

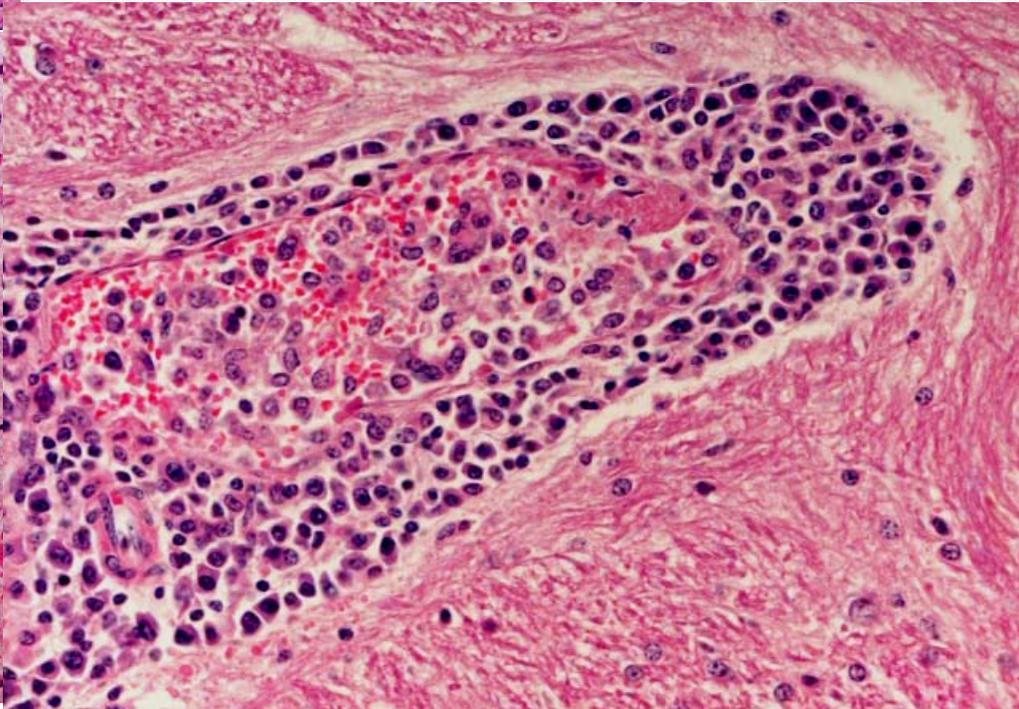
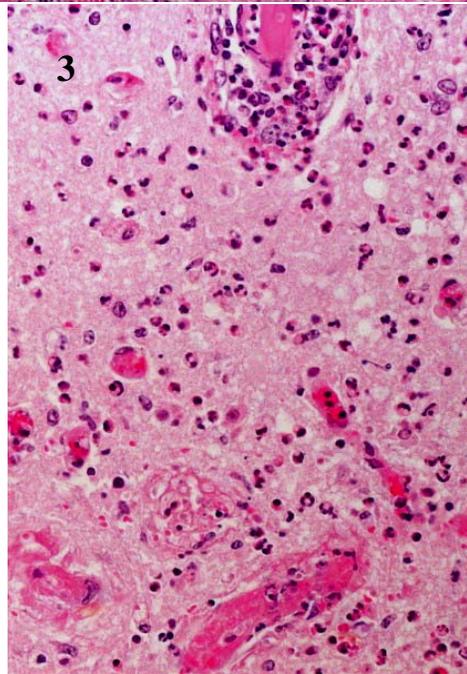
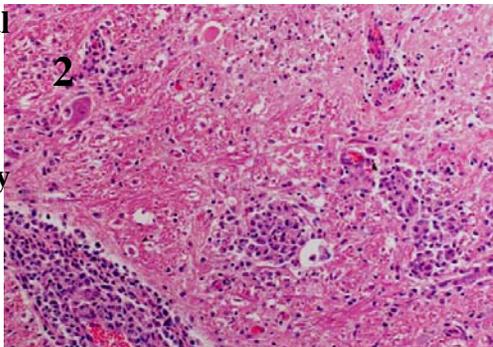
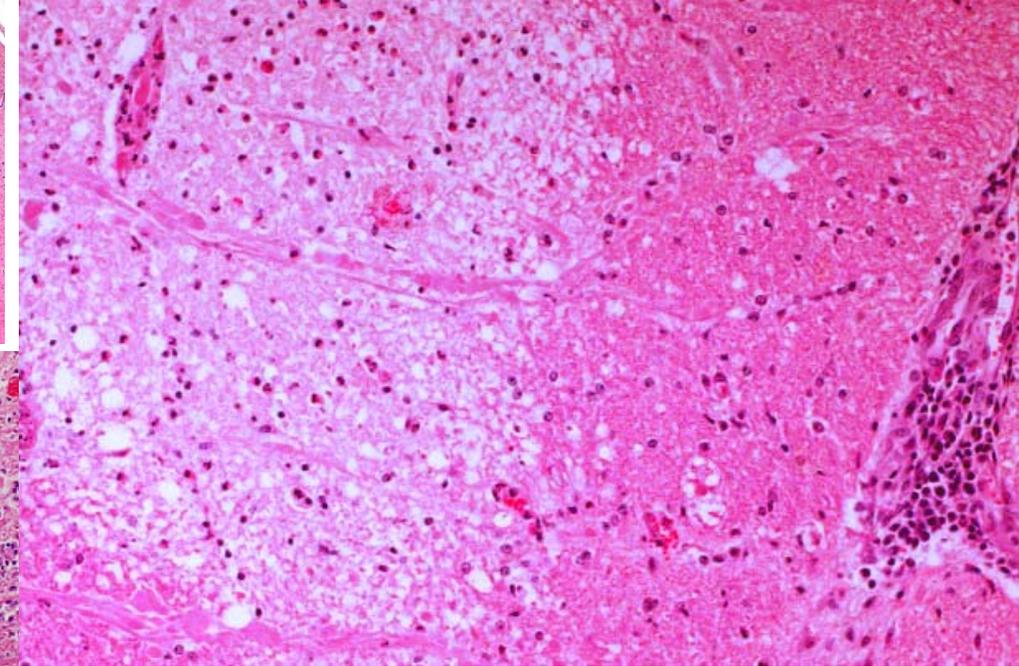
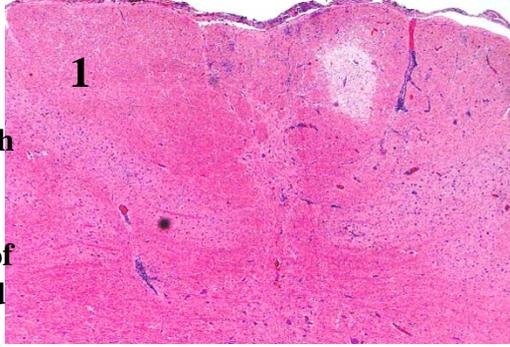
**Case 3.1 – Bovine 8/12 -  
caudal brainstem  
Review – with 2  
supplementary images with  
more detail**

