Low-Dose Dexamethasone Suppression Test (Canine)

Indications

- Screening test for naturally occurring hyperadrenocorticism (Cushing's syndrome).
- Not indicated for monitoring patients receiving trilostane therapy.
- Cannot be used for the diagnosis of hypoadrenocorticism (Addison's disease).

Notes

- Avoid patient stress or concurrent diagnostic procedures for the duration of the low-dose dexamethasone suppression (LDDS) test (8h).
- The reported sensitivity for the LDDS test for diagnosis of hyperadrenocorticism is ≈95%, suggesting it is more sensitive than the ACTH stimulation test for this purpose.
- The specificity of LDDS is poor (≈50%) in dogs with non-adrenal or concurrent illness (particularly diabetes mellitus and renal failure). Positive test results should always be interpreted in light of history and clinical signs.
- Determination of whether animals with diabetes mellitus have concurrent hyperadrenocorticism may be difficult. In such cases, both the ACTH stimulation test as well as the low dose dexamethasone suppression test have been reported to produce false-positive results. Please contact the laboratory to discuss the approach to such cases.
- If exogenous glucocorticoids have been administered, a withdrawal period may be required before an LDDS test is performed to allow normalisation of the pituitary-adrenal axis. Other drugs including delmadinone, osaterone and progestagens such as proligestone may also affect LDDS test results for a variable period. Please contact the Reference Laboratory for further advice.

Protocol

- Collect a baseline blood sample (1-2 ml in a plain/gel tube).
- Inject **0.01 – 0.015 mg/kg of dexamethasone intravenously**, via IV catheter. Consider diluting with saline/water for injection for accurate dosing.
- Collect the second blood sample (1-2 ml in a plain/gel tube) 4 hrs post-injection.
- Collect the third blood sample (1-2 ml in a plain/gel tube) 8 hrs post-injection.
- Ensure the samples have clotted and centrifuge the samples 30-120 minutes after collection.
- For samples collected in plain tubes, please separate the serum into another plain tube (this step is not necessary for samples collected in gel tubes).
- Please label all tubes with the patient's name and the time of sampling.
- Please include the patient history, including drug history, on the request form.
- Submit the separated serum samples and the request form to the reference laboratory (Test code DEXL).
- Cortisol will be measured in all three samples.

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