

CANINE AUTOIMMUNE MEDIATED DISEASE

'AWARENESS GUIDELINES'

What is the difference between a 'weak' or 'defective' immune system and one that causes an autoimmune reaction?

- A weak or defective immune system fails to protect the body, leaving it vulnerable and open to attack by an opportunistic infection.
- A dog with an autoimmune disease does not have a 'weakened' immune system. On the contrary, it works extremely well - but what it does have is a confused one, whereby it begins to attack and reject the body's own tissue as foreign.

What are the causes of autoimmune diseases?

- We simply don't know what causes the immune system to 'short circuit' and start rejecting normal body tissue. However, a number of 'trigger' factors are thought to be involved, including the following:
 - A genetic predisposition in certain breeds (including the English Springer Spaniel)
 - Multivalent modified live vaccines and some drugs (which can over stimulate the immune system)
 - Environmental pollutants (including food preservatives), poisonous substances & chemicals
 - Age (young to middle aged dogs are the most commonly affected)
 - Hormonal influences (particularly if a bitch is in season, in whelp or nursing puppies)
 - Stress - for example, fireworks, thunderstorms, separation anxiety, whelping, etc

What are some of the signs to look out for?

- Diarrhoea (intermittent or persistent, with no obvious other cause)
- Depression & lethargy & the look of premature ageing
- Skin irritation or sores, nail bed problems, mouth ulcers, nose or anal lesions
- Bruising and/or bleeding from gums, nose, bowel or bladder
- Excessive drinking/urinating
- High temperature
- Weakness in the legs, muscle wastage (especially on top of head)
- A tendency to lameness - limping (with no obvious other cause)
- Anaemia (pale gums, tongue and eye rims)
- Collapse
- Intermittent symptoms that can disappear & reappear
- Ongoing symptoms that even after treatment remain constant and unresolved

What are the most common autoimmune mediated diseases?

- Autoimmune Haemolytic Anaemia (AIHA or IMHA)
The body forms antibodies against its own red blood cells resulting in increased destruction of red blood cells which causes anaemia and sometimes jaundice. Common signs include listlessness, depression, unwillingness to exercise, or collapse.

To confirm the diagnosis, a Coombs blood test is usually carried out to look for red cell-bound antibodies. A negative result does not necessarily mean that the anaemic dog does not have AIHA, as the red cell destruction could be occurring in the bone marrow.

- **Immune-mediated Thrombocytopenia (IMTP)**

The body forms antibodies against its own blood platelets. When the platelet count drops very low, bleeding can occur, commonly seen as bruising within the skin or on the gums, or blood in the urine and/or faeces.

- **Autoimmune Thyroiditis**

Antibodies are produced that result in the invasion and destruction of thyroid tissue, causing a reduction in thyroid function. Symptoms include weight gain, lethargy, exercise intolerance, hair loss, mottled coat, dry flaky cool skin.

Your Vet should conduct a complete blood serum thyroid panel (T3, T4, free T3 and free T4), which is the only way to determine if the dog has a thyroid deficiency problem.

- **Addison's Disease (Hypoadrenocorticism)**

This is an insufficient production of adrenal hormones by the adrenal gland. Since these hormones are essential for life, this is an extremely serious disease and must be treated as such.

Initial symptoms can include stomach disturbances such as vomiting. Poor appetite can occur. Lethargy is also an early sign. These are pretty vague signs and it is extremely easy to miss this disease. More severe signs occur when the dog with the disease is stressed or when potassium levels in the blood get high enough to interfere with heart function. Dogs with this problem will sometimes suffer severe shock symptoms (known as a 'crisis') which can lead to a rapid death.

Diagnosis is made by carrying out an ACTH response test - administration of this hormone should stimulate production of adrenal hormones. If this does not occur, hypoadrenocorticism is present.

- **Immune Mediated Polyarthrititis (IMPA)**

This can be a primary autoimmune disease or part of a multi-systemic disease such as Systemic Lupus Erythematosus (SLE). It involves the synovial fluid in the joints of the dog, and diagnosis may be confirmed by joint fluid analysis.

- **Systemic Lupus Erythematosus (SLE)**

This is a multi-system autoimmune disease involving the skin, and which can also involve the heart, kidneys, or other autoimmune diseases such as IMPA, AIHA or IMTP (see above).

- **Autoimmune Skin Disease**

There are many of these, and they can be either primary or secondary to other autoimmune diseases. Identification is by skin biopsy.

What treatment is available for autoimmune mediated diseases?

Most AI diseases are treated with very high doses of corticosteroids or other immunosuppressive drugs to lower the immune response. The type and duration of treatment will be based on each individual case. However, it is important to have a good support network around you, including your Vet as well as family and friends, as in many cases the 'management' of the disease can be the most difficult aspect to deal with for both dog and owner.

An organisation called C.I.M.D.A. (Canine Immune Mediated Disease Awareness) was set up some years ago in order to promote the awareness of autoimmune disease in dogs, and to give help and support to people whose dogs suffer from autoimmune disease.

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C.I.M.D.A.

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