



## **Cushings Disease**

### **What is Cushings disease?**

Cushings disease occurs when the hormones produced by the adrenal glands are secreted in excess. There are two causes of hyperadrenocorticism. The first cause occurs when the adrenal glands are diseased and are therefore overactive. The second cause of the disease occurs when the pituitary gland is diseased. This gland is responsible for sending a message to the adrenal glands telling them they need to release more hormones. If the pituitary gland is diseased then it may send too many messages to the adrenal glands so they release more hormones than required.

### **What causes Cushings disease?**

*Pituitary dependent:* This occurs in the majority of Cushings cases (80-85%) and is usually as a result of a benign pituitary tumour (adenoma) that causes both adrenal glands to enlarge and secrete a surplus amount of hormone into the body.

*Adrenal dependent:* This occurs when there is an adrenal tumour which secretes excessive amounts of hormone.

Approximately 50% of adrenal tumours are benign and 50% malignant.

### **Clinical signs**

- Drinking and urinating excessively
- Increased appetite
- Lethargy/weakness
- Excessive panting
- Pot belly
- Muscle atrophy
- Coat and skin changes

### **Diagnosis**

There are changes that occur on a routine blood and urine test giving a suspicion of Cushings however the use of more specific tests will be required. There are several tests used to diagnose Cushings and a minimum of two will be required to rule the disease in or out and also to decipher whether the disease is originating in the adrenal or pituitary gland. The tests will require the patient to stay with us for a couple of hours to a day in order to take a number of blood samples at specific intervals.

In a selection of cases it may be useful to image the abdomen using radiography and ultrasonography. This is particularly relevant to the less common, adrenal dependent form of Cushings disease.

### **Treatment**

The majority of dogs will suffer from pituitary dependent Cushings disease and this is effectively treated by a tablet which interferes with the synthesis of excess hormone from the adrenal gland. It is usually given once daily. Further monitoring with regular blood tests will be required with possible dose changes. Surgical removal of the pituitary gland tumour is not currently available in the UK and is not without great risk as it is technically very difficult.

For those few dogs suffering from an adrenal gland tumour surgical removal is the treatment of choice as they respond poorly to medical treatment and approximately 50% are malignant so they may spread within the body.



### **Monitoring and ongoing care**

Regular vet checks will be necessary to monitor your dog's progress, blood tests will be necessary to check your dog's levels regularly. During the stabilisation period or a change in medication dose, this will be more frequent. Once stable, this is generally once every 3 months. We can provide you with estimates of the ongoing cost to allow you to budget for this.

Always, keep a keen eye on your dog and make a note of any new or changing symptoms.

Never restrict your dog's access to water and make sure they always have somewhere to wee. It can take a few weeks for symptoms to subside and they may always drink and wee a little more than they used to. It will help your vet if you keep a water diary i.e. every 1-2 weeks, make a note of how much your dog drinks in a 24-hour period.

### **Prognosis**

With treatment:

If your dog responds well to treatment, their symptoms are likely to start improving within a few weeks and their outlook is very good. Many dogs with well-controlled Cushing's, live a relatively normal and happy life for many years.

Without treatment:

Some dog's with Cushing's disease live without treatment for some time, but tend to be happier and healthier with medication. Untreated dogs will eventually die often as a result of complications such as clots within the blood, infection, liver and kidney disease.

### **Prevention**

There isn't anything you can do to stop your dog developing Cushing's disease.