

Hyperthyroidism in Cats.

Hyperthyroidism in cats is an extremely common condition, which usually affects older cats, although cases have been reported in cats as young as 8 months old. It is caused by benign hyperplasia (excessive growth) of one, or both, of the thyroid glands in the neck and is sometimes associated with extra thyroid tissue (ectopic thyroid tissue) in the chest.

Hyperthyroidism usually causes weight loss, a palpably enlarged thyroid gland, vomiting, a heart murmur and tachycardia (fast heart rate), although not all of these signs are necessarily present in every case.

Diagnosis is usually made by blood testing. We check thyroid level and general organ function. Sometimes cats with hyperthyroidism will also be suffering from concurrent Chronic Kidney Disease (CKD) and Hypertrophic Cardiomyopathy (HCM), which is a thickening of the heart muscle. HCM causes the heart murmur and tachycardia that we sometimes hear.

We will usually want to get blood pressure readings from your cat throughout treatment. 10-30% of hyperthyroid cats (even those successfully treated) will have hypertension and require medication to reduce blood pressure.

As well as blood pressure measurement, we will usually want to obtain a urine sample from your cat. Hyperthyroid cats have been shown to be more susceptible to urinary tract infections (UTIs). UTIs are associated with cystitis signs and are likely to be associated with signs similar to dementia, as may be seen in older human patients with UTIs. Our nurses can give you information on how to obtain a urine sample at home, although in many cases we will obtain this when your cat is admitted for blood pressure monitoring.

Regular monitoring of your cat's thyroid level, other organ function blood levels, blood pressure and urine samples are important throughout treatment to ensure that the treatment is working and that concurrent illnesses are diagnosed early.

Treatment

There is no single best treatment for Hyperthyroidism and management will depend upon a number of factors: ability to medicate, complicating factors such as concurrent disease, age of the cat and owner finances. Remember, we often have to treat concurrent disease such as hypertension and UTIs at the same time. The aim is to get the blood thyroid levels down into the bottom half of the reference range (the term for this is 'euthyroid').

Antithyroid medication.

These include drugs such as Felimazole, Vidalta and Methimazole gel.

Felimazole and Vidalta are licensed tablet medications for hyperthyroidism. They work by blocking the production of thyroid hormones. They are widely available,

rapidly effective (cats are usually euthyroid in 10-21 days), and cheaper in the short term, but they are not curative and so are required lifelong, which means there is a financial commitment for the life of your cat. Transient side effects, such as nausea and anorexia are relatively common (10% cats), but they often subside very quickly. Major side effects are rare. These include itching of the face and reduction of white blood cell count.

Methimazole gel is an off-license medication (it is not marketed by a drugs company), which is available for cats that cannot be tableted and cannot have other treatments. The gel is applied to the ear. Side effects are similar to oral medication, but it can also cause dermatitis in a small number of cases. Gloves must be worn when applying the gel so that you do not absorb the methimazole yourself.

With anti-thyroid medications we will need to routinely check your cat's thyroid levels with blood tests and monitor blood pressure, kidney levels and blood cell counts. The dose of medication used is likely to increase over time, as the diseased gland will still grow.

We start most cats on antithyroid medication even if other treatment options are being considered. This is so that we can monitor how cats respond to having a normal thyroid level. Sometimes the treatment of hyperthyroidism can unmask an underlying kidney problem, which will also need to be addressed.

Diet

Hills pet food company now offer a diet call Y/D, which contains no iodine. As the thyroid gland is the only area of the body that relies on iodine, an iodine-free diet can bring about euthyroidism. This management relies on your cat eating this diet and *nothing* else. This means it is restricted to single cat households (the diet is not suitable for healthy cats so it cannot be shared), it cannot be used in cats with concurrent CKD, if your cat won't eat it then it is no use and as cats can hunt outside, it means your cat needs to be kept indoors. Cats are usually euthyroid in 4-8 weeks when having this diet. Obviously the advantage of diet management is that your cat does not need to have drugs and so side effects are negligible.

Radioactive Iodine Therapy

Radioactive Iodine Therapy (RIT) is a treatment that has the potential to be curative and result in a permanent euthyroid state. The cure rate for radioactive iodine therapy is about 95%. Your cat will usually need to have started on antithyroid medication first in order to ensure that concurrent illnesses are not unmasked by a euthyroid state. RIT will treat disease in the thyroid glands and also any ectopic thyroid tissue in the chest.

The disadvantage of RIT is cost. It is a large up front expense (£2500-£3000). And cats need to be hospitalised for 2-4weeks and are only allowed to be handled by dedicated staff due to the radioactive substances used. Side effects are rare. Post-treatment hypothyroidism (low thyroid level) is theoretically a big risk, but cases of this are rare.

Surgery

Surgery also has the potential to be curative. Removal of the affected gland(s) can result in a permanent euthyroid state. We usually stage the removal of the glands (ie remove them in separate operations) due to the risk of damage to the parathyroid glands during the surgery. Damage to the parathyroid glands results in potentially life-threatening low calcium levels.

As with RIT we would normally start your cat on antithyroid medication to ensure that a euthyroid state does not unmask any concurrent diseases such as CKD.

Surgery is less expensive than RIT, but it will not treat ectopic thyroid tissue in the chest and so cure rate is not as high as RIT.

Other treatments:

Concurrent Chronic Kidney Disease (CKD) can occur with hyperthyroidism. Often CKD is masked by the overactive thyroid causing blood flow to be increased to the kidneys and forcing them to work harder. When treatment for hyperthyroidism begins the CKD becomes apparent. It is important to treat both conditions. Please see our separate leaflet on CKD

UTIs are treated with antibiotics.

Hypertension may require treatment with drugs such as amlodipine.

In summary, hyperthyroidism is a common disease of cats and one we are very used to managing. Different treatments are available and there is not one perfect treatment for all cats. You will need to consider all the factors outlined in this leaflet and discuss your cat's case with your vet, to determine the best course of action.

Please do not hesitate to contact us should you require any further information.