



Dr Mark Craig

Auto-immune skin disorders in dogs

Dr Mark Craig has specialised in veterinary dermatology since 1995 – treating animals (from dogs to hippos!) with challenging skin disorders and carrying out research. He is a member of the Raw Feeding Veterinary Society.

We hear a lot these days about auto-immune disorders, and their incidence in people is said to be skyrocketing. But what actually are they, and do they occur in dogs? Auto-immune disorders are disorders of the immune system, a complex network of cells and proteins which should protect against infection by micro-organisms like viruses, bacteria, fungi and parasites. Like people, all dogs have an immune system, and yes, auto-immune disorders do occur in dogs. Unlike allergies, which involve reactions to external objects, such as house dust mites, pollens, moulds, and insects, auto-immune disorders ('auto' meaning 'self') occur when the immune system attacks parts of the dog's own body, which may or may not include the skin. How common are these auto-immune skin disorders in dogs? The short answer is we don't know precisely. Nor do we know for sure whether their incidence is growing. Fortunately, they are much less common than skin allergies, but when they occur, they can have very serious consequences.

Pemphigus foliaceus (PF)

The most common auto-immune skin disorder in the dog is pemphigus foliaceus (PF). The word pemphigus is derived from Greek, meaning pustule. Foliaceus means leaf-like. PF, first reported in dogs in 1977, occurs when the immune system no longer tolerates specific parts of the skin. It is believed that certain factors may influence the development of PF.

Age, breed and sex

Most cases of PF occur in middle-aged or older dogs, but the condition may occur in any age of dog. Any breed is susceptible although some reports have suggested that PF occurs more frequently in English bulldogs, Chow chows, Akitas, Dachshunds, Cocker spaniels and Labrador-retrievers. Although one study showed more male dogs to be affected than bitches, there is no proof of a link between the sex of a dog and its likelihood of developing PF.

Drugs

In people, drugs are a recognised trigger for PF, and there are reports describing a link between drugs and PF-like signs in dogs. Any drug could potentially be a trigger in a susceptible dog, but suspected reactions to certain flea-control products, other anti-parasitic agents, and antibiotics have been reported.

Skin allergies

Older dogs with a history of skin allergies may be more prone to PF. This may be because immune system problems tend to worsen in older dogs, or it may be due to the influence on the immune system of all the drugs these dogs have received.

Environment

Some people think environmental triggers are important. Diet has been implicated in human pemphigus and there are suggestions that the same may be true for our canine friends. Some studies have found that the effects of PF are worse in the summer. However, in other studies, investigators saw no such seasonal differences. Other triggers for PF in people include insects, viruses, heat and humidity. We don't know if the same may be true in dogs.

What are the signs of pemphigus foliaceus in a dog?

Large, red spots and pustules erupt, although pustules quickly break up and become covered in crust. With time, large amounts of crust appear,

sometimes in specific areas such as the head, ears and feet, or sometimes more generally across the body. Hair often falls out, and the skin becomes ulcerated. Unlike most dogs with allergies, dogs with PF are often lethargic and depressed, and run a high temperature. In some dogs, the condition is painful and itchy, but this varies from dog to dog.

Tests for pemphigus foliaceus

If we suspect PF, we can take biopsies to look for certain changes in the skin.

What is the prognosis?

The prognosis for PF is not good, unless the trigger(s) can be identified and avoided, and even then, the immune system may take some persuading to revert back to its former healthy state. Although the condition resolves spontaneously in some dogs, it typically worsens with time, becoming less amenable to therapy. Some dogs cannot tolerate the side-effects of the drugs used in treatment.

How can we treat dogs with pemphigus foliaceus?

Ideally, we should look for, and avoid, possible triggers including flea control products. In view of the association of diet with some cases of human pemphigus, we should consider changing the diet, possibly to one based on raw meaty bones if appropriate for both owner and patient. Raw meaty bone-based diets, high in protein, low in carbohydrate and additives, are probably the diets that most closely resemble the canine ancestral diet, on which dogs have evolved over millions of years. Fresh, complete foods or 'hypoallergenic' diets may also be appropriate.

Steroids, used to dampen down the immune system, are often very helpful in rapidly controlling the skin lesions, and making the dog happier and more comfortable. However, the dose needed is often high and there can be side-effects. Dogs on steroids will often eat and drink more; develop liver, heart, bladder or kidney problems, hormonal changes, behavioural and temperament fluctuations, diarrhoea, pancreatitis, panting, and weight gain. They may also become more prone to infections. As in people, the nature and severity of side-effects vary considerably. Vitamin B3, either given alone or with other medications, is helpful in some dogs with PF.

Three other auto-immune conditions

Other forms of pemphigus

There are other forms of pemphigus occasionally seen in dogs, but these are very rare.

Lupus

Lupus is another type of auto-immune condition, seen in both people and dogs. The term lupus (meaning wolf) was used by a thirteenth-century doctor to describe erosive, facial lesions reminiscent of a wolf's bite. In discoid lupus erythematosus (DLE), the most common form of lupus, affected dogs develop a dry red nose with scale, crust, and loss of pigment. The condition, sometimes called 'collie nose', is often made worse by exposure to sunlight. Dogs typically remain well in themselves, unlike in systemic lupus erythematosus (SLE), in which dogs are often severely, systemically ill. Although steroid tablets are sometimes needed, DLE can often be successfully managed by avoiding sunlight, and giving vitamins, omega 3/6 combinations of essential fatty acids, and topical creams and gels.

Alopecia areata

Alopecia areata is an uncommon disorder in which hair falls out for no apparent reason. In about 60% of affected dogs, hair will regrow without treatment.

In conclusion

Although auto-immune conditions are often suspected by worried owners of dogs with skin problems, they are fortunately uncommon, and some are extremely rare. If you suspect an auto-immune condition, you should discuss it with your vet who may feel it appropriate to refer your dog to a veterinary dermatologist.

Dr Mark Craig, who is registered on the Royal College of Veterinary Surgeons list of Advanced Veterinary Practitioners for Small Animal Dermatology, can be reached via his practice: www.refurall-referrals.co.uk