COMMON FELINE DERMATOLOGIC DISEASES - EOSINOPHILIC GRANULOMA COMPLEX

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Eosinophilic granuloma complex is a commonly seen syndrome/reaction pattern in cats. There are three clinically distinct presentations:

1) Eosinophilic granuloma
2) Indolent/rodent ulcer
3) Eosinophilic plaques

Patients can have one or even all three forms.

The eosinophilic granuloma, also called linear granuloma is a lesion that can occur on the skin, mucocutaneous or oral. Most commonly the lesions occur on the caudal thighs, face and the oral cavity. On the face, the lesions are often nodular in appearance and cause lip and chin swelling. On the thighs the granulomas are often linear. The patient is commonly non-pruritic.

Indolent ulcers, also called eosinophilic or rodent ulcer, are commonly found cutaneously, mucocutaneously or in the oral cavity. Most commonly the lesions are found on the upper lip (unilateral), but they can also occur bilaterally, especially when found in the oral cavity or on skin. Lip lesions can develop into squamous cell carcinomas.

Most commonly eosinophilic plaques occur on the abdomen and medial thighs. Single or multiple lesions can occur and patients are usually severely pruritic. The lesions re usually round, well circumscribed and often ulcerated.

Underlying problems for this syndrome include:

1) Flea bite hypersensitivity
2) Food adverse reactions
3) Atopic dermatitis
4) Idiopathic
Any patient with lesions consistent with eosinophilic granuloma complex should be worked up for these possible underlying causes and of course should also be checked for possible secondary infections.

Any patient with these kinds of lesions should be checked for fleas and flea dirt and should be trial treated for fleas, even if no flea dirt or fleas are found.

residual effects. It is very important to not only treat the affected but all animals in the household as well as the environment. The affected animal usually requires more frequent treatment then recommended in medication inlet.

Even when the lesions had been caused by flea bite hypersensitivity, the existing lesions may have to be treated with an oral steroid until resolution before new lesions can be prevented with consistent flea preventatives.

The next rule out for a cat with eosinophilic granuloma complex lesions would be feline adverse food reactions.

Clinical manifestation of AFR varies. Cutaneous signs include: non-seasonal pruritus and self trauma (also focal pruritus directed at head and neck), non-inflammatory alopecia and eosinophilic granuloma complex. Gastrointestinal signs include vomiting (about 50% of cats with AFR), and less common diarrhea.

Most common skin lesions include: alopecia, scaling, crusts, erosions, ulcers and excoriations. Miliary dermatitis is noted in about 20% of cases. Other clinical signs include papules and pustules, bilateral non-inflammatory alopecia without other skin lesions can develop secondary to licking. Often these lesions are found on the ventral abdomen, thighs, and inguinal area.

The diagnosis of AFR’s is confirmed by feeding a restrictive (hypoallergenic) elimination diet for at least 6-8 weeks or in cases of eosinophilic granuloma complex, until the lesions resolved completely, followed by a re-challenge.

These diets can be either home cooked or consist of a commercial hypoallergenic diet (novel protein source or hydrolyzed). The later is a newer method for food trailing. In these commercially available diets protein molecules will be enzymatically broken down to smaller peptide fragments which are less allergenic and more digestible. In general, if dietary proteins are properly digested prior to contact with the GI mucosa, they will not activate the immune system.

The trial diet is fed for at least 6 weeks. The duration needs to be extended if the secondary skin or ear infections have not been cleared yet or if the cat shows improvement but not complete resolution of clinical signs after 6 weeks.

It is imperative that no commercial treats, flavored medications and toys are available for the animal for the duration of the diet trial.

Every patient that had been on a strict diet trial for at least 6-12 weeks has to be re-challenged with the
maintenance cat food at the end of the diet trial, to evaluate the diagnostic procedure. Most cats with food adverse reactions will develop pruritus within 2 days to 2 weeks, after re-challenge.

Once it is established that the patient has food adverse reactions, avoidance of the offending allergen(s) is most important to prevent lesion from recurring.

If the pruritus and the lesions did not resolve during the elimination diet trial and the patient did not worsen during the 2-14 day re-challenge, the cat does not have AFR’s and should be worked up for atopic dermatitis (airborne allergies) as possible cause for the eosinophilic granuloma complex lesions.

Atopic dermatitis (airborne allergies, atopy) is diagnosed by ruling out all other differential diagnoses and the control of secondary infections.

Airborne allergies cannot be diagnosed based on intradermal testing or serologic testing. These are diagnostic tools to identify single airborne allergens (i.e. tree-, grass, weed pollens, house dust mites, and mold spores) once the diagnosis of atopy has already been made.

Either serologic testing for airborne allergens or intradermal testing (IDT) can be performed to identify allergens. Most dermatologists consider IDT the gold standard, but this is a time consuming procedure and allergens are expensive and have a relatively short shelf life in the refrigerator, therefore IDST is mainly performed by specialists and in cats there is some debate as to which test is most diagnostic.

Based on the results allergy solution can then be ordered and the patient can be started on allergy shots. Most companies will make recommendations on which allergens should be included in the allergy solution. In general the allergens are chosen based on the patients history and the environment it lives in (if allergens are prevalent).

So far allergy shots are the only curative treatment for airborne allergies. We have a ~70% success rate with this treatment and it can take 3-12 months for this treatment to help the patient. The allergens are sent out with a detailed information sheet on the injection procedure, possible side effects, allergen storage instructions and a general injection schedule.

Feline atopy can also be treated with medical therapy. And these medications can also be used to make the patient more comfortable, while we wait for beneficial effects of the allergy shots. Symptomatic treatment includes medications like antihistamine trials, fatty acids, shampoo’s, topical and oral steroids.

Patients with eosinophilic granuloma complex lesions that do not respond to flea preventatives and food trials, will often be treated with glucocorticoids. We prefer the use of oral steroids and to recommend to reserve the use of Depot steroids for the cases that are hard to medicate on a daily basis.

Another newer treatment option for feline atopy is cyclosporine (Atopica®), which will be approved for the use in cats this fall. In the past, this medication has been used successfully for cats with eosinophilic granuloma complex lesions at a dose of 7mg/kg/d.
The therapeutic activity of CsA is related to inhibition of the inflammatory process observed in the allergic reaction. CsA inhibits T-lymphocyte activation, eosinophil recruitment to the sites of allergic inflammation, the lymphocyte-activating functions of antigen-presenting cells, such as Langerhans cells, and cytokine secretion by keratinocytes. Finally, CsA inhibits IgE and mast cell-dependent cellular infiltration at the sites of cutaneous inflammation. Immunosuppressive effects are reached by stimulating cells to secrete transforming growth factor-β (TGF-β).

Side effects include intermittent soft feces, diarrhea, vomiting, inappetence, gingival hyperplasia and papilloma like lesions. Cats being exposed to toxoplasma while receiving oral cyclosporine may be able to develop acute toxoplasmosis. It is recommended to use cyclosporine in indoor cats eating commercial diets no raw diets) only.