulins.

Treatment Indications

Chronic stomatitis is often refractory to treatment, although some strategies may be beneficial, depending on the severity of the case. Mild-to-moderate cases may benefit from professional dental assessment and treatment, home care, and antiinflammatory therapy with corticosteroids or cyclosporine (see Treatment Guidelines for Stomatitis in Cats). Any teeth with periodontitis or resorptive lesions should be extracted. More severe cases, as well as FIV-infected cats, will not always achieve long-term control with conservative treatment. The only treatment shown to provide long-term relief in a majority of these cats is caudal (all teeth behind the canines) or whole-mouth dental extractions.

FIV-infected cats with stomatitis may benefit from treatment with the nucleoside analog azidothymidine (AZT), which is given at a dose of 5 to 10 mg/kg PO or SC Q12 H with careful monitoring of the CBC, as nonregenerative anemia is an important adverse event. Cats with bone marrow suppression should not receive treatment with AZT. However, FIV-infected cats often suffer stomatitis refractory to conservative treatment and may benefit from whole-mouth extractions, as for uninfected cats.

Gathering pretreatment information from the minimum database, including testing for retroviruses, will help in the long-term care of these feline patients.

Treatment Guidelines for Stomatitis in Cats

- **Mild Stomatitis**
  - Plaque control with professional dental assessment and treatment
  - Diligent home care
  - Topical 0.12% chlorhexidine
  - Tooth extractions in cases of periodontitis, resorptive lesions, and retained roots
  - Other options
    - Doxycycline (1 mg/kg PO Q 24 H)
    - Prednisolone (2 mg/kg PO Q 24 H for 1 week, then decrease over time to maintenance dose of 0.5–1 mg/kg PO Q 48 H)

- **Moderate-to-Severe Stomatitis**
  - Cyclosporine (2.5 mg/kg PO Q 12 H) administered for at least a 6-week trial period
  - Carbon dioxide laser ablation of diseased tissue

REFERENCES