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WHAT'S NEW IN THERAPY FOR ATOPIC DERMATITIS?

Canine atopic dermatitis (cAD) is a multifactorial disease, in which a genetic base, a defective skin barrier, an imbalanced immune system and increased susceptibility for secondary infections play a role. Hence, a multimodal approach is required for successful treatment. The current theory for the pathogenesis is that complex immunological reactions are triggered upon penetration of environmental allergens through the cutaneous barrier. Many different cytokines are released resulting in cutaneous inflammation. Pruritogenic compounds as cytokines and chemokines further stimulate neuronal mechanisms and initiate pruritus, the major symptom of canine atopic dermatitis.

The only current specific treatment is allergen-specific immunotherapy. However, allergen-specific immunotherapy requires several months to have a therapeutic effect. A need for instant itch-relief without severe side effects has led to the more recent development of therapies that can better target pruritus mechanisms and control clinical signs in cAD.

Oclacitinib (Apoquel®) is a selective janus kinase (JAK) inhibitor with activity against predominantly JAK-1-cytokines. It has both antipruritic and anti-inflammatory properties, which reduces levels of the pro-inflammatory cytokines interleukin (IL)-2, IL-4, IL-6 and IL-13, as well as inhibiting activity of IL-31, known as the pruritogenic cytokine.

Lokivetmab (Cytopoint®) is a caninized monoclonal antibody that binds specifically circulating IL-31. By binding of this pruritogenic cytokine, it inhibits binding of IL-31 to the cytokine receptor and prevents the neuronal transmission of the sensation of pruritus.
In addition, it has been found that neutralization of IL-31 has both an antipruritic and anti-inflammatory effect in cAD.

This lecture will discuss how these relatively new therapies can be used in dogs with atopic dermatitis from an immunological and practical view.

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