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Part of Improve International

Deep Dives

# Endocrinology

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## Learning Objectives

**1. Adrenal Disease (Hyperadrenocorticism, Hypoadrenocorticism, Primary Hyperaldosteronism and Adrenal Masses)**

a. Understanding of the physiology of adrenal function and the hypothalamic-pituitary-adrenal axis and the pathophysiological mechanisms behind these diseases
b. Knowledge of clinical presentation and clinicopathological abnormalities and an understanding of how this relates to the underlying pathophysiology
c. Ability to choose appropriate diagnostic testing and interpret results with an understanding of each test's limitations
d. Differentiation of pituitary and adrenal disease in hyperadrenocorticism
e. Knowledge of appropriate treatment for each of these diseases and recommended monitoring
f. Understanding of common complications associated with each of these diseases

**2. Diabetes Mellitus**

a. Understanding of the physiology of endocrine pancreatic function and the pathophysiology of both canine and feline disease
b. Knowledge of presenting clinical signs and clinicopathological abnormalities and an understanding of how they relate to the underlying pathophysiology
c. Ability to choose appropriate diagnostic testing to reach a definitive diagnosis with an understanding of pitfalls of each test
d. Decision making on appropriate treatment and monitoring, including the use of SGLT2 inhibitors and continuous glucose monitors

**3. Polydipsia and Polyuria**

a. Understanding of how to logically work up these cases using a problem solving approach and accurately form a list of differential diagnoses
b. Ability to select appropriate diagnostic tests to reach a definitive diagnosis with an understanding of test limitations

**4. Diabetes Insipidus**

a. Understanding of the physiology of antidiuretic hormone and the hypothalamic–pituitary axis
b. Understanding of the pathophysiology involved with both central and nephrogenic diabetes insipidus and how this relates to the clinical signs
c. Knowledge of diagnostic testing required to reach a definitive diagnosis and appropriate treatment options

**5. Thyroid Disease (Hyperthyroidism and Hypothyroidism)**

a. Understanding of the physiology of thyroid function and the hypothalamic-pituitary-thyroid axis and the pathophysiological mechanisms behind these diseases
b. Knowledge of clinical presentation and clinicopathological abnormalities and an understanding of how this relates to the underlying pathophysiology in both canine and feline disease
c. Ability to choose appropriate diagnostic testing and interpret results with an understanding of each test's limitations
d. Knowledge of appropriate treatment for each of these diseases and recommended monitoring
e. Understanding of common complications associated with each of these diseases

**6. Insulinoma**

a. Understanding of the pathophysiology and how this relates to the clinical presentation and clinicopathological abnormalities
b. Knowledge of investigation and differential diagnoses for hypoglycaemia
c. Knowledge of appropriate treatment in both the emergency and chronic setting

**7. Disorders of Calcium Metabolism (Hypercalcaemia, Hypocalcaemia)**

a. Understanding of the physiology of normal calcium metabolism
b. Knowledge of the clinical presentation and main differential diagnosis for hypercalcaemia and hypocalcaemia in the dog and the cat
c. Ability to use a problem solving approach to these cases and choose appropriate diagnostic testing and interpret results with an understanding of each test's limitations
d. Knowledge of emergency treatment for hypercalcaemia
e. Knowledge of appropriate treatment and management of primary hyperparathyroidism and feline idiopathic hypercalcaemia
f. Knowledge of emergency treatment for hypocalcaemia
g. Knowledge of appropriate treatment and management of primary hypoparathyroidism

**8. Hypersomatotropism**

a. Knowledge of the pathophysiology of feline hypersomatotropism and differentiation from canine disease
b. Ability to choose appropriate diagnostic testing and interpret results
c. Knowledge of appropriate treatment options and associated potential complications

**9. Management of Endocrine Emergencies**

a. Knowledge of the emergency management of hypoadrenocorticism
b. Understanding of the pathophysiology of diabetic ketoacidosis and principles of treatment and stabilisation
c. Understanding of the pathophysiology of a hyperthyroid crisis and associated clinical signs
d. Knowledge of the emergency management of a hyperthyroid crisis, including treatment of hypertension