**1) Abnormalities evident  
are: Image 1 – focal area of  
pallor; randomly scattered  
mild perivascular,  
parenchymal and meningeal  
hypercellularity. Image 2 –  
perivenular and  
pericapillary lympho-  
histiocytic infiltrates;  
locally extensive parenchymal  
rarefaction with scattered  
degenerate neutrophils;  
solitary axonal spheroid.**

**Image 3 – parenchymal  
rarefaction with degenerate  
neutrophils and acute  
capillary and venular  
thrombosis.**

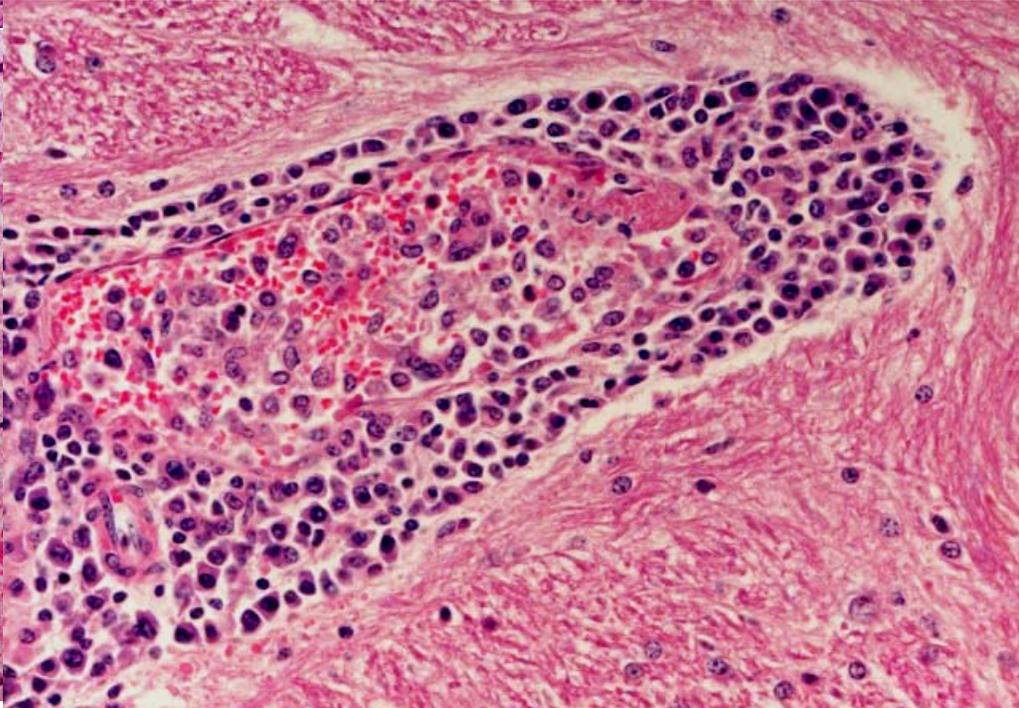
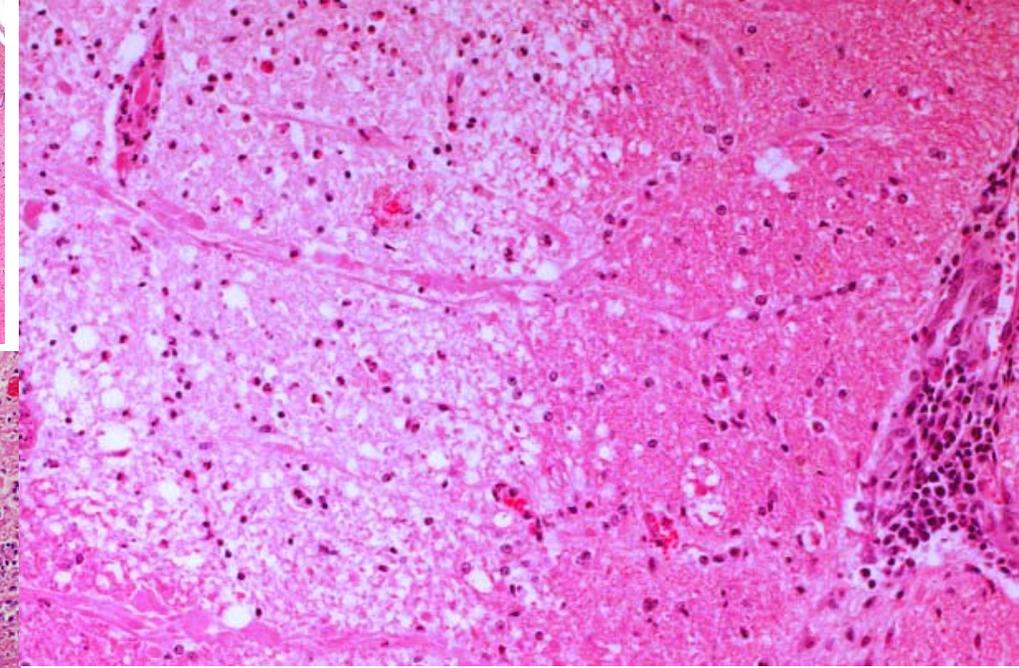
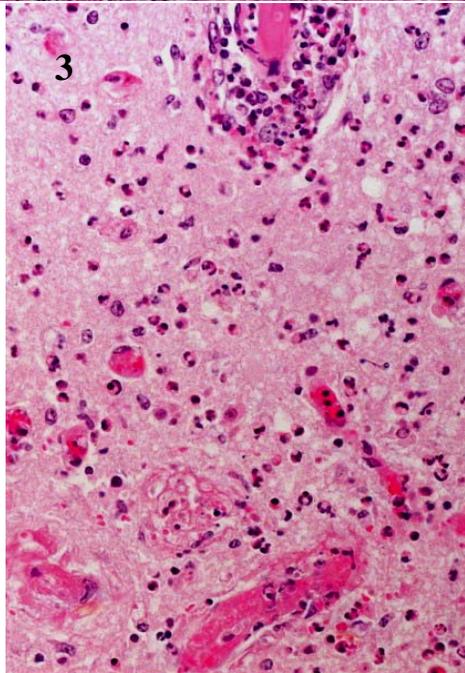
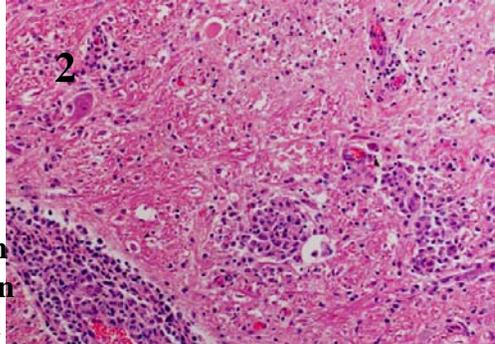
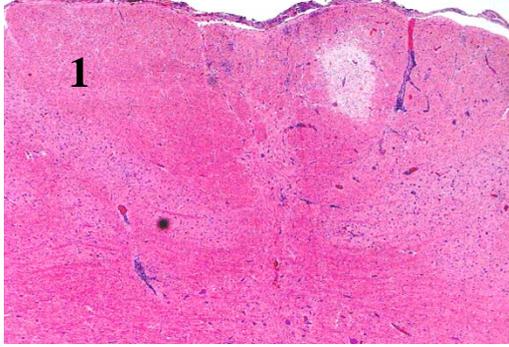
**2) Pathologic processes  
evident are – subacute  
perivascular inflammation,  
both lympho-plasmo-  
histiocytic and neutrophilic;  
acute infarction; acute  
parenchymal necrosis with  
neutrophilia and acute small  
vessel thrombosis.**

