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CLINICAL KNOWLEDGE INSIGHTS

EOSINOPHILIC GRANULOMA COMPLEX – FELINE

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AT A GLANCE

- The feline eosinophilic granuloma complex is a term assigned to a group of inflammatory skin conditions which occur in cats consisting of three different manifestations: eosinophilic plaques, eosinophilic granulomas, and indolent ulcers
- The term "eosinophilic granuloma complex" is commonly used, but not universally accepted because not all types of the complex exhibit a true granulomatous reaction
- All three manifestations of the "complex" have been classically associated with hypersensitivity reactions, though there is controversy as to whether all types are equally likely to be associated with a hypersensitivity etiology. The eosinophilic granuloma, in particular, is proposed by some to more commonly be idiopathic.

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- The term "eosinophilic diseases" has been used in recent studies to describe the same three manifestations and "eosinophilic diseases" were shown to be one of the four major cutaneous reaction patterns seen in cats with hypersensitivity dermatitis
- Eosinophilic granuloma complex lesions can occur in cats with food, flea or environmental hypersensitivities, among others, and are not specific to the type of allergy the cat is suffering from.

WHAT DOES IT LOOK LIKE?

- Each of the three manifestations has a characteristic appearance and can occur in any breed of cat. The age of onset tends to reflect the age of onset of allergies and therefore often begin in young to middle-aged cats.

EOSINOPHILIC PLAQUES *(PATHOLOGIC IMAGE LIBRARY - FIGURES 1A & 1B)*

- Alopecic, raised, erythematous to slightly yellow plaques that are often found on the ventral abdomen
- Lesions may be single, multiple, or coalescing
- Lesions are typically intensely pruritic and often exude serous fluid which mats adjacent hairs.

EOSINOPHILIC GRANULOMAS HAVE A VARIETY OF PRESENTATIONS *(PATHOLOGIC IMAGE LIBRARY - FIGURES 3, 4A, 4B & 5)*

- Linear granuloma: Firm, raised and linear band of erythematous skin running vertically along the caudal aspect of the thigh; Milder lesions may be difficult to visualize amongst the hair coat without palpation and may go unnoticed by owners
- Oral Cavity: erythematous papules or nodules on the palate or tongue, often with an ulcerated white center
- Chin: diffuse swelling of the chin
- Footpads: swelling and potentially ulceration and crusting of the pads

INDOLENT ULCERS ALSO CALLED "RODENT ULCERS" *(PATHOLOGIC IMAGE LIBRARY - FIGURES 6 & 7)*

- Variably-sized ulcerations, often with a concave surface and raised borders
- Surface of the ulcer is often erythematous to slightly yellow
- Usually located along the mucocutaneous junction of the maxillary lip, adjacent to the canines
- Cats sometimes display very little discomfort associated with these lesions which can be detected incidentally on examination

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PATHOLOGIC IMAGE LIBRARY : EOSINOPHILIC GRANULOMA COMPLEX - FELINE



Figure 1a. Eosinophilic plaque on the ventral abdomen of a cat



Figure 1a. Closer view of eosinophilic plaque in figure 1a



Figure 2. Eosinophlic granuloma on the tongue of a cat.



Figure 3. Side and front view of eosinophlic granuloma on chin of a cat.



Figure 4. Ulcerated eosinophilic granulomas involving the footpads of a cat

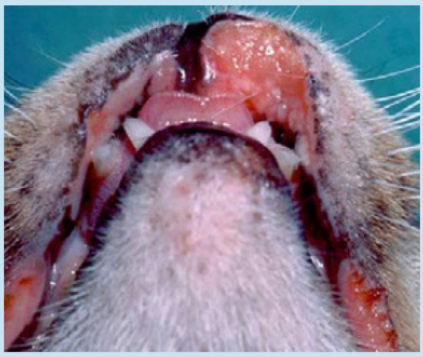


Figure 5. Indolent ulcer on the upper lip of a cat



Figure 6. Severe manifestation of an indolent ulcer in a cat

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WHAT ELSE LOOKS LIKE IT?

