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## Allergic Dermatitis

Just like people, dogs and cats can suffer from allergies. The exact cause is unknown but it is thought that both genetic and environmental factors are involved. Animals with allergic dermatitis are thought to have problems with the outer barrier of their skin which allows 'allergens' to penetrate the skin and cause an allergic response. An allergen is something that causes an allergic reaction.

The majority of animals are allergic to more than one thing, each contributing to the symptoms we see. Exposure to a single allergen may be insufficient to cause dermatitis, however the effect of small amounts of multiple allergens can add together and cause dermatitis.

Skin allergies in dogs and cats can be due to parasites (especially fleas), environmental allergens for example grasses and dust mites or food. Food can be involved either alone or in combination with other allergies.

Allergic dermatitis is a common condition in dogs and there is no guaranteed 'cure', ongoing management is very important in order to control clinical signs. Allergic dermatitis is less common in cats, however appears to be increasing. The most common allergens are house dust mites, pollens and grasses. Allergic dermatitis leads to variety of clinical signs including generalised itchy skin, foot chewing, facial rubbing and ear problems.

Allergies cannot be cured and usually require some form of lifelong treatment. Management is achieved by

- 1) Controlling exposure to allergens
- 2) Therapy to control the immune reaction and therefore itch and inflammation
- 3) Therapy to control secondary bacteria, yeast and flea prevention

## **Controlling Exposure to Allergens**

Completely avoiding the exposure to allergens other than food is almost impossible, however reduction of the amount of certain allergens in the environment is possible. Reducing exposure can reduce the degree of dermatitis and therefore reduce the amount of treatment necessary

- As dust mites are the most common cause of allergies in the UK, avoidance where possible is key. When vacuuming and dusting keep your dog outside or remove them from the room during and ideally for two hours after. If possible your dog should be kept in an un-carpeted room and not in your own bed- as your bed often has the highest concentration of dust mites in the home! Wash the dogs bedding weekly. A dehumidifier also reduces the amount of house dust mites
- Don't allow your dog to lie on freshly cut grass. It may be worthwhile looking at your dog's skin before and after contact with grass to determine whether the condition is affected by contact with grass. Avoid cut flowers indoors.
- Regular washing/shampooing removes allergens from the surface of the skin
- Storage mites are also a common allergen, they feed on flour, grains and seeds. Management of your dog's food can help reduce exposure. Empty the food from its original package and store in a resalable plastic container and discard the dust at the bottom of the packet. Keep the food in dry/cool conditions

 Diet- you may be asked to consider a diet trial as part of the investigation of allergies. It is important to continue this for a minimum of 6 weeks and to feed only the prescribed diet-so no treats!

These management options may not control the dermatitis alone however they should reduce the amount of control therapy required.

Often a combination of treatments are required to control the itch and secondary infections.

## Therapy to control the immune reaction, itch and inflammation

- o Immunotherapy- This involves identifying allergens by either a blood test or intra-dermal skin testing and having a specific vaccine made. It works by gradually building up immunity/tolerance to the specific allergens that are causing the allergic reaction. Immunotherapy is very safe and is effective in up to 70% of cases. If the therapy works then it is usually life long monthly injections.
- Cytopoint (lokivetmab)- A monoclonal antibody. An injection given every 4-8 weeks to control the itch associated with allergies. The data suggests this drug is very safe.
- Apoquel (oclacitinib)- Directly blocks activation of nerves responsible for itch. Side effects appear to be minimal
- Steriods- Very effective in controlling allergic dermatitis however they have potential side effects when used long term. The side effects are reduced when given on an every other day or every third day basis. We can also use topical steroids in spray (Cortavance) and gel (isaderm) formulations
- Atopica (Cyclosporine)- Modifies the component of the immune system involved in the development of allergies. It is relatively safe over a long period of time but expensive. The main side effects are vomiting, diarrhoea.
- Antihistamines- those available are not licensed in veterinary species and only have a beneficial effect on a very small number of dogs.
- <u>Essential fatty acids dietary supplement</u>- They come in liquids or capsules and are used to improve the outer barrier of the skin, which is thought to be faulty in dogs with allergic dermatitis

## Therapy to control secondary bacteria, yeast and flea prevention

- Shampoos and topical skin care- With allergic dermatitis inflammation of the skin results in excessive growth of normal skin bacteria and/or yeasts (malassezia). This often leads to itchy skin. Recurrent infections can be prevented by regular shampooing with a suitable shampoo. Foams and wipes are also available for this purpose when shampooing is difficult
- Tablets for bacteria and yeast- In some cases topical therapy is insufficient to bring bacterial and yeast infections under control and courses of tablets are required. Occasionally malassezia infection requires tablets in addition to shampooing. We may use antifungal tablets on two consecutive days of the week to control malassezia skin infection including those involved with the ear.
- Flea control- Many patients will develop an allergic reaction to flea bites. It is important to have a good flea control program. There are numerous products available for this