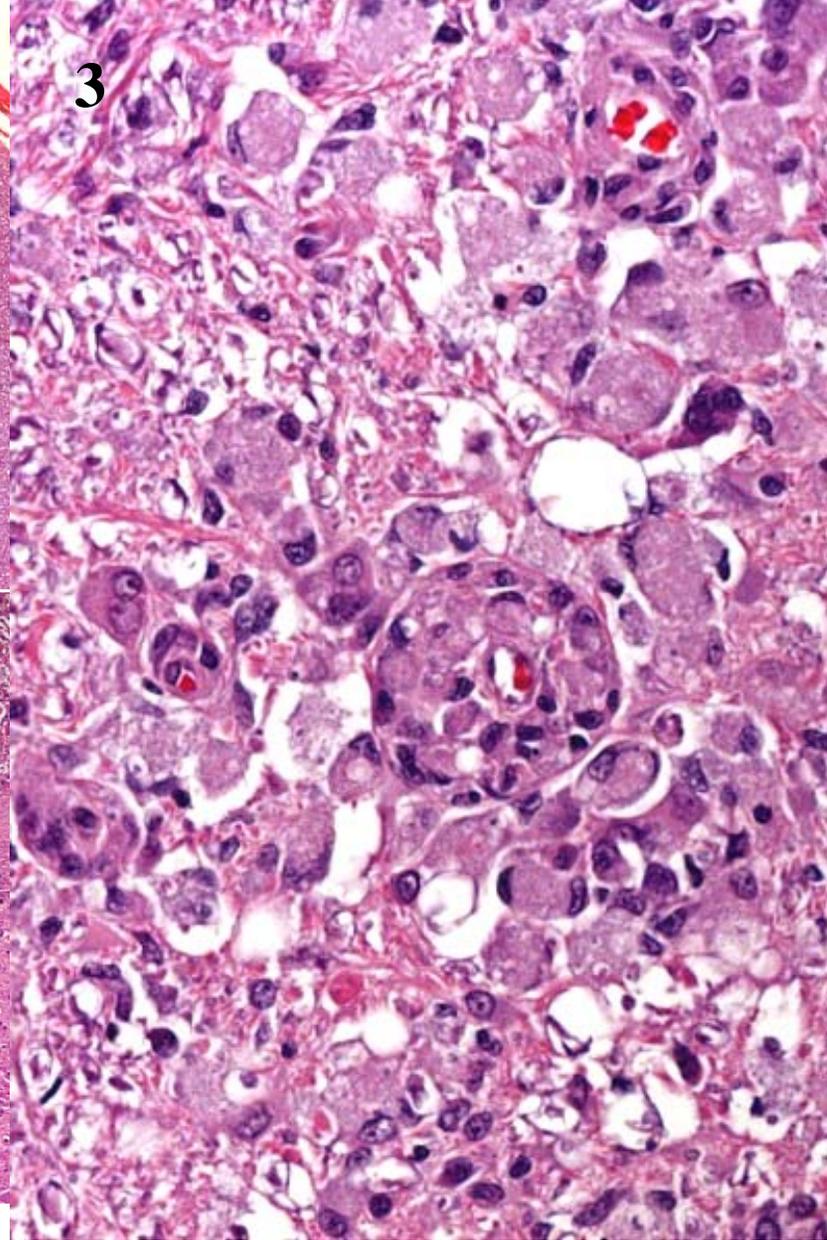
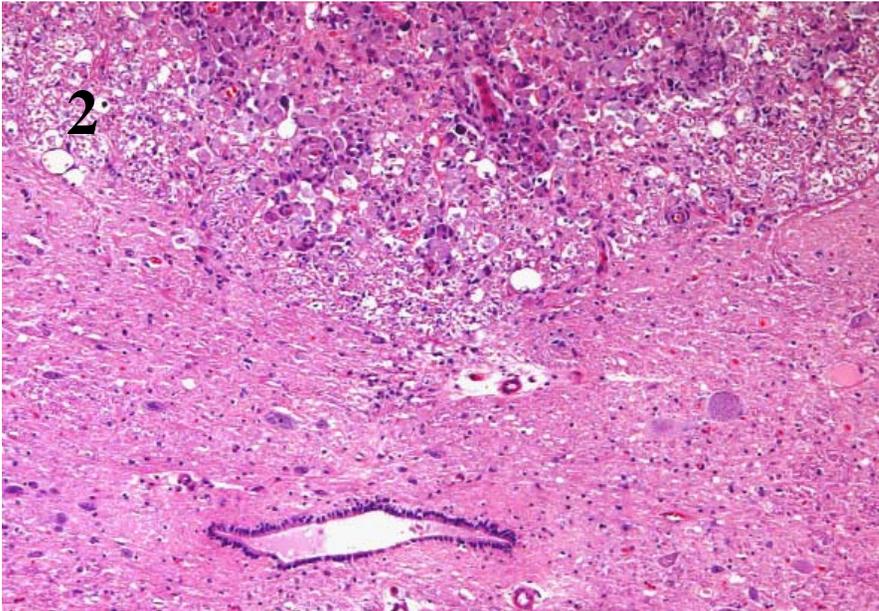
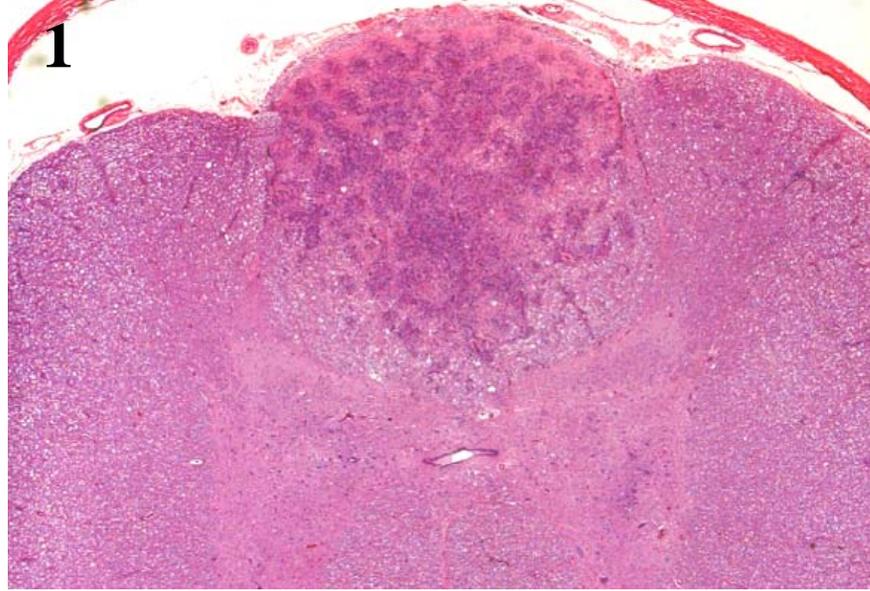
**(Continued next slide)**



