What's new in canine atopic dermatitis?

Kathryn Cuddy MVB CertAVP(VD) MRCVS, of Skinvet Ireland, provides an overview of the international guidelines for the diagnosis and treatment of atopic dermatitis

Canine atopic dermatitis (CAD) is a genetically predisposed inflammatory and pruritic allergic-skin disease with characteristic clinical features. It is associated most commonly with immunoglobin E (IgE) antibodies to environmental allergens. The International Committee on Allergic Diseases of Animals (ICADA) was established in 2010, and is an affiliate organisation of the World Association for Veterinary Dermatology (WAVD). Part of ICADA's remit is to arrange for the publication of critical reviews on AD and other allergic conditions, and to advance the practice of veterinary dermatology by encouraging best practice.

DIAGNOSIS OF CAD

In 2015, Hensel et al[1] published detailed guidelines for the diagnosis of canine atopic dermatitis, and allergen identification. The full paper is accessible free of charge at www.icada.org, and is summarised below.

These guidelines provide an overview of the diagnosis of CAD that involves three distinct, but complementary, approaches. These are:

1. Ruling out of other skin conditions with clinical signs that can resemble, or overlap with CAD. This is traditionally referred to as 'the work-up'.

Important differential diagnoses for pruritic skin diseases in dogs include:

- Ectoparasitic skin diseases – fleas, scabies, demodicosis, cheyletiellosis, pediculosis, otoacariasis, trombiculiasis, nasal mites;
- Microbial skin infections – *Staphylococcal pyoderma*, *Malassezia dermatitis*;
- Allergic skin diseases – flea allergy dermatitis, atopic dermatitis, adverse food reaction, insect bite hypersensitivity;
- Neoplastic disease – cutaneous lymphoma.

These differential diagnoses need to be narrowed down using information derived from the history, the findings on physical examination, diagnostic tests (where necessary), and response to treatment. Basic sampling methods and diagnostic tests, which may be required to rule out most of the common differentials are: flea-combing, skin-scraping, hair-plucking and cytological examination of skin and ear samples. An elimination diet trial is required to rule out an adverse food reaction.

If pruritus is still present after all of the above have been completed, a clinical diagnosis of CAD should be considered.

2. Detailed interpretation of the historical and clinical features of the condition. A new tool to assist with interpretation of these findings is the application of clinical criteria known as Favrot's criteria.

The initial clinical feature of CAD is pruritus, which can include scratching, rubbing, chewing, excessive grooming or licking, scooting, and/or head shaking. Depending on the

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allergens involved, the pruritus may be seasonal or non-seasonal. At the beginning, the pruritus may be alesional or associated with primary skin lesions such as erythema and occasionally papules. In more chronic cases, secondary skin lesions will occur due to self-trauma, chronic inflammation and secondary infections. Typical secondary skin lesions are excoriations, alopecia, lichenification, hyperpigmentation, crusting, and seborrhoea.

Favrot's criteria[2] are a set of clinical criteria that have been developed from a large case series of confirmed cases of CAD. These criteria are used to evaluate the probability of the diagnosis of CAD. These should not be used alone for the diagnosis of CAD, and other pruritic skin diseases should be ruled out. The criteria are:

- Onset of signs under three years of age;
- Dogs living mostly indoors;
- Glucocorticoid-responsive pruritus;
- Alesional pruritus at onset;
- Affected front feet;
- Affected ear pinnae;
- Non-affected ear margins; and
- Non-affected dorso-lumbar area.

A combination of five satisfied criteria has a sensitivity of 85% and a specificity of 79% to differentiate dogs with AD from dogs with chronic or recurrent pruritus without AD. Adding a sixth fulfilled parameter increases the specificity to 89% but decreases the sensitivity to 58%.

3. Assessment of skin reactivity by intradermal testing (IDT) or detection of IgE by allergen-specific IgE serology (ASIS) testing.

This is traditionally referred to as allergy testing. Allergy testing can be performed by IDT and ASIS. Both tests are not recommended as screening tests and should only be used to confirm the clinical diagnosis of AD. Once a clinical diagnosis of CAD has been made, several factors may play a role in deciding whether an allergy test is necessary or not. These include the severity of the clinical signs, duration of clinical signs for more than three months per year, and insufficient management with symptomatic therapy. The results of these tests are used to identify the offending allergen(s) in order to formulate an allergen-specific immunotherapy (ASIT).