EOSINOPHILIC PLAQUES

- Neoplasia (squamous cell carcinoma, mast cell tumor, cutaneous lymphoma)
- Bacterial infection
- Cutaneous lymphocytosis
- Herpes viral dermatitis

EOSINOPHILIC GRANULOMAS

- Caudal thigh (linear granuloma): Few reasonable clinical differentials exist
- Oral cavity: Neoplasia (squamous cell carcinoma), Fungal granuloma
- Footpads: Pemphigus foliaceous, Plasma cell pododermatitis
- Chin: Neoplasia, Bacterial infection, Chin acne and furunculosis

INDOLENT ULCERS

- Trauma
- Neoplasia (squamous cell carcinoma, lymphoma, mast cell tumor)
- Bacterial infection
- Viral infection (herpes virus, calicivirus, cowpox)

HOW DO I DIAGNOSE IT?

- Evaluate for the presence of any of the other four major cutaneous patterns of feline hypersensitivity dermatitis (miliary dermatitis, eosinophilic diseases, head and neck pruritus, self-induced alopecia). The concurrent presence of additional lesions compatible with feline hypersensitivity dermatitis increases the index of suspicion that suspected lesions are attributable to eosinophilic dermatitis
- Surface cytology to rule out infections or document secondary infections for treatment
- Skin scrapings and hair combing to evaluate for fleas or other parasites that could be triggering hypersensitivity
- Skin biopsy if necessary to confirm the diagnosis and rule out other differentials

DIAGNOSTIC TECHNIQUES VIDEOS: ExcellenceInDermatology.com → Education Library → Videos

DIAGNOSTIC TECHNIQUES SECTIONS: ExcellenceInDermatology.com → Diagnostic Techniques

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HOW DO I MANAGE IT?

- An allergic reaction manifesting as an eosinophilic plaque or indolent ulcer, is best treated by avoiding further contact with the offending allergen
- Removing the offending allergen is only possible for some allergens and identifying these allergens requires exclusion trials

DIET TRIALS

→ Choose a novel or hydrolyzed protein diet

→ Use a prescription or home-cooked source for the diet

→ Feed exclusively for a period of at least 6 and up to 12 weeks

→ A positive response should be followed with dietary challenges to confirm the benefit was due to food allergies and to document what particular foods must be avoided in the future

→ A lack of response to one or two properly performed diet trials can be used to rule out food allergies

→ Special attention should be paid to cats that experience a partial benefit which can suggest food, in addition to other, allergies

PARASITE PREVENTION TRIALS

→ Routine parasite preventative, effective against adult fleas, should be used to rule out flea allergies

→ Further treatment may be necessary depending upon the local flea burden or if other parasites are found on the initial workup

ANTIBIOTICS

→ Lesions are often secondarily infected and amoxicillin-clavulanate has been shown to cause significant lesion reduction in cats with eosinophilic plaques and indolent ulcers

- A lack of response, or incomplete response, to the above exclusion trials may suggest an environmental allergy trigger or idiopathic disease
- Cats with an environmental trigger may require multimodal therapy with a variety of treatments such as:

→ Glucocoticoids: Prednisolone at 1-4 mg/kg/day PO is usually very effect at bringing lesions under control initially. In those cats for which oral medications are not possible, methylprednisolone acetate (Depomedrol) injections can also be effective at a dose of 10-20 mg/cat (~5 mg/kg) IM or SQ. Injections can be repeated every 2 weeks for 2-3 doses if necessary.

→ Immunotherapy: allergy testing, whether intradermal or via serology, is not specific enough to use in diagnosis but is helpful in selecting allergens to include in an immunotherapy prescription

→ Cyclosporine: effective at 7 mg/kg/day

→ Antihistamines: cetirizine at 5 mg/day

→ Fatty acids: omega 3 (60 mg/kg/day)

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COMMENTS

- Idiopathic cases of eosinophilic granulomas may show heritability suggesting a genetic trigger is involved in some cases
- Some eosinophilic granulomas developing in young cats may spontaneously regress
- Due to the inaccuracy of currently available diagnostic tests for environmental hypersensitivity in cats, it is difficult to confidently discriminate between idiopathic reactions and those due to an environmental hypersensitivity. Food, fleas and other possible triggers of hypersensitivity reactions should however always be investigated
- Prednisone is poorly metabolized in some cats and prednisolone or methylprednisolone should be used instead

FURTHER READING / REFERENCES

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