**CLIENT EDUCATION HANDOUT**

**Customer Name, Street Address, City, State, Zip code**

**Phone number, Alt. phone number, Fax number, e-mail address, web site**

**Adrenal Insufficiency**

**Basics**

**Overview**

• Adrenal insufficiency (AI) is also called adrenal exhaustion or hypoadrenocorticism

• The disease is associated with a decreased production of steroid hormones from the adrenal cortex

• In most cases the insufficiency is transient (secondary AI) and associated with a concurrent critical illness

**Signalment**

• Secondary AI is most commonly diagnosed in foals, especially premature and/or septic foals

• There is no predilection for sex, age, or breed when occurring in adult horses

**Signs**

• In acute cases—signs of septic shock, including fever or hypothermia, pale mucous membranes, weakness, hypotension, hemoconcentration, cardiovascular collapse, and death

• In chronic cases—depression, loss of appetite, weight loss, poor haircoat, exercise intolerance, excessive drinking/urination, mild abdominal pain, salt craving, and diarrhea

**Causes**

• Hypothalamic–pituitary–adrenal (HPA) axis immaturity associated with prematurity in neonatal foals

• HPA axis suppression and/or adrenal hemorrhage and necrosis subsequent to systemic inflammatory response or sepsis/septic shock

**Risk Factors**

• Chronic administration of glucocorticoids (steroids), exogenous adrenocorticotropic hormone (ACTH), or anabolic steroids

• Prematurity in foals

**Treatment**

**Appropriate Health Care**

• Treat the underlying primary cause

• Fluid, dextrose, and electrolyte support

**Activity**

• Complete rest and avoidance of stress, particularly surgery, infection, and trauma

**Diet**

• If mineralocorticoid insufficiency, provide sodium supplementation (e.g. salt) and avoid potassium supplementation

**Surgical Considerations**

• Surgery is not indicated in this condition. Patients with AI should be supplemented with steroids (see Medications) around the time of surgery to prevent worsening AI

**Medications**

• Glucocorticoids at physiologic doses equivalent to daily corticosteroid production rates

• For acute insufficiency in foals, low-dose hydrocortisone is recommended

• For longer term therapy in adult horses with chronic AI, maintenance doses of prednisolone are recommended

• If mineralocorticoid replacement is necessary, fludrocortisone may be considered

**Follow-Up**

**Patient Monitoring**

• Monitor electrolytes, renal function, acid–base balance, blood glucose, and blood pressure

• Once the animal is stable, recovery can be documented by repeating ACTH stimulation tests

**PossibleComplications**

• Excessive glucocorticoid administration, especially with long-acting forms (e.g. triamcinolone), increases susceptibility to infections and may induce insulin dysregulation, which could increase laminitis risk

**Expected Course and Prognosis**

• In general, secondary AI resolves with short-term steroid supplementation if the underlying disease/stressor resolves

• Secondary AI complicates underlying illness so that septic patients with AI have a worse prognosis for survival than septic patients with normal adrenal function

**Key Points**

• AI most often occurs in neonatal foals, and generally results from suppression of the HPA axis during critical illness

• AI is managed by treating the underlying disease and providing short-term supplementation

• AI generally resolves fully if the underlying cause is effectively treated



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