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## HOW I TREAT.... POORLY RESPONSIVE PRURITUS

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Pruritus is one of the most common presenting signs in veterinary medicine, and is the most common cutaneous symptom. It can cause great discomfort in dogs and cats and be a source of anxiety for the owner. The most important aspect of the management of pruritus is determining the precise cause. Once that is known, the pruritus can usually be resolved completely or controlled.

In the case of parasitic skin diseases, elimination of the parasite will lead to complete cure and hence resolution of the pruritus. However, there may be a lag phase between parasite elimination and reduction in pruritus because of a residual hypersensitivity reaction to parasite components. With skin infections such as staphylococcal pyoderma and *Malassezia* dermatitis, appropriate anti-microbial therapy will also lead to resolution of the pruritus, although these conditions may recur if an underlying cause is not controlled adequately.

The management of pruritus is most problematic in the case of allergic skin diseases, in which long-term management is required. With food allergies or intolerance, the pruritus will abate as long as the offending ingredients are not fed. With atopic dermatitis, complete resolution can be obtained in some cases by allergen-specific immunotherapy or allergen avoidance. However, in the majority of cases, some form of anti-pruritic therapy is required either for life or at least in the short term.

**Systemic Anti-Pruritic Drugs** that are commonly recommended for the treatment of atopic dermatitis include glucocorticoids, cyclosporine, antihistamines, and essential fatty acids. Glucocorticoids are effective in the majority of cases with most patients being controllable with prednisolone or prednisone. In dogs, a dose rate of 0.5 – 1.0 mg/kg/day would typically be effective as a starting dose but in cats, these doses need to be doubled, especially in cats suffering from eosinophilic plaques. Rarely, other glucocorticoids such as dexamethasone or triamcinolone may be effective where prednisolone has failed but these drugs should not be considered for routine use because their duration of action makes them unsuitable for alternate day therapy.

**Cyclosporine** (5 - 10 mg/kg/day) shows approximately the same efficacy as glucocorticoids in the management of atopic dermatitis. In cases suffering from adverse glucocorticoid effects, or cases requiring daily therapy, this drug can provide a very effective long-term management option.

**Antihistamines** will probably only provide relief in approximately 20% of cases. Hence, therapeutic failure is extremely common and owners should be warned in advance so that they have realistic expectations. In order to achieve results with antihistamines, it is critical to try at least three different types before deciding that they are of no benefit. The most commonly prescribed drugs would be clemastine (0.05 mg/kg Q12 hours), hydroxyzine (2.2 mg/kg Q 8hours),

chlorpheniramine (0.4 mg/kg Q 8 hours), and diphenhydramine (2.2 mg/kg Q 8 hours). However, in difficult cases, it is worth trying more than three types in the hope that one will eventually work. Other drugs to be considered include cyproheptadine (0.1-1.0 mg/kg Q 12 hours) and amytriptiline (1-3 mg/kg Q 12 hours).

**Essential Fatty Acid Supplements** have a similar efficacy rate to antihistamines and there is some evidence that a combination of the two is more effective. It is important to ensure that the dose given is adequate. This is usually higher than the doses stated on labels. Essential fatty acid supplementation can also be achieved by feeding certain commercial diets that have specifically increased amounts of EFAs in the correct proportions.

**Topical Therapy** can also be useful in the management of canine atopic dermatitis. Topical glucocorticoids can be very effective for stubborn focal lesions but care must be taken to avoid skin thinning. However, if there is evidence of lichenification, this can be a beneficial effect. Topical tacrolimus (a similar drug to cyclosporine) has recently been shown to be beneficial in some cases of atopic dermatitis but as with topical glucocorticoids, it is only suitable for focal lesions. Other forms of non-steroidal anti-pruritic therapy can be used as an adjunct in the management of atopic dogs but it is rare for these products to offer anything other than short-term relief. Colloidal oatmeal and pramoxine shampoos and capsaicin fall into this category and usually need to be used very regularly (daily or every other day) to achieve any degree of efficacy.

If an atopic dog fails to respond to the above anti-pruritic therapies, clinicians should first establish that the diagnosis is correct. Failure to respond could be due to the presence of a disease that doesn't normally respond well to anti-pruritic medication. In particular, scabies, *Malassezia* dermatitis, food intolerance, epitheliotropic lymphoma, pemphigus foliaceus, intestinal parasite hypersensitivity, drug eruption, sterile eosinophilic pustulosis, syringo-hydromelia, zinc-responsive dermatosis, acral mutilation syndrome and pseudorabies should be considered.

If the diagnosis is correct, and none of the above treatments work, clinicians can consider a number of other therapeutic strategies, agents and combinations:

**Pentoxifylline** – this drug has been shown to have some efficacy in the management of canine atopic dermatitis when used at a dose of 10mg/kg Q 12 hours although the efficacy may be better if the dose is increased to 10mg/kg Q 8 hours. However, in the authors experience, it is unlikely to be effective in cases that have failed to respond to glucocorticoids.

**Arofylline** (1 mg/kg Q 12 hours) – this drug has been shown have similar efficacy to low doses of glucocorticoids but there is a very high incidence of vomiting and it is not widely available. It is not recommended for routine use.

**Misoprostol** (5µg/kg Q 8 hours) – this drug has been shown to reduce pruritus scores in approximately 30% of dogs suffering from atopic dermatitis. However, it is not likely to be effective in dogs that did not respond to oral glucocorticoids.

**Chinese Herbal Therapy** – a product containing a mixture of 3 herbs has recently been shown to benefit dogs suffering from atopic dermatitis. Although the results with this product can be good in certain cases, it is unlikely to be totally effective in cases that did not respond to glucocorticoids.

**Azathioprine** – Very rarely, an atopic dog cannot be managed by any of the above treatments. This may be because of adverse effects or failure to respond. In such cases, the author has had good success with azathioprine. This drug is ordinarily used for the treatment of auto-immune

diseases, and should only be considered a last resort option in the management of atopic dermatitis.

In cases in which a psychological component to the pruritus is suspected, there may be some benefit from psychological drug therapy. These drugs include fluoxetine, clomipramine, amitriptyline and doxepin. Clomipramine has been shown to be beneficial in cases of acral lick dermatitis and some dogs with allergic dermatitis may benefit from amitriptyline and doxepin. However, routine use of these drugs in the management of atopic dermatitis is not recommended by the author.