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Part of Improve International

Deep Dives

Medical Neurology

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Learning Objectives:

1. The Neurological Examination

- a. Understanding of approach to the neurological examination in both the dog and the cat and ability to neuro-anatomically localise the problem
- b. Ability to accurately assess mentation, including use of the Modified Glasgow Coma Scale
- c. Ability to formulate a succinct list of differential diagnoses by combining your neuroanatomical localisation together with the signalment of the patient and the onset and progression of the neurological signs
- d. Understanding of further appropriate diagnostic tests and advanced imaging, including cerebrospinal fluid analysis

2. Vestibular Disease and Ataxia

- a. Understanding of approach to the vestibular and/or ataxic patient and how to differentiate peripheral from central vestibular syndrome
- b. Knowledge of idiopathic vestibular disease including diagnosis and management options
- c. Understanding of when further diagnostic tests and advanced imaging are indicated

3. Infectious and Non-Infectious Inflammatory Conditions

- a. Ability to summarise the most common infectious and non-infectious inflammatory conditions affecting the brain and nervous system and knowledge of how to diagnose and treat them, including meningoencephalomyelitis of unknown origin, steroid responsive meningitis arteritis, feline infectious peritonitis and metronidazole toxicity

4. Neuromuscular Disease

- a. Knowledge of the presentation of neuromuscular disease in both the dog and the cat
- b. Understanding of the differential diagnoses for tetraparesis and ability to neuro-anatomically localise the problem and select appropriate diagnostic tests
- c. Ability to summarise the most common neuromuscular conditions, including treatment options
- d. Understanding of diagnostic work up for neuromuscular disease

5. Cognitive Dysfunction

- a. Understanding of pathophysiology of cognitive dysfunction and common presentation in both the cat and the dog
- b. Ability to use cognitive function scores to assess senior patients
- c. Knowledge of treatment options for cognitive dysfunction and an understanding of the importance of managing comorbidities

6. Spinal Cord Disease

- a. Ability to neuro-localise the lesion through a comprehensive neurological examination and form a list of differential diagnoses
- b. Ability to summarise presentation, diagnosis and treatment options for the most common spinal cord conditions, including intervertebral disc disease, fibrocartilagenous embolism (ischaemic myelopathy), lumbosacral disc disease and degenerative myelopathy

7. Chiari-Like Malformation and Syringomyelia

- a. Understanding of the pathophysiology of these conditions and how it relates to the clinical presentations
- b. Knowledge of diagnosis and management options

8. Seizures and Status Epilepticus

- a. Understanding of the definition of status epilepticus and staging
- b. Knowledge of treatment for status epilepticus (first, second and third-line treatment options), including monitoring
- c. Knowledge of the treatment options for cluster seizures
- d. Ability to differentiate structural seizures from reactive seizures with an appropriate diagnostic work up
- e. Understanding of approach to diagnosis of idiopathic epilepsy using evidence-based guidelines
- f. Knowledge of when to start treatment for idiopathic epilepsy and treatment options for chronic therapy
- g. Ability to differentiate seizures from paroxysmal dyskinesia

9. Disorders of Abnormal Mentation

- a. Understanding of approach to a patient presenting with abnormal mentation, coma or obtundation and ability to use Modified Glasgow Coma Score for prognostic evaluation
- b. Ability to form a list of differential diagnoses for these patients based on history and neurological examination findings and select appropriate further diagnostic testing
- c. Knowledge of the management of raised intracranial pressure, cerebral oedema and toxic encephalopathy and stabilisation of these patients