



# ECVP/ESVP Summer School in Veterinary Pathology



## Marie Curie Training Courses

Summer School 2004 – CNS 3333-99

Slide No. 3333-99: Tissue from a CAT

### DESCRIPTION OF HISTOLOGIC FINDINGS

Cerebellum and brain stem; predominately at the ventral aspect of the brain stem there is a massive, diffuse meningeal infiltration of macrophages, neutrophils, lymphocytes, and plasma cells with multifocal accumulation of an acellular, eosinophilic, fibrillar material (fibrin). Individual meningeal vessels show fibrinoid necrosis, characterized by intimal hypereosinophilia, intra- and extravascular fibrin deposition and accumulation of cellular debris/degenerated neutrophils. Small caliber-sized blood vessels in the adjacent superficial parenchyma/neuropil, predominantly in the periventricular region, show moderate perivascular accumulation of lymphocytes, plasma cells and macrophages in the Virchow-Robins space. Occasionally, meningeal and cerebellar vessels show endothelial activation, characterized by enlarged, cuboidal endothelial cells with oval nuclei. Additionally, there is massive enlargement of the choroid plexus by perivascular to diffuse infiltration of lymphocytes, plasma cells, macrophages and neutrophils. Furthermore, there is accumulation of macrophages, neutrophils, fibrin and cellular debris in the ventricular lumen. Adjacent blood vessels in the cerebellum and meningeal vessels show mild perivascular infiltration of inflammatory cells and degeneration as described above.

### MORPHOLOGIC DIAGNOSIS/DIAGNOSES:

Cerebellum; lymphoplasmahistiocytic to pyogranulomatous meningoencephalitis and lymphoplasmahistiocytic to pyogranulomatous plexus chorioiditis with fibrinous necrotizing vasculitis, diffuse, severe, subacute

### ETIOLOGY:

Feline Infectious Peritonitis (FIP) virus (Coronavirus)

### Scoring System

#### Slide description:

Design	2 points
Tissue (cerebellum, brain stem)	1 point

#### Descriptive features:

Meningeal involvement	1 point
Macrophages, neutrophils, lymphocytes, plasma cells	1 point
Fibrin	1 point
Fibrinoid necrosis of vessels	2 points
Fibrin deposits, degenerated neutrophils	1 point
Periventricular, perivascular infiltrates	2 point
Lymphocytes, plasma cells, and macrophages	1 point
Choroid plexus involvement	2 point
Same inflammatory cells as describe above	1 point
Endothelial cell activation	1 point

**Total: 16 points**

### MORPHOLOGICAL DIAGNOSIS/DIAGNOSES:

3 points

### ETIOLOGY:

1 points