



UNIVERSITY OF SASKATCHEWAN

Veterinary Medical Centre

WESTERN COLLEGE OF VETERINARY MEDICINE
USASK.CA/VMC

Hyperthyroidism in Cats: Information for Referring Veterinarians

Cost

Please contact the WCVM Small Animal Clinic at 306-966-7126 and ask for a quote that details the approximate cost of treatment (without complications). If the cat has other concurrent problems that require intensive therapy (such as diabetes or heart failure), the bill will be higher. Courier charges to and from the airport are not included in the quote.

Anti-thyroid drugs

Studies show that methimazole (Tapazole) administration does not interfere with radioactive iodine treatment. If you feel that a cat would benefit from treatment with antithyroid medication prior to referral for radioactive iodine treatment, that is not a problem. Oral and topical medication can be discontinued one week before treatment. If the patient is being fed Hill's Prescription Diet y/d, please discontinue using this pet food two weeks before treatment. We will discontinue the anti-thyroid medication when the cat is admitted to this hospital (usually three to four days prior to the actual radioactive iodine treatment).

We ask clients to give us a deposit (\$800) at the time their cat is admitted. We bill them for the remaining charges at the time of hospital discharge. We do not offer in-house credit arrangements or payment plans.

Q. What tests are conducted at the WCVM Veterinary Medical Centre?

All hyperthyroid cats that come to the WCVM Veterinary Medical Centre will have the following diagnostic tests performed:

- physical examination
- complete blood count (CBC)
- serum biochemistry profile
- resting T4
- electrocardiogram (ECG)
- chest radiographs
- blood pressure

Other studies (cardiac ultrasound, urine culture, abdominal ultrasound) may be performed if the attending clinician considers that the tests are warranted based on the patient's history, physical findings or initial testing results at an additional cost.

Q. Who cares for the cat?

The cat is admitted to the hospital as a medical case and will be under the care of a Small Animal Medicine clinician. The cat will be examined and the appropriate diagnostic testing performed to make certain that the cat is a good candidate for radioactive iodine therapy.

If the cat is a suitable candidate for this therapy, then the radioactive iodine dose will be administered orally or subcutaneously and the cat will be moved to our special ward for radioactive hyperthyroid cats.

While staying in the special ward, the cat will be under the direct care of trained veterinary students who look after all of the cat's needs. The cats are cleaned, watered and fed twice a day and medications are administered as required. The students also find time to groom and pet the cats who appreciate this kind of attention.

The students immediately notify the clinician in charge of the ward if there are any medical problems with any of the cats. The students also call the owners at least once a day to let them know how their cats are doing after treatment. If there are problems with a cat while it is at the WCVM, the owners are notified immediately by the clinician in charge.

Most hyperthyroid cats are older (average age 12 years) and owners are concerned that they won't do well during their period of hospitalization. We have treated approximately 450 cats over the past years and our experience is that these cats do very well in our hospital.

That being said, it is very important to us that these cats eat while they are staying at the WCVM hospital. We encourage owners to send along a special or favourite diet if their cat is very nervous or is a picky eater. If we can not convince a cat to eat in the days preceding the planned treatment, we will not treat it and we will send it home.

This is one reason (in addition to the pre-treatment testing) that we request cats arrive at our hospital two to four days before the planned treatment: we want the cats to get a chance to acclimatize, relax and start to eat in our hospital.

Arranging referral to the WCVM

Cats are treated in "batches" to minimize the costs associated with the treatment, care and housing of the cats. We can treat five to six cats at a time.

The WCVM small animal medicine liaison will be able to give you an estimate of where a cat is on the waiting list and how long it is likely to be before the cat can be accepted for treatment.

To place a cat on the waiting list, please submit an online medicine referral. We will then call the client directly two to three weeks prior to the scheduled treatment to arrange hospital admission.