(continued from previous slide)

- 3) MD<sub>x</sub> –  
Meningoencephalitis and thrombo-vasculitis, subacute, moderate, lympho-histiocytic, plasmacytic and neutrophilic, with acute infarction and locally extensive necrosis.
- 4) Changes are consistent with SBE (*Chlamydophila percorum*). The age of the animal is fairly typical, with changes widespread in brain and cord, in both white and grey matter, but seldom grossly visible. Also expected would be fibrinous polyserositis. Clinical course is subacute, and herd morbidity generally low.
- 5) Vasculitis and infarction occur in *Histophilus somni* or fungal infections, but certain pathological and epidemiological features would be expected to be different (consult appropriate literature)

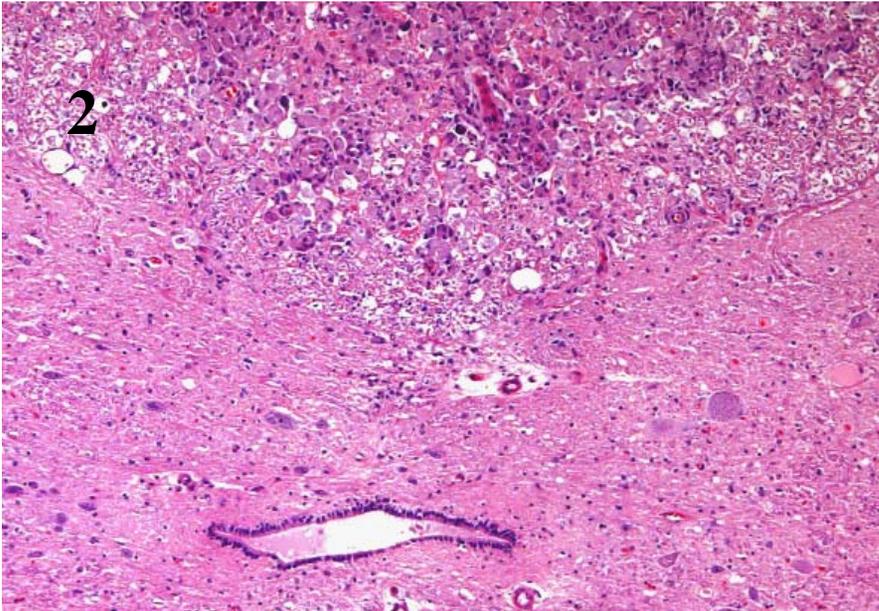
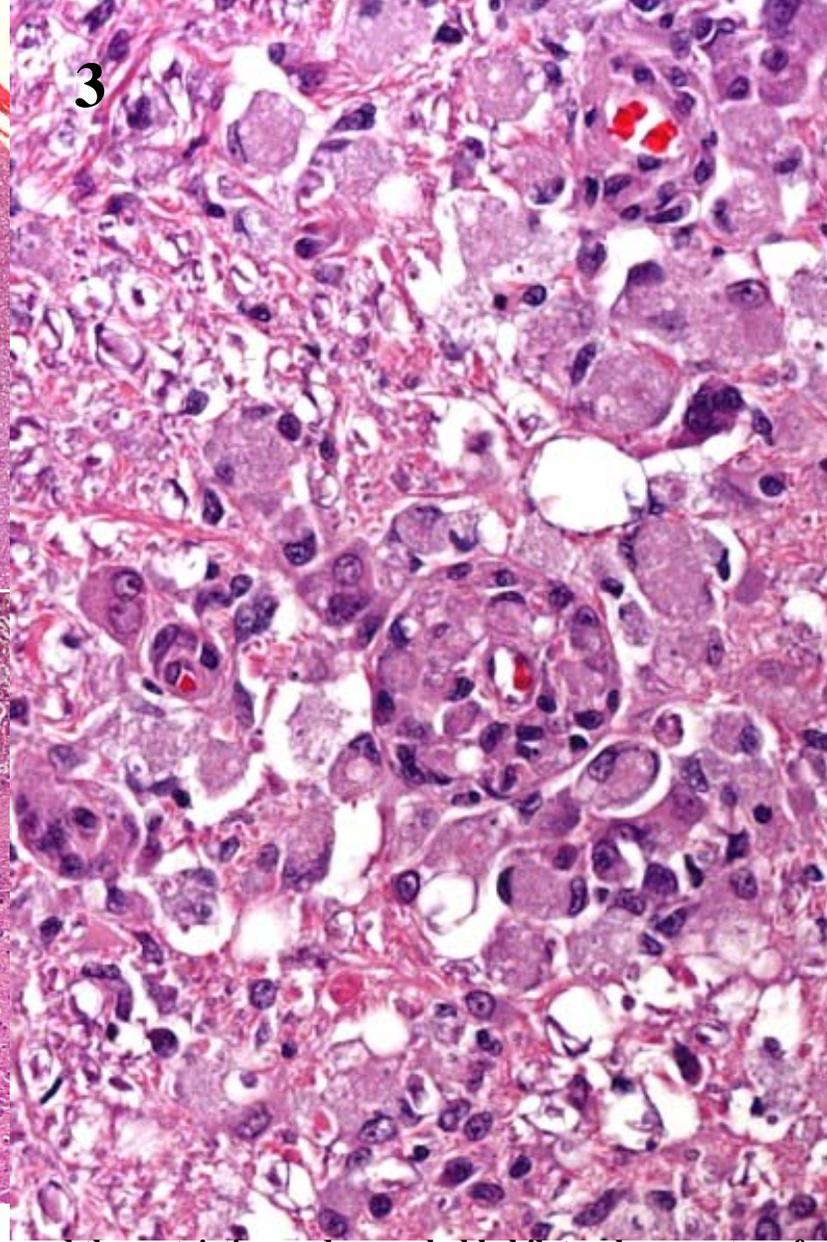
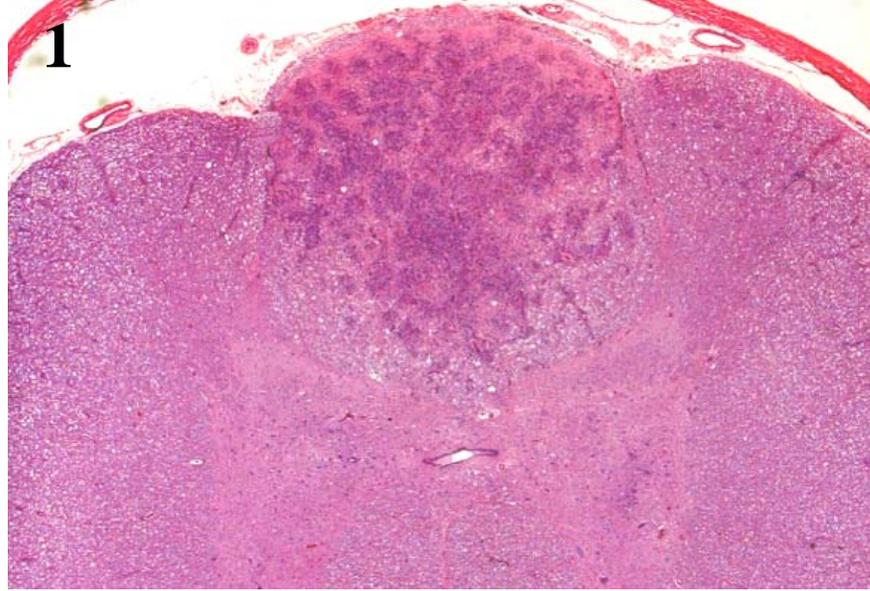