Both testing methods are very different and not standardised, which inevitably results in a poor correlation between both tests. Nonetheless, the success rate of ASIT based on ASIS versus IDT is not significantly different.

TREATMENT

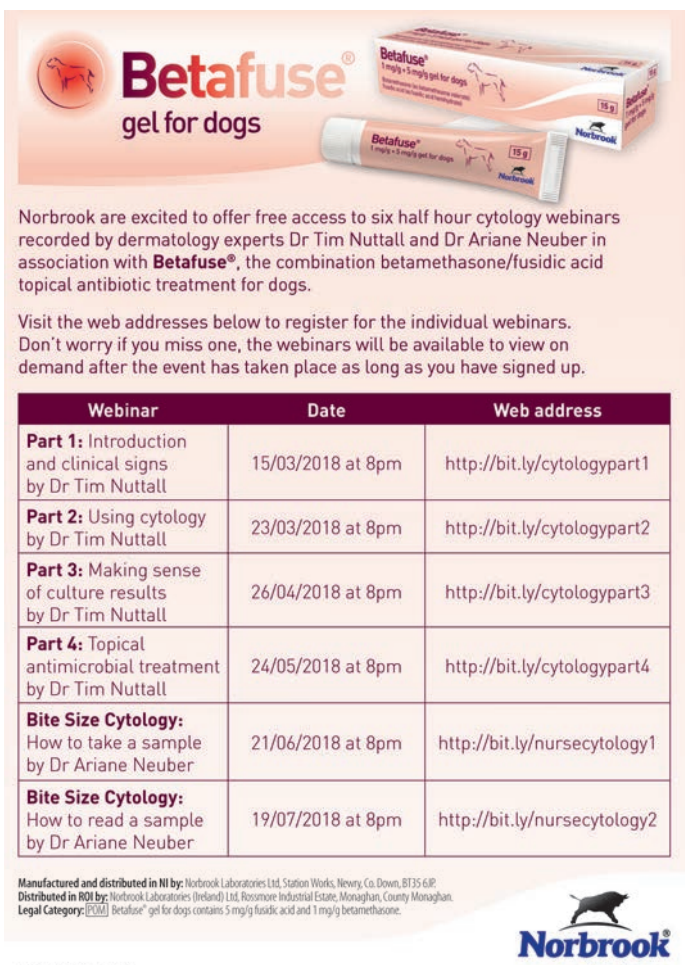
In 2010, the International Task Force on Canine Atopic Dermatitis (now ICADA) published the first consensus guidelines for the treatment of canine AD. A minor update was published by ICADA in 2015. The guidelines distinguish between the treatment of acute flares of AD and chronic AD. Both papers are accessible free of charge at www.icada.org, and are summarised below.

The treatment of acute flares of AD should involve the search for, and then elimination of, the cause of the flares, bathing with mild shampoos, and controlling pruritus and skin lesions with interventions that include topical and/or oral glucocorticoids or oclacitinib. For chronic CAD, the first steps in management are the identification and avoidance of flare factors, as well as ensuring that there is adequate skin and coat hygiene and care. This might include more frequent bathing and possibly increasing essential fatty acid intake. The medications currently most effective in reducing chronic pruritus and skin lesions are topical and oral glucocorticoids, oral ciclosporin, oral oclacitinib, and where available, injectable recombinant interferons. Allergen-specific immunotherapy (ASIT) and proactive intermittent topical glucocorticoid applications are the only interventions likely to prevent, or delay, the recurrence of flares of AD.

NEW TREATMENT

Lokivetmab (Cytopoint, Zoetis) is the first monoclonal antibody therapy approved for the EU veterinary market. Lokivetmab is an injectable anti-canine IL-31 monoclonal antibody to treat clinical manifestations of AD in dogs, and is administered once monthly by subcutaneous injection. It is a highly-targeted therapy that provides rapid and long-lasting relief from pruritus. Studies have shown it to be safe and effective, with no known drug interactions, and it may be used in dogs with comorbidities.

REFERENCES ON REQUEST



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