HYPERTHYROIDISM

The most common endocrine disorder of our Feline patients.
98-99% have benign adenomas
70-75% have bilateral lobe enlargement
Most adenomatous thyroids get heavier as they enlarge and gravitate down towards the thoracic inlet.

Average age on diagnosis is 13 years with a range of 4-20yrs.

Concurrent Problems

1. Thyrotoxic cardiomyopathy (most are reversible with therapy but not dilated thyrotoxic cardiomyopathy which is rare)
2. Renal Insufficiency very common in older cats and occurs concurrently
3. Systemic hypertension
4. Gastrointestinal tract disorders are very common and include polyphagia, weight loss, and anorexia, vomiting diarrhea, increased frequency and volume of stool. IBD can occur concurrently.

Minimum data base
Geriprofile,CBC,U/A,Urine culture, Blood Pressure

Treatment

Methimazole and I131 are considered the present day therapies with I 131 being the gold standard.
If the patient’s renal function is good then I 131 is recommended (iodincafe.com)
If I 131 is not recommended or renal function is a concern the following is the standard of care that is recommended by Feldman and Nelson’s latest text Canine and Feline Endo/Repro. The protocol is designed to gradually control hyperthyroid syndrome with minimizing the incidence of side effects.

Methimazole 3 indications

1. To be used to normalize serum T4 levels allowing assessment of the effect of resolution of hyperthyroidism on renal function
2. Used to prepare a patient for I 131 therapy( +/- atenolol) by allowing weight gain and resolution of concurrent hyperthyroid conditions
3. Used as the only planned short term/ long term therapy.

Oral Protocol: Designed to gradually control the hyperthyroid state while minimizing side effects. Hyper T4 is a chronic and progressive disease that does not require acute resolution!

Methimazole 2.5 mg q 12 hrs for 2 weeks then repeat Chem/CBC/T4
If T4 normal or close to normal continue dosage and repeat Chem/CBC, T4 in 1 month then every 3 months. It is not recommended to just test the T4 level, we are doing our patients a disservice by not looking for side effects of the methimazole (biochemical/hematological)
If T4 is still elevated increase the methimazole by 2.5 mg and repeat chem./cbc/t4 every 2 weeks until euthyroid. Do not increase the methimazole by more than 2.5 mg every 2 weeks!
Once the patient’s hyperthyroidism is controlled then a long term protocol can be followed.
Most cats require 5 or 7.5 mg a day to control the disease, occasionally cats require 10 mg /day or more (very small %)

**The most common cause of apparent resistance to methimazole is the owner’s inability to administer the drug (Think Transdermal!)**

Hyperthyroidism with concurrent renal disease: The same protocol as above but start the Methimazole at 2.5 mg once daily for 2 weeks then repeat chem./cbc/T4.
If renal parameters worsen at any point decrease the dosage (reduce 50%, previous dosage).
Some cats are undoubtedly healthier with hyperthyroidism than without.

Most side effects of methimazole occur within 4-8 weeks of therapy. It is recommended to follow laboratory parameters closely for the first 8-12 weeks.
Side effects
10-15 % of patients will have them
Anorexia, vomiting, lethargy are common but usually transient.
If the conservative protocol outlined above is followed the incidence of side effects is less than 3%. If side effects are observed, stop the drug until side effects resolve then restart at a 50% reduced dosage
Facial and neck excoriations are self induced alarming reactions that warrant stopping therapy and either consider I 131 or reduced dosage (50%)

Biochem/Hematologic: hepatopathy, eosinophilia, lymphocytosis and transient leucopenia (eosinophilia may be related to GI signs) may occur.
Thrombocytopenia, Agranulocytosis and immune-mediated anemia are serious side effects that can only be recognized with proper laboratory tests.

Long Term Monitoring of Hyperthyroidism
Physical exams, Chem/CBC/T4 every 3-4 months.

If there is concern about drug induced hypothyroidism (rare with methimazole) a Free T 3 is recommended.

Ref: Feldman & Nelson Can/Fel Endo Repo, Jour Fel Med Surg