Canine Hypoadrenocorticism: **Diagnosis**

Signalment:

- Possible at any age but more common between 3 and 6 years
- More common in large pure-breeds dogs

History:

- Waxing and waning chronic gastrointestinal signs
- Vomiting, diarrhea, inappetence, weight loss, lethargy, weakness, collapse, polyuria, polydipsia, shaking, abdominal pain, melana or hematochezia, and hematemesis
- Sometimes no relevant medical history

Physical examination:

- Usually nonspecific: thin-body condition, dehydration, and a painful abdomen
- Acute hypoadrenocortical crisis: signs of hypovolemic shock, including bradycardia or tachycardia, collapse, hypothermia, weak pulses and poor capillary refill time

Hypoadrenocorticism possible

Diagnostic workup

- Biochemistry: **Low Na^+ and/or high K^+ (important)**, Na^+ : K^+ ratio < 27, low cholesterol, glucose, increased urea, creatinine and calcium
- Sometimes no electrolyte abnormalities (eunatraemic, eukalaemic hypoadrenocorticism)
- CBC: some dogs have mild anemia, lack of a stress leucogram, eosinophilia, and lymphocytosis
- Urinalysis: usually impaired urine concentration ability
- Abdominal ultrasound: usually small adrenal glands

Received corticosteroids (including topical) in the previous 2 months?

NO

ACTH stimulation test

- Post ACTH cortisol < 2 µg/dL (< 55 nmol/L) * → **Hypoadrenocorticism**
- Post ACTH cortisol 2-5 µg/dL (55-140 nmol/L) * → **Hypoadrenocorticism possible but unlikely, repeat the test and measure endogenous ACTH**
- Post ACTH cortisol > 5 µg/dL (>140 nmol/L) * → **Hypoadrenocorticism ruled out**

YES

- ACTH stimulation test
- Measurement of endogenous ACTH

- Post ACTH cortisol > 5 µg/dL (> 140 nmol/L) * → **Hypoadrenocorticism ruled out**
- Post ACTH cortisol < 2 µg/dL (< 55 nmol/L) Endogenous ACTH high → **Hypoadrenocorticism**
- Post ACTH cortisol < 2 µg/dL (< 55 nmol/L) * Endogenous ACTH normal/low ** → **Hypoadrenocorticism less likely. If the animal is stable enough re-evaluate in 1-2 months**

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* The specific reference range of the laboratory should be used
** In rare cases, secondary hypoadrenocorticism is detected (low endogenous ACTH)

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