

CUSHINGS DISEASE

Cushings Disease or hyperadrenocorticism, to use the correct term, is more accurately described as a syndrome than a disease since it produces a much wider variety of signs or symptoms than are normally associated with any particular disease.

What is Cushings Syndrome?

It is a complicated condition caused by high circulating levels of cortisol (commonly known as cortisone) in the blood stream.

Cortisol, cortisone or corticosteroid are all names used to describe the principal hormone secreted by the outer part of the adrenal gland which is known as the cortex, hence the term hyperadrenocorticism, indicating over production from the adrenal cortex.

High levels of circulating cortisol can have multiple effects on the body, affecting many of the body's organs and systems. These can include kidneys, bladder, skin, as well as the reproductive, nervous and muscular skeletal systems.

Today Cushings Syndrome is recognised as one of the most common hormonal diseases of the dog.

What causes it?

Spontaneous over production of cortisol by the adrenal cortex can be due to two main causes.

1. Adrenal dependent hyperadrenocorticism (ADH)

Cortisol excess in these cases is caused by a tumour in the adrenal gland. ADH occurs more frequently in larger breeds of dogs and is most commonly seen in dogs of 11-12 years of age or older. ADH only accounts for 10-15% of all dogs with Cushings Syndrome.

2. Pituitary dependent hyperadrenocorticism (PDH).

Here the cause is over production of a hormone which controls the secretion of cortisol by the adrenal glands. This is adenocorticotrophic hormone, ACTH. Over production again is usually caused by a tumour, in this case in the pituitary gland. Altogether approximately 85% of all cases of Cushings Syndrome seen in dogs is due to PDH. It can be seen in quite young dogs.

Are any particular breeds more commonly affected?

Any dogs, including mongrels, can be affected. Poodles, Dachshunds, small Terriers, Boxers and Beagles have been reported to be at higher risk.

Does sex play a part?

Both dogs and bitches, whether neutered or entire, are equally at risk with PDH but adrenal tumours causing ADH appear to be more common in females.

What are the clinical signs?

The most common sign is usually increase in thirst and urination. Appetite also increases markedly. Other common signs include a pendulous

abdomen, hair loss, (often bilateral), lack of energy, muscle wastage and obesity. In addition to these there are many other signs that can become apparent, e.g. panting, pigmentation of areas of the body that have lost hair, and lack of sex drive. Some dogs are presented with hair loss and a paper thin skin. Frequently this is attributed to old age by their owners.

Are there any other causes?

PDH and ADH are the two known causes of spontaneous Cushings Syndrome. However iatrogenic Cushings can occur. This means that the excess of cortisone has resulted from excessive administration of the drug. This may occur as a result of medication for other conditions, e.g. chronic skin irritation over a long period. Usually the dose prescribed is well within the normal range. Unfortunately over time the effects of the corticosteroid on the body have become detrimental.

Administration need not only be by mouth or injection. Even cortisone containing ointments over a long period can result in iatrogenic Cushings Syndrome. This is due to absorption through the skin and the dog licking the ointment applied.

How is it diagnosed?

Cushings disease can be accurately diagnosed with a series of blood tests, the most important of which is the ACTH Stimulation Test

Is it possible to successfully treat the disease?

Yes. Depending on the cause, the disease can be successfully treated and controlled, if not cured.

What are the treatment options?

1. Iatrogenic Cushings Disease. Administration of cortisone for whatever medical reason has to be discontinued or at least drastically reduced. Unfortunately in some cases, e.g. intractable allergic conditions, this can result in recurrence of the original problem.
2. ADH. Some adrenal tumours are amenable to surgery. Although this is a complicated procedure and not without risk, if successful and the tumour is benign, there is a good chance that the dog will be cured of the problem.
3. PDH. For many years this condition has been treated with non-licensed drugs. Today there is a drug available that is licensed in the UK for the treatment of Cushings Syndrome.

It must be borne in mind that treatment with trilostane (Vetoryl) may have to be continued for life and regular monitoring (approximately every three months) will be necessary. Therefore treatment can be costly. Nevertheless effective control of the condition is now available using this licensed product.