Canine low dose dexamethasone suppression test

Test Use

This protocol can be used as an aid in diagnosing and confirming clinical suspicions of hyperadrenocorticism (Cushing’s syndrome) in dogs. If results of pituitary-adrenal testing confirm hyperadrenocorticism, the LDDST results can also be used as an aid in discriminating between pituitary and adrenal dependant hyperadrenocorticism.

Note: Although the LDDST is the preferred method of confirming hyperadrenocorticism in dogs, no test is perfect and hence results should always be interpreted in light of the clinical picture and results of other testing.

When dogs are chosen for a LDDST based on consistent changes in the history, physical examination and database results (clinical pathology profile, urinalysis), the sensitivity approaches 99%.

When not suffering from clinical illness, < 5% of dogs with other polyuria/polydipsia syndromes (diabetes mellitus, diabetes insipidus, hypercalcaemia, chronic renal failure) have abnormal LDDST results. Animals with evidence of clinical illness can however have misleading LDDST results. It is hence recommended to postpone any endocrine testing in ill animals until they are stable.

Protocol

Patient preparation. The animal should preferably be fasted before collection. Pituitary-adrenal function testing is best performed in a healthy, non-stressed animal. Given the circumstances leading to testing, this is rarely achievable, however, minimizing stress/illness is nonetheless recommended. Note also therapy with corticosteroids can alter the pituitary-adrenal axis, hence where possible should be avoided, especially in the previous 48-72 hours.

i) Collect blood into a plain or SST for a baseline cortisol and clearly label as the resting or 0 hr sample.

ii) Administer 0.01 mg/kg of dexamethasone IV

iii) Collect post-dexamethasone blood into a plain or SST and again clearly label with appropriate time.

Samples should be collected at both 4 hours and 8 hours post-dexamethasone administration

iv) Submit all three samples (resting, 4 hour and 8 hour post-dexamethasone) together to the laboratory for testing.