Hypoadrenocorticism can look very different in the clinic than it tends to appear on board exams. In the real world, this disease is often called “The Great Pretender” or “The Great Imitator,” and it should be on the differential list for a multitude of common clinical signs. Dogs can present with anything from vague and mild clinical signs to a life-threatening emergency, with severe GI signs and cardiac abnormalities. Fortunately, on board exams, you will likely be asked about the “classic” signs associated with Addison’s disease. These signs are discussed on this PowerPage.

Background

- Caused by inability of the adrenal glands to produce cortisol (glucocorticoids and mineralocorticoids)
- Causes include:
  - Autoimmune/idiopathic factors
  - Granulomatous destruction of adrenal cortex
  - Secondary via a disruption in the adrenal-pituitary axis
- Commonly affected breeds include Standard Poodles, Portuguese Water Dogs, Rottweilers, and West Highland White Terriers, but any breed may be affected.

Clinical Signs

- Symptoms may include:
  - Weakness
  - Vomiting
  - Diarrhea (sometime vague gastrointestinal symptoms)
  - Finicky appetite
  - Dehydration
  - Bradycardia and low blood pressure
- Symptoms may wax and wane
- Addisonian crisis is a medical emergency
Hypoadrenocorticism (Addison’s Disease)

Laboratory Findings

- Elevated potassium, low sodium and chloride (lack of aldosterone leads to impaired renal sodium retention and potassium excretion)
  - Na:K ratio usually < 27:1
- Hypoglycemia
- Increased BUN and creatinine, due to decreased renal perfusion (hypovolemia and hypotension lead to decreased cardiac output)

Diagnosis

- The test for diagnosis is the ACTH Stimulation test

Treatment

- Supportive care with fluids and steroids are the mainstays of therapy
  - Fluid of choice: 0.9% sodium chloride
- Requires lifelong treatment
- Treatment of Addison’s includes:
  - Mineralocorticoid: DOCP injections (mineralocorticoid only) or oral fludrocortisone acetate (mineralocorticoid that also has some glucocorticoid activity).
  - Glucocorticoid: oral prednisone.
- The only steroid medication that can be given prior to the ACTH stim is dexamethasone.
  - Should be started in a crisis situation, until the ACTH stim may be performed.
  - Prednisone cannot be started until AFTER the ACTH stimulation test has been performed!
    - Will interfere with test results.