

# Lecture summaries

## Joao Miguel De Frias

DVM, MVetMed, MRCVS

Senior lecturer in veterinary Neurology and Neurosurgery

University of Edinburgh, Royal (Dick) School of Veterinary studies, Edinburgh, Scotland

### **Inflammatory brain diseases**

The brain is considered an immune privileged region. The protection offered by the blood-brain barrier and other mechanism shields the brain against many systemic inflammatory reactions. However, this protection can be a “double-edged sword”. The ability to treat neuroinflammation can be more challenging given the protected environment. In this lecture, we will explore the unique brain inflammatory system and describe the most common neuroinflammatory conditions in dogs and cats.

#### Learning goals

1. Explain why the brain is a site of immune privilege.
2. Identify the main inflammatory diseases in dogs.
3. Identify the main inflammatory diseases in cats.
4. Recognise the challenges treating neuroinflammation.

### **Differentiating the effects of systemic disease from primary brain pathology**

Given the large demand for nutrients and oxygen from the brain, systemic illness can cause similar signs to primary brain pathologies. Forebrain clinical signs can cause abnormal mentation and behaviour with very often a normal gait. This lecture will discuss the challenge of identifying neurological pathology in a patient with diffuse clinical signs. A step-by-step approach will be reviewed.

#### Learning goals

1. Recognise how systemic illness can affect the brain
2. Make distinctions between primary and secondary brain disease
3. Briefly review the clinical signs of forebrain, cerebellar or brainstem pathology
4. Identify signs of structural or focal brain pathology