Feline Atopic Dermatitis

By Sara Anderson

Feline Atopic Dermatitis, also known as “Atopy” is an environmental allergy of the skin. This allergy can be initiated several ways, including inhalation or ingestion of allergens as well as contact of allergens through the skin. It can present both seasonally or non-seasonally. Most cases of Atopy in cats usually present with clinical signs between 6 months -5 years of age. Purebred cats may be at a higher risk for development of Atopy.

How do cats develop this allergy? The pathogenesis of Atopy in cats is less understood than dogs, but thought to have a similar mechanism. When a cat is exposed to allergens, such as house dust mites, pollen, or mold, the allergens are taken up by antigen presenting cells within the body and travel to the lymph nodes where they activate T-cells of the immune system. The T-cells then produce cytokines (IL-4, IL-13, IL-31) and antigen specific IgE which travel to the skin and cause inflammation and itch. Why this only happens in certain cats and not all, is likely due to genetics and the history of previous exposure to allergens. This is the same concept as to why some people have specific allergies and others do not.

Cats usually present with complaints of excessive overgrooming, which can often be a sign of pruritis (itchy skin). Excessive grooming commonly causes self-induced loss of hair. Atopy can also present with specific lesions associated with Eosinophilic granuloma complex, mililiary dermatitis, or the presence of subcutaneous plaques.

In order to diagnose feline atopy, other potential causes need to be ruled out. This includes; flea allergy dermatitis, superficial mites, and food allergies. To rule these out, flea prevention should be applied and coverage should last at least 6 weeks. Improvement in clinical signs would be seen during this time if fleas were the inciting cause. To rule out food allergies a food trial can be started with prescription food containing a novel protein and should last 10-12 weeks. Additional diagnostic should also be performed to determine if superficial mites are present. A intradermal allergen test is typically performed in dogs to diagnose the specific environmental allergens that cause atopy in each individual patient, though this test is not commonly done in cats. The results in cats are typically more subtle and difficult to interpret. Therefore the diagnosis is usually by exclusion of other causes.
Treatment for Atopy is usually targeted to decrease the immune response causing the pruritis. This is done with immunosuppressive therapy’s such as Glucocorticoids (steroids), and Cyclosporine. Other treatments include; antihistamines, fatty acid supplementation to repair the skin barrier, and avoidance of the allergens. Glucocorticoids are not considered the best treatment as they have many side effects (Polydipsia, panting, weight gain, secondary infections, muscle wasting/ weakness, GI ulcers) and can potentially cause insulin resistance (diabetes) in cats at high doses, therefore this is not recommended as a long term treatment for Atopic dermatitis. Cyclosporine inhibits T-cell function which decreases production of the cytokines (IL-4, IL-13, IL-31) involved in causing itch and inflammation. This is the more common choice of treatment for cats as it has fewer side effects then Glucocorticoids. This medication should be lowered to the lowest effective dose as it does suppress the immune system, which could cause susceptibility to secondary infections. Additional therapy may be added, such as antihistamines, to lower the dose of Cyclosporine needed. Environmental changes could be tried, including hypoallergenic pillow, bed, and couch covers, changing home air filters frequently and dry carpet cleanings to decrease dust and mold. Atopy is a lifelong condition that is never fully cured, though it may be able to subside if seasonal, medication is still usually required to decrease clinical signs.

In conclusion, Atopic dermatitis in cats can be frustrating for owners as well as Veterinarians and requires diagnosis by exclusion. This allergy is usually life long, and may subside in certain seasons. Medications such as immunosuppressives and antihistamines are used to control the pruritic symptoms of Atopic dermatitis.

References:


