Atopy Therapy: Minimizing Drugs (Or At Least the Immunosuppressive Ones)

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Atopy or Atopic dermatitis continues to be one of the most common dermatological disorders afflicting both dogs and cats. At our referral dermatology specialty practice, 75% of our patients have atopic dermatitis as one of the final diagnosis. The problem is so common and severe that many drugs have been utilized in an attempt to offer relief to the suffering patient. The challenge for the clinician is to try and find the right balance between all of the therapy options, their cost, efficacy and safety. The disease continues to generate research, with new therapies being developed. The International Task Force on Atopic Dermatitis developed guidelines in 2010 for the treatment of atopic dermatitis which involve a multifaceted approach including

- Treatment of acute flares
- Attempt to ID and avoid all triggers of flare
- Improve skin & coat hygiene
- Treat ongoing pruritus with drug therapy
- Allergen specific immunotherapy should be offered when feasible

The diagnosis of atopic dermatitis is not based on any laboratory or skin test but is based on a combination of signalment, history, clinical signs and the ruling out other causes of inflammatory skin. Obtaining a certain and complete diagnosis for the pruritic patient can be challenging, but is a necessity if efficient and effective care is to be delivered.

When attempting to effectively help a patient with atopic dermatitis it is necessary to understand the pathogenesis of the disease, and teach the client these basic concepts.

- In dogs, atopic dermatitis is known to be an inherited type 1 hypersensitivity reaction to percutaneously absorbed antigens
- Epidermal barrier defects contribute to the pathogenesis
- Bacterial and yeast infections provide additional antigens which may exacerbate pruritus

I try and simplify options with clients and explain there are four groups of options for the treatment of atopic dermatitis. They include supportive therapy, corticosteroids, cyclosporine and allergen specific immunotherapy. The point of this lecture is how to minimize the corticosteroids and cyclosporine (C&C). Allergen specific immunotherapy is covered in more detail in a separate lecture. These options are frequently used in combination in order to obtain synergistic effects, which is an important concept to teach clients. In order to use less C&C clients must administer more intensive supportive therapy.

Supportive therapy is always a good place to start when treating a “mildly” affected atopic patient and includes antihistamines, essential fatty acids, bathing, restoration of the epidermal barrier, control of secondary infections, and potentially topical anti-inflammatory products.

A number of antihistamines have been utilized to control pruritus in dogs. Good clinical trials with placebo controls show the benefits of reducing pruritus ranging from zero to 30%. Many dermatologists will utilize antihistamines as part of the ongoing maintenance control of atopic dermatitis, but recognize their limited value when treating an acute or intense flare. Antihistamines which we currently recommend at our practice include cetirizine, amitrpytilline, clemastine, diphenhydramine, and chlorpheniramine. Most are available in generic formulation, and are over the counter, which helps keep the cost low. I usually try 2-3 different antihistamines, but expectations need to be realistic in understanding the value of these drugs may be in their steroid sparring effects. Remind owners to avoid formulas which contain decongestants and pain relief products.

There are many published reports regarding efficacy of essential fatty acids (EFAs) for the treatment of atopic dermatitis. Unfortunately many of these studies failed to control, or account for the amount of EFAs in the diet which makes interpretation and comparison of these studies difficult. Most dermatologist support the use of EFAs in the treatment of chronic atopic dermatitis. Despite claims to the contrary, currently it is the position of the Task for on Atopic Dermatitis that there is no evidence of superiority of any particular EFA combination, dosage, ratio or formulation (including enriched diets) to improve skin and coat quality. As with antihistamines, EFAs are not adequate as a single therapy for atopic dermatitis except in mildly affected patients. I recommend minimizing other oils or fats such as olive oil or animal fat to minimize competition for absorption of the EFAs.

Improvement of the epidermal barrier has recently been getting more investigation and implementation. Simply bathing the atopic patients has many benefits including physical removal of antigens, reduction of bacterial and yeast populations, repair of epidermal barrier defects and the anti-pruritic effects of cool water cooling hot inflamed skin.