Medical considerations

When the cat is sent to the WCVM for treatment, please forward a brief summary of the cat's medical history and the results of any recent laboratory tests. You can send this information along with the cat or please fax it to 306-966-7156. The summary should include an assessment of renal function (urea or BUN, creatinine, urine specific gravity), a serum T4, and the details of any treatment administered.

We will not accept "sick" cats for treatment. Medically unstable cats have a much greater likelihood of complications compared with stable cats. The referring veterinarian must ensure that the cat is fit for travel (if it has to be transported by plane or driven to the hospital) and that it can withstand the stress of examination and hospitalization.

Hyperthyroidism and chronic renal failure are both common disorders in older cats. We know that GFR decreases with successful treatment of hyperthyroidism in most cats regardless of the therapy used (medical, surgical, radioactive iodine). In cats with pre-existing renal dysfunction, the deterioration in GFR that accompanied resolution of hyperthyroidism can result in symptomatic renal failure.

For this reason we ask that referring veterinarians try to carefully evaluate kidney function in cats before sending them here for radioactive iodine treatment. If there is evidence of pre-existing significant kidney dysfunction we recommend that treatment with a permanent treatment such as radioactive iodine be delayed while medical treatment of the hyperthyroidism is attempted with reversible antithyroid drugs (methimazole) for a few months.

If renal function is stable when the cat is maintained at a euthyroid state for one to two months, then it is a good candidate for radioactive iodine therapy.

The treatment process

On the morning of treatment, the cat will be moved to our isolation ward. This small ward, which contains large cages, is located in a separate area of the Small Animal Clinic building. It is a nice, quiet room. The cats are housed individually and have no contact with other cats during their hospitalization.

Each cat receives a fixed low dose of radioactive iodine orally or subcutaneously. If we have reason to suspect thyroid carcinoma instead of adenomatous hyperplasia in a cat (lung metastases visible on thoracic radiographs or failure to respond to initial treatment), then we treat with a high dose intended to ablate all thyroid tissue. There is no pain or anxiety associated with the treatment and we have not noticed any side effects in the treated cats.

Length of stay

Most cats stay at the WCVM Veterinary Medical Centre for approximately 10 to 14 days. This includes two to four days before treatment and approximately five to 10 days after treatment.

Radiation safety regulations mandate that we must keep cats until their level of radioactivity reaches an acceptable level. We will use a Geiger counter to measure the amount of radioactivity left within each cat beginning seven days after treatment with radioactive iodine. Once the degree of radioactivity measured over the thyroid gland has diminished to a certain level, we know that there is no longer any radioactive iodine being excreted in the urine or saliva. As a result, exposure to the cat should pose no risk to humans or other pets.

When owners take their cat home, they will be asked to follow radiation safety guidelines for two weeks (wearing gloves to change the litter box, not sleeping with the cat). If the owners feel that they are unable to follow those guidelines or they feel uneasy with the very low potential for exposure, we are willing to keep the cats for that additional one-week period (at boarding cost).

Treatment outcome

Greater than 90 per cent of cats treated with radioactive iodine will be cured by a single dose. We ask that you re-evaluate the cat about two to four weeks after hospital discharge to confirm that treatment has been successful (measure T4) and to evaluate kidney function. Please send a copy of the blood test results to Prairie Diagnostic Services (PDS).

A small percentage of cats (less than five per cent) will not respond completely to this treatment. They will feel better and symptoms may disappear, but the thyroid hormone level is still high and these cats will relapse within months. Reasons for failure to respond to the initial treatment may include a very large thyroid mass or the presence of a malignant thyroid tumor instead of a benign one. These cats may be cured by a second treatment of a very high dose of radioactive iodine.

A few cats will become hypothyroid after treatment. For some reason, these cats respond more completely to the low dose of iodine than is desirable. This is usually not an important clinical problem and does not result in any symptoms. Occasionally, however, there will be clinical signs such as weight gain, sluggishness and poor hair coat requiring treatment with thyroid hormone replacement (pills) — perhaps for the rest of the cat's life.

For more information, contact:

Small Animal Clinic
WCVM Veterinary Medical Centre
306-966-7126