You have asked ...

What steps do you take to confirm/diagnose flea allergy, and how do you manage your patients?

The Expert Says ...

Flea Allergy:
The Best Tests & Prevention

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Fleas are among the most common external parasites of companion animal dogs and cats, and flea allergy dermatitis (FAD) is believed to be the most common allergic skin disease in these species worldwide. Flea allergy can affect dogs and cats at any age and can cause severe clinical signs. Therefore, it is important to recognize, diagnose, and manage these patients in a timely manner.

What Does Flea Allergy Dermatitis Look Like?

Flea allergy dermatitis is one of the three most pruritic skin diseases, along with food allergy and sarcoptic mange. It is characterized by often severe pruritus in both dogs and cats and often incessant grooming in cats. Flea allergy dermatitis can occur in any animal regardless of flea burden or length of exposure. Dogs tend to show secondary lesions: excoriations, alopecia, lichenification, scaling, crusting, and sometimes pyotraumatic dermatitis ("hot spots"). Affected sites include the lower back, perineum, tailhead, hindlimbs, and umbilical region. (Flea allergy dermatitis has been called the "waist-back disease"—that is, all lesions occurring behind the "waist"). Lesions can become generalized and mimic atopy or scabies, but usually spare the head.

The clinical signs may be seasonal or constant, depending on flea exposure. Young pups with early-onset FAD may have unique clinical signs with a widespread papular, very pruritic dermatitis mimicking scabies. Cats may have normal-looking skin with hair loss due to excessive licking, usually over the back or caudal ventral abdomen. A reaction resulting in symmetrical alopecia is common. Cats can also present with eosinophilic granuloma complex lesions or head and neck pruritus. However, miliary dermatitis, a generalized papular crusting dermatitis, is usually considered the most typical lesion of FAD in the cat.

Illustration by Bill Celander

Diagnosis of Flea Allergy Dermatitis

Diagnosis of FAD requires the following: compatible clinical signs, evidence of exposure to fleas, and response to flea control. Animals that are allergic to fleabites may have very few fleas at any one time because the excessive grooming removes them. The absence of fleas on examination does not rule out FAD. It is important to inform clients that it is fairly common not to see fleas on flea-allergic patients. Therefore it is prudent to educate clients about the signs of flea allergy dermatitis and the need for strict flea control for these patients.

In many cases, only the secondary skin lesions are seen because the fleabites tend to be intermittent. Intradermal skin testing with commercial flea antigens or in vitro testing with flea salivary antigens can contribute to a good flea control program, although both types of tests tend to lack sensitivity and specificity. In skin testing with commercially available whole-flea extracts, a positive reaction is helpful to confirm flea allergy but does not necessarily mean that the dog is clinically hypersensitive and a negative reaction does not necessarily rule out hypersensitivity. Flea-allergic pets may have immediate (15-minute), late-phase (6-hour), or delayed (24- to 48-hour) reactions or a combination of reactions after testing. An immediate reaction consists of an erythematous wheal. If the immediate reaction is negative; then wait for a delayed reaction. The 24-hour reaction may be noted only by careful palpation or observation of localized erythema.

Skin testing with pure flea saliva provides the most accurate correlation between clinical signs and diagnosis of FAD but unfortunately pure flea saliva is not commercially available at this time. The advantage of testing with pure flea saliva is that it removes the possibility of a false positive intradermal skin test reaction due to an irrita-

tion caused by the whole-flea extract. Again, the positive reaction to pure flea saliva means nothing without compatible history and clinical signs.

A mail-in flea saliva IgE titer (Allercept—Heska Corp., Loveland, CO) is commercially available. The flea saliva IgE test only measures antigen-specific IgE and does not document delayed hypersensitivity. Both skin and in vitro tests may yield negative results in 15% to 30% of patients with FAD. Overall, only response to flea control definitively confirms FAD.

Management

The most important part of therapy is preventing fleabites. Vigorous year-round flea control is the most important part of therapy. It is also recommended to treat all animals in the household. For outdoor cats, I recommend weekly to biweekly application of imidacloprid (Advantage—Bayer, West Haven, CT). Imidacloprid has a weekly application on the label if necessary. Fipronil (Frontline—Merial, Duluth, GA) is also effective at more frequent intervals, but this is an off-label use of an Environmental Protection Agency–regulated product. Fipronil is currently labeled as a monthly application product.

Nitenpyram is a new synthetic compound that binds to and inhibits specific nicotinic acetylcholine receptors. Available to be administered as capsules to dogs, puppies, cats, and kittens, it produces "rapid-kill" and lasts less than 24 hours as a systemic insecticide. It is not intended to be used alone for flea control. For the flea-allergic animal that has entered an area of heavy infestation, this drug may be useful while other pets and the environment are being treated. As a general rule, systemic products are not as useful in flea-allergic patients as the flea has to bite to be exposed to the active ingredient, triggering a potential allergic response.

Similarly, selamectin is available as a topically applied (drip-on) but systemically absorbed adulticide/insect development inhibitor for dogs, cats, kittens, and puppies. Labeled for monthly application for control of fleas, it is most effective as an ovicide, preventing eggs from hatching. It provides some advantage over lufenuron and lufenuron/milbemycin combinations in killing adult fleas but should be coupled with a potent adulticide. The superior method of flea control for all animals is an adulticide combined with an insect-growth regulator.

Lingering Pruritus

Pruritus may remain for a while after the fleas are gone, so some patients will need additional antiinflammatory medications. This author generally recommends an antiinflammatory dose of oral corticosteroids for 10 to 14 days. If there is a bacterial and/or yeast infection, antimicrobial therapy must be prescribed. Topical therapy, such as shampoos and leave-on conditioners, can soothe inflamed skin. If topical products are prescribed, it is important to follow the directions of the flea control product with respect to application after bathing.

The best prevention for flea allergy dermatitis is year-round, comprehensive flea control. ■

See Aids & Resources, back page, for references, contacts, and appendices.

our authors

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