**Case 3.2. – Spinal cord of a young dog**

**Review –**

**1) Image 1 – dense multifocal and confluent hypercellularity symmetrically distributed in the dorsal funiculi; Image 2 – ditto, with apparent normality in adjacent grey matter; Image 3 – large histiocytoid cells cuffing vessels and crowding adjacent parenchyma**  
**2) Process evident - extensive angiocentric histiocytosis with associated loss of normal tissue elements. Possibilities might include neoplasia, or “lepromatous“ type of granulomatous reaction (continued next slide)**

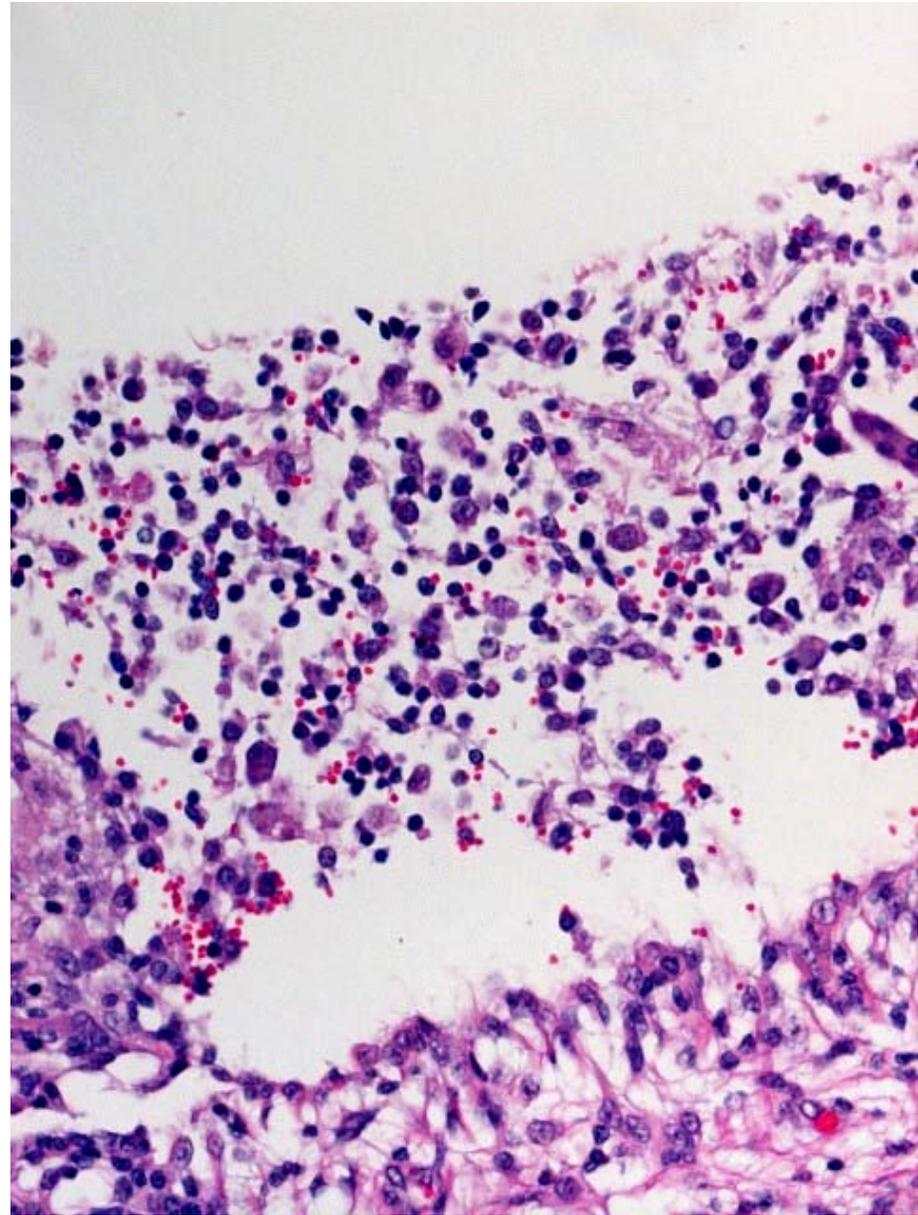
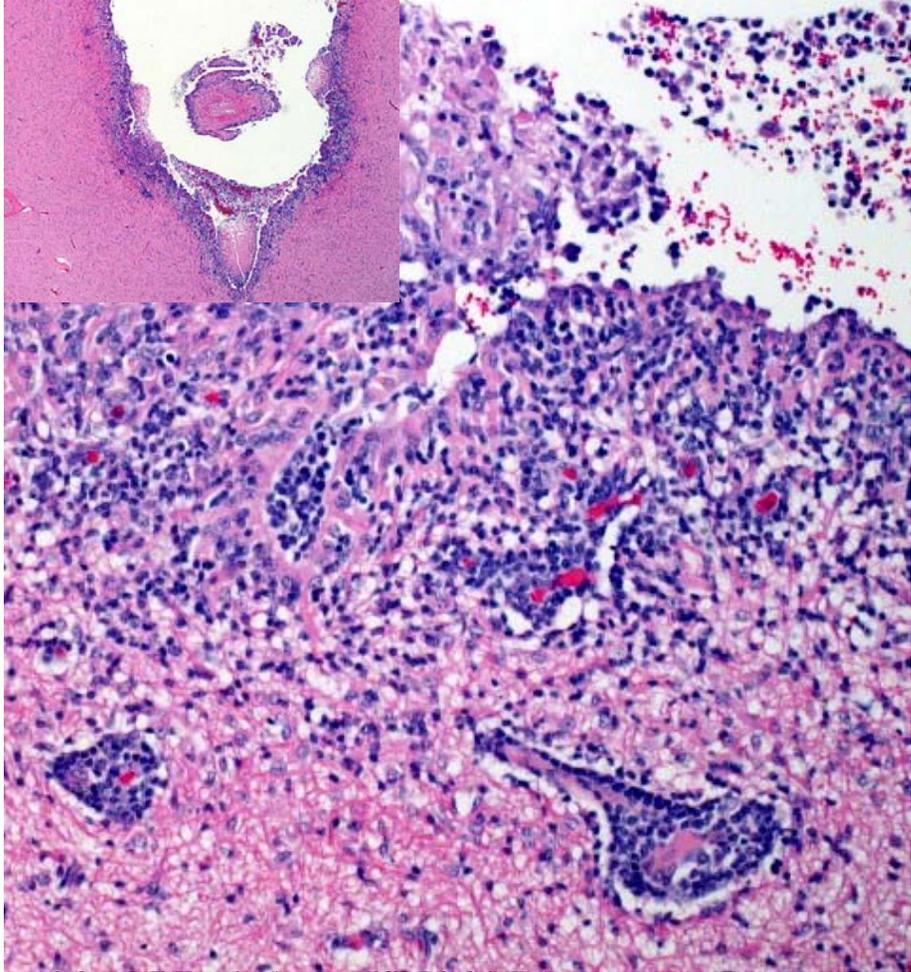
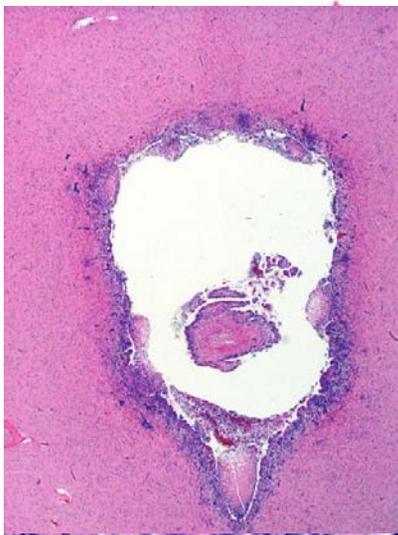


(continued from previous slide)

3) The principal characteristics are the monomorphism of the cellular reaction, and the restriction and remarkable bilateral symmetry of the lesion, suggesting the possibility of a metabolic disturbance of the tissue, rather than those mentioned above.

