

Case review: Feline demodicosis

Shedding light on the treatment of this rare disease.



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Feline demodicosis is rare in general practice but should not be overlooked as a possible cause of skin disease. Three mites can cause the disease: *Demodex cati*, *Demodex gatoi* and an undescribed *Demodex* species. Feline demodicosis usually presents as a localized, self-limiting form. Cats can present with lesions primarily on their head, neck, eyelids and periocular area. Lesions are similar in appearance to those found on dogs. The mites cause intermittent pruritus, patchy erythema, crusting, scaling and alopecia.¹

The generalized form of demodicosis is rare in cats and usually not as severe as generalized canine demodicosis. However,

the disease is similar to the canine form; it is often triggered by an underlying condition such as diabetes mellitus, feline leukemia virus (FeLV) infection, feline immunodeficiency virus (FIV) infection, systemic lupus erythematosus, hyperadrenocorticism or squamous cell carcinoma. Clinical studies also have revealed that many cases of feline demodicosis are associated with prior glucocorticoid therapy.² In some cats, no underlying cause can be identified. Siamese and Burmese cats are the most common breeds affected by this skin disease.

The mites can be found on superficial (*D. gatoi*) or deep (*D. cati*) skin scrapings (Figure 1). The recommendation for treating feline demodicosis is weekly lime sulfur dips for four to six weeks before practitioners consider ivermectin. Clinical improvement is usually observed in three weeks, or after the third lime sulfur treatment.

Ivermectin can be used to treat *D. cati* mites but not *D. gatoi* mites. *D. gatoi* mites are contagious, so it is recommended that doctors perform skin scrapings and treat all cats living with the affected cat. The following case offers a glimpse of a rare diagnosis of feline demodicosis in general practice.

Figure 1



Carol Foll, DVM, MS, DACVD

A skin scraping showing an adult *Demodex cati* (top) and a *Demodex gatoi* (below).

History

A 4-year-old spayed female Siamese cat named Agnus was presented for evaluation of recurrent, intermittently pruritic chin and facial scabs of greater than a year's duration (Figure 2). The client was unable to provide our hospital with the Pet's previous medical record. She did report that the lesions were present at the time of adoption and resolved after treatment with methylprednisolone injections and an unknown oral antibiotic. However, the lesions recurred and required methylprednisolone injections every two to four weeks to control each episode. Agnus' vaccinations were not current. The owner reported that she and the other household cat had no apparent lesions.

Presentation

Agnus was bright and alert when she arrived at the hospital. Her temperature was 102.2 F and she weighed 9 pounds. Examination revealed mild dental calculus and mild waxy debris in each ear. Integumentary lesions included a swollen lower lip (Figure 3); excoriations with crusting and comedones on the chin, ventral neck and bridge of the nose; an approximately 4-by-1-cm ulcerated lesion along the ventral neck (Figure 4); a few crusts over her back; and thin and broken hairs on all four feet and the tail but no apparent skin lesions in these locations.

Differential diagnoses for the skin lesions included eosinophilic granuloma complex, secondary pyoderma, sarcoptic mange, demodicosis, dermatophytosis, flea allergy dermatitis, autoimmune disease and atopic dermatitis.

Diagnostic tests

Skin scraping revealed one long, slender *Demodex* mite consistent with *D. cati*.

Figure 2



Photos: Thomas Baltzell, DVM

Figure 3

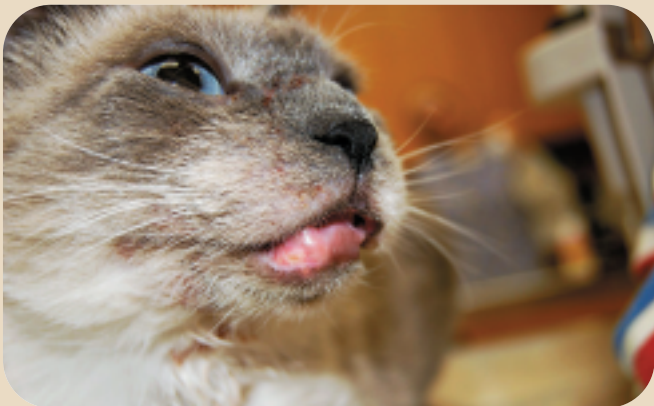


Figure 4



Figures 2-4: Agnus as she presented before treatment. In diagnosing feline demodicosis, a cat will present with lesions on the face. Notice the excoriations of the bridge of the nose. Agnus also has a swollen lower lip, comedones and superficial pyoderma of the chin and neck.

