ECVP/ESVP Summer School in Veterinary Pathology

Marie Curie Training Courses

Summer School 2004 – CNS1445-97

Slide No. 1445-97: Tissue from a BOVINE
DESCRIPTION OF HISTOLOGIC FINDINGS

Brain stem; there are multifocal accumulations of lymphocytes, plasma cells, macrophages and occasional neutrophils around small- to medium-sized blood vessels. Additionally, there are multifocal, randomly distributed, variable sized microabscesses, characterized by multifocal unencapsulated accumulations of neutrophils, cellular debris and occasional macrophages. Additionally, multiple granulomas and focal microgliosis are present. There is an extensive area of necrosis (malacia), characterized by massive accumulation of neutrophils and macrophages. Additionally, degenerated neutrophils with an hypereosinophilic cytoplasm with basophilic, fragmented (pyknotic) nuclei can be found. Some axons are hypereosinophilic and swollen (spheroids) with markedly swollen myelin sheaths. Few neurons are swollen and hypereosinophilic with central chromatolysis (neuronal degeneration) or shrunken, hypereosinophilic with pyknotic nuclei (neuronal necrosis). Occasionally, neuronophagia can be found. Additionally, there is moderate infiltration of activated microglia and gitter cells. The intima of multiple vessels is enlarged and hypereosinophilic with infiltration of neutrophils (fibrinoid necrosis), associated with fibrin and microthrombi.

Meningeal vessels show a mild perivasular infiltration of macrophages, lymphocytes and plasma cells.

MORPHOLOGIC DIAGNOSIS/DIAGNOSES:

Brain stem; lymphohistiocytic perivascular meningoencephalitis with microabscesses and focal necrosis, multifical, subacute, severe

ETIOLOGY:

Listeria monocytogenes

Scoring System

Slide description:	
Design	2 points
Tissue (brain stem)	1 point
Descriptive features:	
Perivascular lymphocytes, macrophages and plasma cells	2 points
Microabscesses with description	2 points
Neutrophils	1 point
Granulomas, glial nodules	1 point
Swollen myelin sheaths	1 point
Necrosis of white matter	2 points
Degenerated neutrophils	1 point
Neuronophagia and/or neuronal necrosis	1 points
Spheroids	1 point
Meningeal vessels with perivascular mononuclear inflammation	1 point
	Total: 16 points
MORPHOLOGICAL DIAGNOSIS/DIAGNOSES:	**3 points**
ETIOLOGY:	**1 point**