Busting Common Myths about Cutaneous Adverse Food Reactions (CAFRs) in Dogs and Cats

Insight from an AAHA Webinar, "Adverse Food Reaction? Think Novel Protein"

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Here are some pearls of wisdom from a veterinary dermatologist to help you make diagnostic and treatment decisions for your patients with confidence based on the latest research and real-world experience. They can also be used as talking points for discussions with your clients.

"Forget ears and rears": Distribution of skin lesions tells you NOTHING about the cause of an animal's allergic dermatitis[1].

Not all allergies respond well to steroids. Only about 50-60% of dogs with cutaneous adverse food reaction (CAFR) respond well to glucocorticoids. Cats fare only slightly better, with 50-70% responding well[2]. So don't rule out food allergies when your patients don't respond to treatment with steroids! Some pets with CAFR don't respond as well to Apoquel either, but this has not been evaluated in clinical studies.

Chicken is NOT the top food allergen in dogs and cats. In fact, it's number 3 on the list for both species[3]. Both dogs and cats have been found to react the most to beef, followed by dairy in dogs and fish in cats.

In addition to recommending a diet elimination trial, it is important to treat the pet's secondary conditions (infection, pruritus, inflammation, etc.) from the very first appointment! They will not necessarily go away on their own with the diet elimination trial, and it will help to improve compliance when you make the pet more comfortable.

Grains are NOT a major cause of food allergies in animals, contrary to what many pet owners and some veterinary professionals believe.

Some dogs and cats (as many as 20%) will have both dermatological and gastrointestinal signs as part of their CAFR[4], so this is important to pay attention to. According to Dr. Hoff, when both signs are present at the same time, it's a CAFR until proven otherwise!

The only way to diagnose a CAFR is through a restrictive diet elimination trial for at least 8 weeks! Other tests such as bloodwork, biopsy, intradermal testing, and saliva or hair testing have all been proven to be ineffective in diagnosing CAFRs in dogs and cats[5]. It is also important to remember that without challenging the pet with the original diet or individual ingredients, it is impossible to definitively diagnose a CAFR.

Most dogs will have responded to a diet elimination trial within 8 weeks, but for cats it can be helpful to keep going for up to 12 weeks if they have not responded by week 8[6].

There's no one perfect diet to use for a diet elimination trial. The one you choose will depend on the patient, their diet history, and what the owner feels they can do.

- **Home-cooked diets:** some dermatologists prefer these as you have total control over what the patient eats. Some owners will also prefer this option. However, they are very labor intensive, require a very dedicated owner, and there can be concerns about compliance. If they are used long term, a veterinary nutritionist should be consulted to make sure they are balanced.
- **Novel protein diets:** These can be great choices for many pets, as long as the diet history is known so that a truly novel protein can be chosen. They may cause fewer gastrointestinal side effects when compared to hydrolyzed protein diets. It can be harder to find a "novel" protein these days, as many pet food manufacturers are using more exotic proteins in their over-the-counter diets. There is also always the chance that a pet will develop a new allergy to the novel protein diet over time.
- **Hydrolyzed protein diets:** These can be a good choice when the pet's diet history is not known or a novel protein can't be found (if the owner has constantly been switching proteins, for example). It is possible for some pets to still react to the parent protein depending on how sensitive the pet is and how small the protein hydrolysates are[7]. Because the proteins are broken down into such small molecules, pets can be at higher risk for developing hypoosmotic diarrhea. Constipation is also a concern with these diets for some pets.

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2. Vogelnest LJ, Cheng KY. Cutaneous adverse food reactions in cats: retrospective evaluation of 17 cases in a dermatology referral population (2001-2011). *Aust Vet J* 2013;91:443-451.
3. Mueller RS, Olivry T, Prélaud P. Critically appraised topic on adverse food reactions of companion animals (2): common food allergen sources in dogs and cats. *BMC Veterinary Research* 2016;12.
4. Mueller RS, Olivry T. Critically appraised topic on adverse food reactions of companion animals (6): prevalence of noncutaneous manifestations of adverse food reactions in dogs and cats. *BMC Veterinary Research* 2018;14.
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7. Petra Bizikova, Thierry Olivry. A randomized, double-blinded crossover trial testing the benefit of two hydrolysed poultry-based commercial diets for dogs with spontaneous pruritic chicken allergy. *Veterinary Dermatology* 2016;27:289-e270.