
Interferon-Omega for Feline Stomatitis

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In the Literature

Matsumoto H, Teshima T, Iizuka Y, et al. Evaluation of the efficacy of the subcutaneous low recombinant feline interferon-omega administration protocol for feline chronic gingivitis-stomatitis in feline calicivirus-positive cats. *Res Vet Sci.* 2018;121:53-58.

FROM THE PAGE ...

Seventeen cats with chronic gingivostomatitis (FCGS) that tested positive for calicivirus DNA via PCR were treated with either SC recombinant feline interferon- ω (rFeIFN- ω [1 M unit/kg]) or prednisolone (1 mg/kg) to evaluate the effectiveness of the former in reducing clinical signs. Thirteen cats received rFeIFN- ω on days 1, 2, 3, 7, 8, 9, 14, and 21; the remaining 4 cats received prednisolone on the same schedule. Clinical signs (ie, salivation, pain on opening the mouth, halitosis, mandibular lymphadenopathy) and stomatitis (ie, degree and extent of oral inflammation and bleeding) were scored on days 0, 7, 14, 21, and 28. In addition, real-time PCR was used to quantify calicivirus replication.

The study found a reduction in salivation scores and degree and extent of inflammation in cats treated with rFeIFN- ω . Real-time PCR results demonstrated inhibition of virus replication in the rFeIFN- ω group but not in the prednisolone group. The authors concluded that SC administration of rFeIFN- ω could significantly improve clinical signs and appearance of stomatitis in cats with calicivirus and FCGS and that improvement was the result of inhibition of calicivirus proliferation. Limitations of the study included nonblinded evaluators, concomitant use of antibiotics in some patients, and small sample size, which did not allow statistical comparison between groups.

Further studies should be performed with a larger sample size and stricter protocol to determine the validity of this treatment. Until a definitive cause of stomatitis can be determined, it may be difficult to find a treatment that will eliminate the disease in all cases.

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... TO YOUR PATIENTS

Key pearls to put into practice:

- 1** FCGS can be a frustrating condition that can severely affect a patient's quality of life. The underlying cause of FCGS has not been determined. Although concurrent viral and bacterial infection (eg, feline calicivirus, bartonellosis, FeLV) can be present, there has been no definitive proof of a cause-and-effect relationship.^{1,2}
- 2** Many treatments have been used in an attempt to treat FCGS, including full- or partial-mouth extractions, corticosteroids, cyclosporine, antibiotics, and rFelFN- ω . No single method has been shown to have a 100% success rate.³
- 3** Although the cause of FCGS has not been determined, it is generally accepted that it develops from an inappropriate immune response to chronic oral antigenic stimulation and that the cause is likely multifactorial.³
- 4** Three studies regarding the success rate of full- or partial-mouth extractions are often quoted. The results of 2 of these studies are similar, with $\approx 80\%$ of both groups demonstrating substantial improvement or resolution of stomatitis. The third study had a lower success rate, but most patients showed improvement after extraction.⁴⁻⁶ Full-mouth or near full-mouth dental extractions remain the current standard of care for treatment of stomatitis. Further studies are needed to develop treatments with higher success rates.³⁻⁶
- 5** Patients with refractory stomatitis after dental extraction may still have improved quality of life with medical management (eg, cyclosporine). rFelFN- ω has shown promise as a treatment option but can be difficult to acquire in the United States.⁷

References

1. Druet I, Hennet P. Relationship between *Feline calicivirus* load, oral lesions, and outcome in feline chronic gingivostomatitis (caudal stomatitis): retrospective study in 104 cats. *Front Vet Sci*. 2017;4:209.
2. Belgard S, Truyen U, Thibault JC, Sauter-Louis C, Hartmann K. Relevance of feline calicivirus, feline immunodeficiency virus, feline leukemia virus, feline herpesvirus and *Bartonella henselae* in cats with chronic gingivostomatitis. *Berl Munch Tierarztl Wochenschr*. 2010;123(9-10):369-376.
3. Winer JN, Arzi B, Verstraete FJ. Therapeutic management of feline chronic gingivostomatitis: a systematic review of the literature. *Front Vet Sci*. 2016;3:54.
4. Hennet PR. Chronic gingivo-stomatitis in cats: long-term follow-up of 30 cases treated by dental extractions. *J Vet Dent*. 1997;14(1):15-21.
5. Bellei E, Dalla F, Masetti L, Pisoni L, Joechler M. Surgical therapy in chronic feline gingivostomatitis (FCGS). *Vet Res Commun*. 2008;32(Suppl 1):S231-S234.
6. Jennings MW, Lewis JR, Soltero-Rivera MM, Brown DC, Reiter AM. Effect of tooth extraction on stomatitis in cats: 95 cases (2000-2013). *J Am Vet Med Assoc*. 2015;246(6):654-660.
7. Rochette J. Feline stomatitis. *Clinician's Brief*. 2012;10(6):97-99.