Despite the widespread belief that frequent baths will dry out the skin, it is this authors belief that a client cannot over bathe an allergic dog. The biggest drawback of frequent baths is the concern of washing away some of the flea control products. In such case recommendation of flea control products which are not washed off are appropriate.

A plethora of OTC and prescription antipruritic shampoos are available with ingredients including oatmeal, corticosteroids, diphenhydramine, pramoxine, lidocaine and coal tar just to name a few. It is the feeling of this author that the higher cost and short-term benefit of these products usually do not justify their use. Instead, at our practice we utilize products with antiseptic and epidermal restoration effects. Knowledge of any and all infections of the skin should influence the choice of antimicrobial shampoo. Chlorhexidene, triclosan with ethyl lactate, or benzoyl peroxide are chosen for most allergic patients prone to recurring pyoderma. If the skin is oily, or the infection is deeper than a superficial folliculitis, ethyl lactate or benzoyl peroxide is chosen since they are more potent "degreasers" and have follicle flushing activity. Shampoos with miconazole or ketoconazole are chosen if the skin is infected only with Malassezia, otherwise a shampoo with multiple ingredients may be needed for a mixed infection of bacteria and yeast. Recently we have utilized a shampoo and spray containing Tris EDTA with a 4% chlorhexidine, particularly when dealing with methicillin resistant Staphylococcal infections of the skin.

Formulations which extend or prolong the antimicrobial effects of the product include "Leave on" lotions/sprays/conditioners. Also the active ingredient can be formulated into "Spherulites™" or "Liposomes" which adhere to the skin and hair with a slow prolonged release

The final "goal" of shampoo therapy is to repair or restore the epidermal barrier. Products marketed for this function include L-Rhamnose and phytosphingosine, both of which also contain chlorhexidine . There are also a number of new topical "pour on" products available which attempt to mimic and replace the endogenous lipid barrier of the epidermis. They include ceramides with fatty acids (Virbac), phytosphingosine (Sogeval) and EFAs (Dermoscent). Clinical trials are ongoing, but these products make sense if they are in fact able to restore the epidermal barrier, reduce transepidermal water loss, and reduce percutaneous absorption of allergens.

Simple management techniques can be employed to reduce overall allergen load on the skin surface. In addition to frequent baths, the coat can be wiped down on a daily (or more often) basis in an attempt to wipe off allergens. Keeping the hair coat short can reduce the "dust mop" affect of a longer coat. Wearing T-shirts and boots or socks can act as a physical barrier to the allergens.

The advantages of the supportive care options outlined above include safety and benefits which are seen relatively quickly, although EFA supplementation may require two months before a benefit is seen. Another benefit is that no specific diagnostic testing is required once the diagnosis of atopic dermatitis has been made. There is no cost for monitoring of blood work, or even examinations if OTC products are used. Drawbacks include rather lower efficacy, moderate (or more) cost, and they are labor intensive.

Another significant therapy option for the control of atopic dermatitis is allergy specific immunotherapy (ASIT) or "desensitization" injections. With the increased "popularity" of drugs such as cyclosporine, it seems that ASIT is considered "only if Atopica fails." It is the opinion of this author and of the International Task Force on Canine Atopic Dermatitis that this is a mistake. For many atopic patients ASIT can become one of the easier, safer, more cost effective therapies. For ASIT to be its most efficacious, several factors should be considered. This subject is covered in more depth in a different lecture.

Other Nontraditional therapies which are frequently promoted for use in treating atopic dogs includes yucca extract, local bee pollen, biotin, herbs such as "Skin-eze" (Tang-Kuei; Articum; Calamus Gum; Salvia; Rehmannia; Forsynthia; Sophora Root; Cicada; Kochia; Schizonepta; Siler; Licorice). This author has utilized many of these products with no success, nor are there any published scientific studies to support their use. If effective, I would be one of the best customers of these products.

References

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