Hypoadrenocorticism (Addisons) Client Handout

Explanation of the Disease

Hypoadrenocorticism is an insufficient production of the mineralocorticoid and glucocorticoid hormones produced by the adrenal glands, located near the kidneys.

Mineralocorticoids help control electrolyte balance within the body, such as potassium and sodium. Glucocorticoids control the body’s ability to deal with stress. A lack of these hormones results in a loss in ability to control electrolyte and water balance effectively and also affect the body’s response to stress.

Addisons disease is the result of either;

- Immune mediated or idiopathic (unknown) destruction of the adrenal gland.

OR

- A reduced production of ACTH, which is a hormone produced by the pituitary gland within the brain that is responsible for stimulating and controlling the production of mineralocorticoid and glucocorticoids hormones.

Clinical Symptoms

Addisons is most common in young to middle aged dogs. Females are over-represented and some breeds such as Standard Poodles and Bearded Collies may also be predisposed.

The signs of Addisons disease can be vague, often featuring intermittent episodes of vomiting and/or diarrhoea, as well as moderate to profound lethargy.

Diagnostic Procedures

To diagnose Addisons disease, a combination of tests are performed. Initially a thorough physical exam by the veterinarian and history is required and then this is often followed with a comprehensive blood test to assess internal organ function and rule out other possible causes of the clinical signs; such as diabetes, liver or kidney disease. An abdominal ultrasound can also be useful in assessing for changes within the adrenal glands and rule in or out an adrenal based tumour.

This is followed up with a more specialised blood test called an ACTH stimulation test. To perform the ACTH stimulation test your pet will require a day in hospital. During that day we take a baseline blood sample to check the resting cortisol level of your pet, and then we inject a medication called Synacthen and take another blood sample one hour later. Synacthen, like the true hormone ACTH produced by the brain, should stimulate cortisol production. In patients with Addisons disease they have low resting cortisol levels, as well as failure to increase cortisol production when given the Synacthen injection.

In addition to this test, we may also have to check the levels of your dog’s naturally occurring (endogenous) ACTH. A high ACTH is indicative of primary disease and low ACTH is indicative of secondary disease.
A diagnosis of Addison's disease will mean your dog requires life-long treatment. Initially depending on how stable the patient is, hospitalisation with intravenous fluid therapy, supplementation of glucocorticoids and monitoring blood tests are required. Ongoing treatment will require either oral supplementation or injections of glucocorticoid and mineralocorticoid.

**Monitoring Requirements**

1. You need to monitor your pet’s clinical signs at home. Should they get severe thirst and urination, lethargy, depression, weakness, poor appetite, regurgitation/vomiting or blood in the faeces you should seek veterinary advice immediately.

2. A balanced diet with adequate levels of sodium is required, we can recommend a prescription food that is suitable.

3. We need to perform weekly electrolyte blood tests on your pet until we are happy with their medication dosage.

4. Once stabilised, we should test the electrolytes once monthly for the first 3-6 months. Then following this blood tests to check electrolytes, CBC, liver and kidney enzymes should be repeated every 3-6 months.

5. A full health check is required every 6 months to ensure that your dog is stable and able to continue on medications.