

Hypoadrenocorticism or Addison's disease



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Hypoadrenocorticism or Addison's Disease

WHAT ARE THE ADRENAL GLANDS?

The adrenal glands are two small bean-shaped organs less than 1cm in height and width that are located next to each kidney in the abdomen. They produce several hormones, two of which are crucial for survival. These are glucocorticoids (cortisol) and mineralocorticoids (aldosterone). Glucocorticoids have many functions in ensuring you feel well. Cortisol is important for responding to stress, and it helps stimulate appetite and affect immune function and maintains a normal blood glucose. The main mineralocorticoid, aldosterone, is important for salt (electrolyte) concentrations in the body fluids, specifically sodium and potassium. Too much or too little of either glucocorticoids or mineralocorticoids causes serious medical problems.

WHAT IS HYPOADRENOCORTICISM?

Hypoadrenocorticism, also known as Addison's disease is sometimes called the great pretender as it can imitate all sorts of other diseases and therefore can be challenging to diagnose. This disease occurs when the adrenal glands produce too little of these important hormones (cortisol and aldosterone). In dogs and cats, it most often occurs when the body's own immune system attacks cells of the adrenal gland. The function of the immune system is normally to protect the body against foreign substances and organisms. In immune mediated disease the cells of the immune system cannot recognise 'self' from 'foreign' and start attacking cells from the individual's own body.

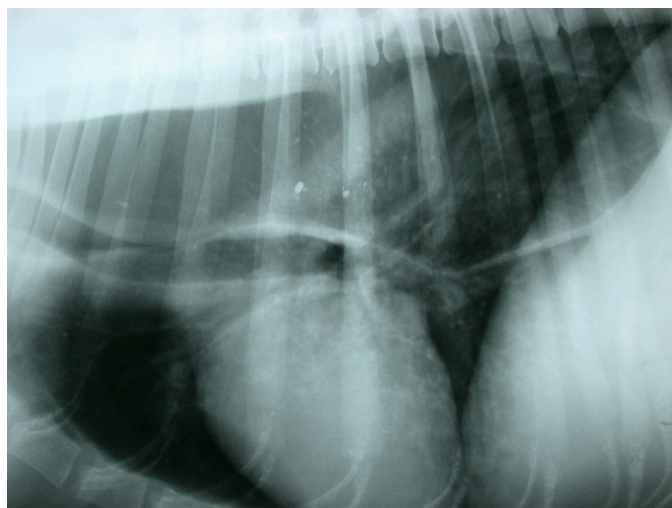
CLINICAL SIGNS

WHAT ARE THE SYMPTOMS OF HYPOADRENOCORTICISM?

Hypoadrenocorticism is uncommon in dogs and rare in cats. Dogs most often affected are young to middle-aged of any breed, however in some breeds it may be hereditary (Standard Poodle, Bearded Collie). Animals that have hypoadrenocorticism commonly lose their appetite, have vomiting or diarrhoea and they become lethargic and weak. Animals may have chronic waxing and waning clinical signs over a period of months or other animals may present in a crisis, critically unwell and in shock.

DIAGNOSIS, PROCEDURES AND TREATMENT

WHAT TESTS ARE NEEDED?



Because the symptoms are not specific for hypoadrenocorticism, and it is an uncommon disease, often a number of tests will need to be done to diagnose hypoadrenocorticism. It tends to mimic several other diseases such as kidney, liver and gastrointestinal disease. Blood work and abdominal imaging such as radiographs or ultrasound may be performed. Classic abnormalities are found on a blood biochemistry test, sodium is lower than normal, and potassium is higher than normal. Some animals may also have low glucose, high calcium, elevated kidney values and anaemia. These changes are suggestive but not specific to hypoadrenocorticism, however, to definitely diagnose your dog or cat with hypoadrenocorticism, another test called ACTH stimulation test needs to be performed. If the results of this test are typical for hypoadrenocorticism then the diagnosis is made. Some medications interfere with this test such as prednisolone tablets or topical steroid preparations, any drugs to lower cortisol levels

such as trilostane and some antifungals and anti-testosterone drugs. It is important to make sure the vet knows all the medications your pet has been treated with prior to making the diagnosis of hypoadrenocorticism.

WHAT TREATMENT IS AVAILABLE?

When pets are first seen by the vet for hypoadrenocorticism, they could be in a critical state and may need intensive care. Commonly intravenous fluids and other medications to rapidly lower the potassium. As high potassium can cause cardiac arrest. Your pet may require constant ECG monitoring until electrolytes are improved. The sodium needs to be slowly increased as rapid changes of this electrolyte can cause neurological problems. Several blood tests to check the level of electrolytes during this intensive phase of treatment are needed. Rarely dogs may also require a blood transfusion as bleeding into the intestines can occur after a crisis.



Not all animals are critical when diagnosed, some are quite stable and will not require intensive therapy and are managed as out patients.

However, all animals diagnosed with hypoadrenocorticism will require lifelong medication to replace the hormones they can no longer produce. Two methods of treatment exist, which one is chosen depends on what suits you and your pet the best.

1. Fludrocortisone tablets (Florinef) – these tablets contain both glucocorticoids and mineralocorticoids. Some animals also need extra glucocorticoids (prednisolone or cortate). Given once to twice daily.
2. Injections of Desoxycorticosterone pivalate (**Percorten or Zycortal**) injection once every 25 to 30 days. This injection just replaces mineralocorticoids, so your pet will also need to take a tablet daily to replace the glucorticoids (prednisolone)

In pets where we are having difficulty controlling electrolytes or they are drinking excessively the DOCP injections may be a better choice. Blood tests may be required weekly until the electrolytes are stabilised then periodic monitoring is required approximately every 3 to 6 months for the rest of the animal's life.



WHAT IS THE PROGNOSIS?

The prognosis is excellent once the crisis period is over. Hypoadrenocorticism is a disease that cannot be cured but it can be easily managed. Your pet will need lifelong medication, but most pets will live a very happy healthy life. Some adjustments of medications may be needed at times of stress ie going to kennels or needing surgery (usually a short-term increase in the glucocorticoids).

If you have any questions, please feel free to contact of the Specialist Surgeons at Veterinary Specialist Services.



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