Canine atopic dermatitis (CAD), one of the most common diagnoses in general veterinary practice, is a progressive condition that decreases the quality of life in 10% of companion dogs worldwide.1-4

CAD’s most common sign is pruritus, most often affecting the ears, face, ventral neck, distal limbs, and ventrum, as well as the perianal and perivulvar regions. Secondary bacterial and yeast infections are also common. CAD may begin seasonally and progress to nonseasonal pruritus.

Canine Atopic Dermatitis & Immunotherapy

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CAD is thought to be a polygenic disorder involving immune dysregulation and epidermal barrier dysfunction.5 The atopic immune response causes increased production of allergen-specific IgE, while barrier dysfunction facilitates transcutaneous allergen and microbe penetration.

CAD is diagnosed via exclusion of other causes of pruritus; it cannot be accurately diagnosed by allergy testing alone. Nonseasonal CAD and cutaneous adverse food reaction (CAFR) are clinically indistinguishable and an elimination diet trial (≥8 weeks) is the only reliable way to distinguish between the 2; however, a diet trial requires excellent client communication and support for success. Serum tests are unreliable for diagnosing CAFR because of frequent false positive and false negative results.

ASIT
Allergen-specific immunotherapy (ASIT) is the administration of allergens subcutaneously or sublingually to induce immune tolerance in atopic patients. ASIT increases T-regulatory cell numbers and likely has additional immunologic effects.6 Immunotherapy effectively reduces pruritus in most canine patients within 12 months and has no known long-term side effects. Following ASIT, half the patients responding to therapy require additional anti-inflammatory therapy for optimal control, and the other half experience reduced pruritus but still require concurrent anti-inflammatory therapy for adequate control of signs.

Intradermal and/or serum tests identify allergens for inclusion in ASIT. Neither test is 100% sensitive nor specific; therefore, interpretation of results in regard to the seasonality of signs and environmental exposure to antigens is recommended for antigen selection. Intradermal tests assess for immediate hypersensitivity in situ, and serum tests assess for circulating allergen-specific IgE; therefore, these tests may produce divergent results.

RESPIT
Regionally specific immunotherapy (RESPIT; vetrespit.com), an alternative to ASIT, is based on the premise that allergy testing and specific allergen selection are not required for an tolerogenic immune response. RESPIT includes common regional allergens. A peer-reviewed, blinded study comparing the efficacy of ASIT and RESPIT has not been published.

SLIT & SCIT
Peer-reviewed publications comparing success rates of sublingual immunotherapy (SLIT) and subcutaneous immunotherapy (SCIT) in dogs are lacking. The results of clinical trials with SLIT suggest a success rate similar to SCIT. In the author’s experience, some patients will fail SCIT but respond to SLIT and vice versa.

No method is currently known to predict efficacy for the individual patient; the author therefore requests that the client, who will perform the task, chooses the route of administration to optimize compliance.