

Pattern of thyroid function tests during recovery from acute nonthyroidal illness

Purpose:

To identify the approximate duration of time for thyroid hormone levels to return to normal following nonthyroidal illness resolution

Background:

The thyroid gland regulates important functions within the bodies of humans and animals. In dogs, disturbances in thyroid hormone levels can cause problems like weight gain and lethargy. During acute illness not involving the thyroid gland, thyroid hormone levels can be falsely suppressed resulting in nonthyroidal illness. Testing performed during or immediately after illness resolution can result in inaccurate thyroid test results and lead to an inappropriate diagnosis of hypothyroidism. This study aims to identify the approximate duration of time for thyroid hormone levels to return to normal following illness resolution. Clinically, this will correspond to more concrete recommendations as to when accurate thyroid hormone testing can be performed following acute illness resolution.

Eligibility:

- Illness of less than or equal to 1 weeks' duration
- Illness severity that requires in-hospital treatment (no time limit)
- Illness diagnosis that can be resolved without the induction of chronic disease
- Anesthesia and/or surgery cases with clinically resolvable disease, including but not limited to fractures, GDV, GI foreign bodies, and gallbladder mucocele (as examples)
- Low serum total T₄ on admission

Exclusion Criteria:

- Sighthound breeds
- Intact females within 60 days of estrus
- Malnourished dogs
- Dogs diagnosed with a chronic or incurable disease
- Dogs diagnosed with a disease for which the treatment can alter thyroid function tests
- Dogs receiving phenobarbital, glucocorticoids, sulfonamides, or nonsteroidal anti-inflammatory agents within the 7 days prior to hospital admission or necessitating any of these medications as part of their treatment

Study Design:

While enrolled dogs are hospitalized, a blood sample is obtained every 24 hours for thyroid hormone level measurement. At 2- and 4-weeks following discharge, dogs return to the VTH or their referring veterinarian for follow-up. During each follow-up, owners will complete a brief questionnaire and a blood sample is obtained for thyroid hormone level measurement.

Compensation:

The cost of all thyroid hormone measurements will be covered by the study. If dogs return to the VTH for their 2 and 4 week rechecks, the recheck exam and bloodwork will be at no cost. If dogs return to their referring veterinarian for their 2 and 4 week rechecks, only the cost of study-related bloodwork is covered by the study.

The cost of any other tests or procedures that are considered standard of care in the treatment of your dog's illness, including clinically necessary bloodwork, surgery, aftercare, and follow-up treatment are not covered by the study and are the responsibility of the owner.

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