Figure 5



Figure 6



Figure 7



Figures 5-7: One week after Agnus received her first lime sulfur dip. Agnus shows improvement with resolution of the swollen lower lip, superficial pyoderma and comedones. The excoriations on the bridge of the nose are also almost resolved.

A superficial cytologic examination using Diff-Quik stain revealed two-plus cocci bacteria and a single budding yeast. Complete blood count, serum chemistry profile, FeLV/FIV testing and fecal flotation exams revealed no additional pathologies. An ear swab revealed no mites or other organisms. Fungal culture and skin biopsy were discussed with the owner as possible future diagnostics.

Treatment

Demodex mites are a rare cause of dermatitis in cats and may have been the primary cause of Agnus' recurrent dermatitis. The lesions also resembled those of eosinophilic granuloma complex. Clinically it was important to eliminate the mites, although we realized this would not resolve the clinical signs if the mites were only a secondary problem.


The initial treatment plan was aimed at eliminating the *Demodex* mites and resolving the apparent secondary bacterial infection. We prescribed 62.5 mg (1 ml) oral amoxicillin-clavulanic acid twice daily for two weeks and scheduled a recheck visit in one week to begin lime sulfur dips and evaluate Agnus' condition. We also recommended that Agnus eat Royal Canin Hypoallergenic HP diet.

Outcome

At the one-week follow-up exam, the lip swelling and facial and neck lesions had improved. The client reported minimal pruritus. A deep skin scraping of the chin revealed one live *D. cati* mite. Agnus' entire haircoat was treated with 2 percent lime sulfur dip per label instructions. Her facial lesions were treated by sponging the dip solution onto the affected areas. We

placed an Elizabethan collar on the Pet until her haircoat dried. We recommended that Agnus continue with weekly in-hospital dips for a minimum of three weeks and that she be re-evaluated with superficial and deep skin scrapings one month after beginning therapy. One week after the first lime sulfur dip (two weeks after presentation), Agnus' facial, chin and neck lesions were nearly resolved (*Figures 5-7, page 42*).

At the one-month recheck, a single live *D. cati* mite was identified on skin scraping. Excoriations had begun to reappear on the bridge of her nose and chin, and Agnus was mildly pruritic, according to the owner. We placed her on 2 mg chlorpheniramine orally twice a day, resumed oral amoxicillin-clavulanic acid and advised the owner that switching to Royal Canin Hypoallergenic HP diet was necessary since she had not done so yet. The

lime sulfur dips were continued on a weekly basis. Agnus is still under treatment at this time. If no clinical resolution is achieved with lime sulfur dips, we plan to increase our diagnostic efforts at finding an underlying cause in Agnus. 

References

1. Scott DW, Miller WH, Griffin CE. *Muller and Kirk's Small Animal Dermatology*. 6th ed. Philadelphia, Pa: WB Saunders Co, 2001;457-473.
2. Kwochka KW. Canine and Feline Demodicosis Treatment Options (VET-99), in *Proceedings*. 76th Annual Meet West Vet Conf 2004.

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Useful Rituals for Controlling Stress

The ability to control your environment is a critical factor in managing stress. One way to strengthen your feeling of control is to develop daily rituals, which can help energize you physically, emotionally and spiritually. Examples of positive rituals include:

- **Sleep.** Go to bed and get up at the same time every day.
- **Exercise.** Set aside at least 20 to 30 minutes every day to energize yourself.
- **Nutrition.** Develop a regular routine of eating—start with breakfast and eat often and light.
- **Family.** Some of your rituals should include family, such as eating dinner together.
- **Spirituality.** Spend time exploring the meaning of life and where you are going.
- **Plan ahead.** Prepare for daily tasks; for example, create a to-do list before beginning your day.
- **Down time.** Do something special for yourself between appointments—step outside into the sunshine, eat a healthful snack or snuggle with a Pet.
- **Creative time.** Balance your life by pursuing gardening, photography, writing, music or other creative activities that give you satisfaction.
- **Travel.** Shift gears between destinations by listening to pleasant music or a book on tape.
- **Time alone.** Find time twice a day to be alone.

—Kathy Engler, DVM, DABVP, Director of Veterinary Career Development, Banfield, The Pet Hospital