



Hyperthyroidism in cats Information sheet Martin and Carr T N Carr

What is hyperthyroid disease?

The thyroid glands produce a hormone called thyroxine. Thyroxine is a body clock regulator, the more you have, the faster the metabolism.

Occasionally the thyroid glands go wrong and over produce this hormone. This over production gives rise to the condition of hyperthyroidism.

What causes hyperthyroidism?

It is usually caused by a benign tumour (adenoma) of the thyroid gland.

Who are affected?

Usually we see middle aged and older cats affected.

What are the symptoms?

Symptoms most commonly seen:

- Weight loss despite a good appetite. Indeed some cats display an excessive appetite.
- The heart beat may be faster than normal, and irregular
- Occasionally a small mass may be felt in the neck
- Agitation. Over activity.
- Excessive vocalisation

Symptoms continued:

- Sometimes gastrointestinal upset ,for example diarrhoea

How is hyperthyroidism diagnosed?

Usually a blood test is taken to exclude other conditions that may mimic hyperthyroidism,namely diabetes and kidney failure.

The definitive test for hyperthyroidism is a measurement of the hormone T4(thyroxine).

If this is higher than normal (normal around 30 to 50 mmol/l) then a diagnosis of hyperthyroidism is confirmed.

Why should you treat hyperthyroidism?

Left untreated the symptoms get much worse.Hyperthyroidism also predisposes cats to high blood pressure that can in turn lead to kidney failure and blindness.We can measure blood pressure using a Cardell Blood Pressure Monitor.

What are the treatment options?

Basically the condition can be managed either with tablets and regular blood tests,or alternatively tablets to stabilise the patient followed by a surgery.

- Medical therapy

If the patient is easy to tablet and the owner is happy to give tablets for the rest of its life then this is an option.The dose of tablets needed varies from patient to patient, and normally blood tests are offered at three weeks after starting the medicine and then at regular intervals after this.Usually every three months is sufficient, however if the symptoms seem to be changing then it is better to test the Thyroid hormone again to see if there has been a deterioration in the condition.

Ideally blood tests for monitoring should be taken between four and six hours after the medication ,but with the newer once daily medications available(videlta) this is less of an issue.

Some patients with hyperthyroidism have concurrent heart disease caused by the excess thyroid hormone in the system.These patients may also be given a beta blocker.

If high blood pressure is suspected ,tablets to reduce this may also be suggested.The common drug we use is amlodipine.This is a human drug and if you need to use it we will normally ask you to sign an off licence acceptance form.

- Surgical therapy

Usually it is advisable to treat medically first to bring the thyroid hormone levels down to more reasonable levels. The reason for this is to make the heart more stable, to allow a safer anaesthetic. Three weeks of medical treatment is usually enough but the best plan is to treat with tablets then do a blood test to ensure the thyroid hormone level has improved.

There are then TWO options surgically.

Surgical treatment continued:

Unilateral thyroidectomy

The thyroid gland consists of a left and right side (lobe).

Commonly with hyperthyroidism only one half of the thyroid is diseased. This side is usually larger and once the cat is anaesthetised it is easy to locate the diseased side.

With a unilateral procedure just this side is removed.

Closely associated with each lobe of the thyroid is the parathyroid gland. The parathyroid gland controls the calcium level in the body. The aim of surgery is to leave the parathyroid behind but commonly this gland may be bruised at surgery and compromised for some days. IF both thyroid lobes are removed at one surgery there is a post operative risk of hypocalcaemia which can cause fits, and needs to be treated with intravenous calcium .

Doing a unilateral thyroidectomy means that even if you have to come back and do the other side either months or years later the first side's parathyroid has had chance to recover and post operative hypocalcaemia is much less likely (still not impossible though!)

A good proportion of cats (>50%) will never need any further surgery.

Bilateral thyroidectomy

Some vets prefer to remove both sides of the thyroid in ONE operation. The advantage of this is obviously the hyperthyroidism cannot return in the contra lateral gland as it is not there. The major disadvantage in my opinion is the increased risk of developing post operative hypocalcaemia (low blood calcium).

If post operative hypocalcaemia does occur it is treatable and eventually those patients affected stabilise and regain control of their calcium levels though this can sometimes take some weeks.

Are there any surgical complications?

Usually thyroidectomies go very well. The commonest post operative complication is hypocalcaemia (low blood calcium). This complication is all but eliminated by doing a unilateral approach, but can still be seen at a second surgery.

Surgery continued

As with all surgery wound infections can occur post operatively, though these are probably less than 1% of cases, and will respond to antibiotics.

Some cats scratch at their stitches and this must be discouraged, as these cats are more likely to develop a wound infection.

A rare but recognised complication is damage to the recurrent laryngeal nerve. The recurrent laryngeal nerve runs past the larynx near the position of the thyroid glands. It supplies the larynx (voice box) and on rare occasions should it be damaged or bruised in surgery, the larynx can be affected. This complication probably affects less than 0.5% of cases.

There are a very small percentage of cats that can remain hyperthyroid despite having both sides of the thyroid gland removed. In these cases it is likely ectopic (rare misplaced extra thyroid tissue) is present.

These cases usually continue to respond if treated medically.

- Radioactive iodine

Some universities now offer radioactive iodine treatment. This is when radioactive iodine is injected into the patient and the radioactive iodine concentrates in the thyroid gland acting as radiotherapy to destroy the abnormal thyroid tissue. This is likely to become the treatment of the future but ionising radiation regulations and health and safety make it unlikely this will become common place in general veterinary practice.