4) A general MDx might be “leukomyelopathy, subacute symmetrical histiocytic, proprioceptive tracts“

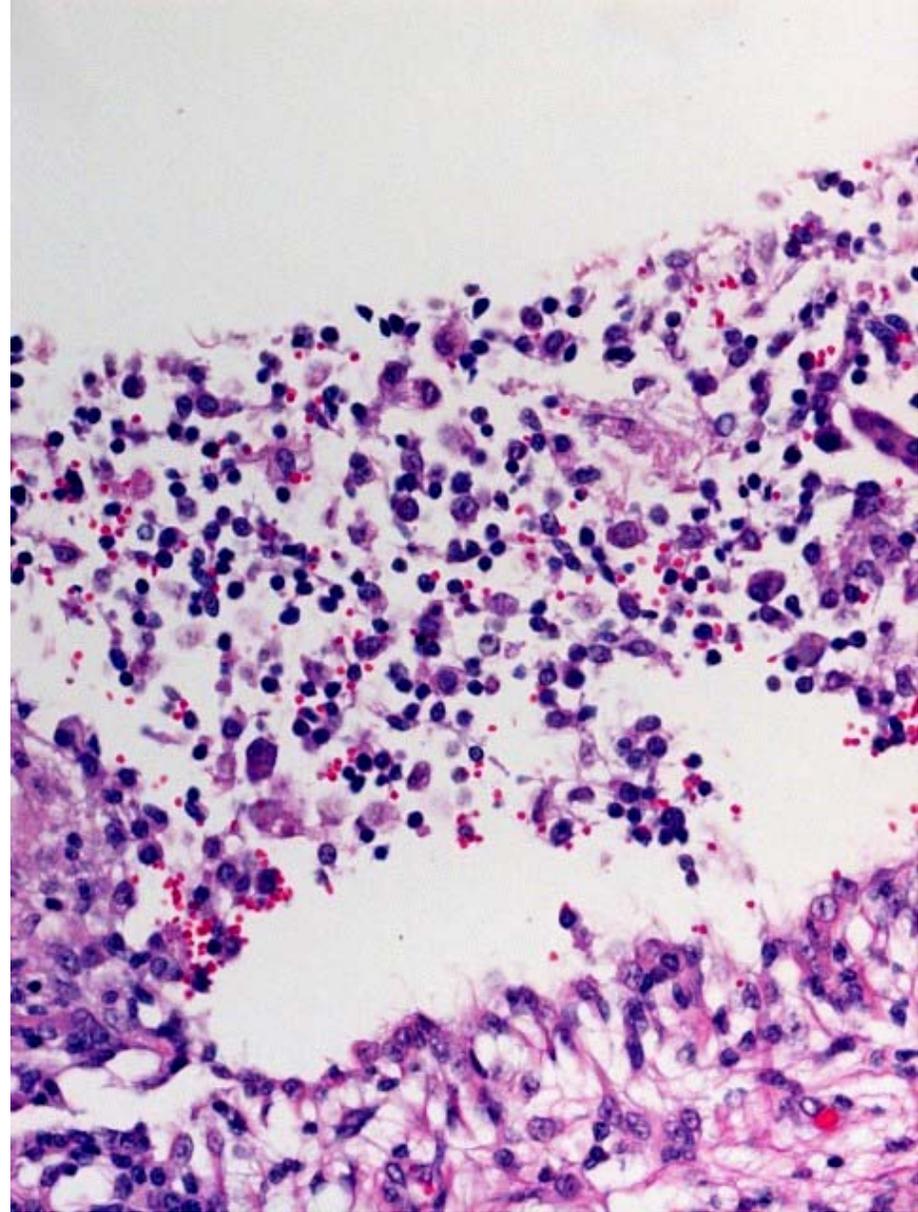
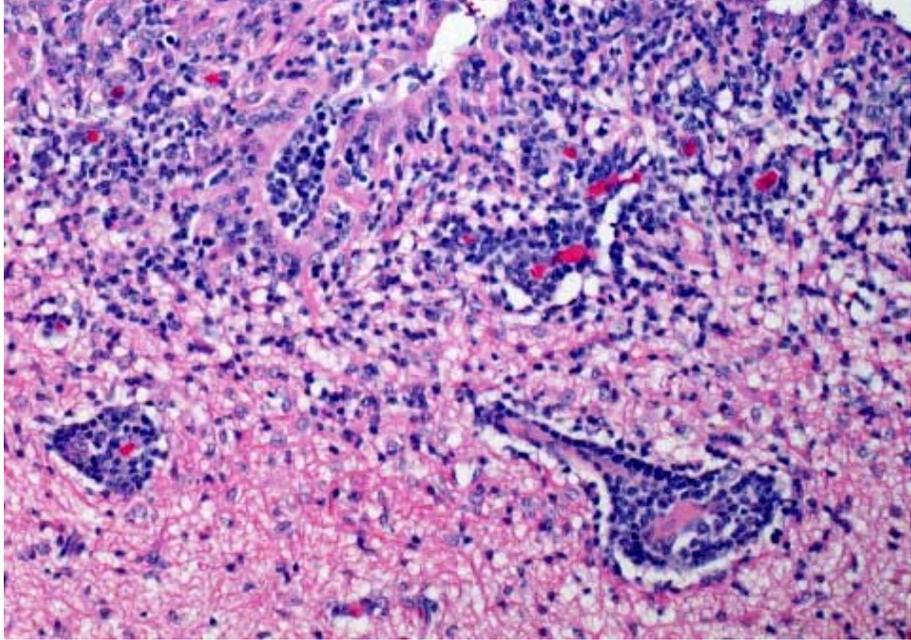
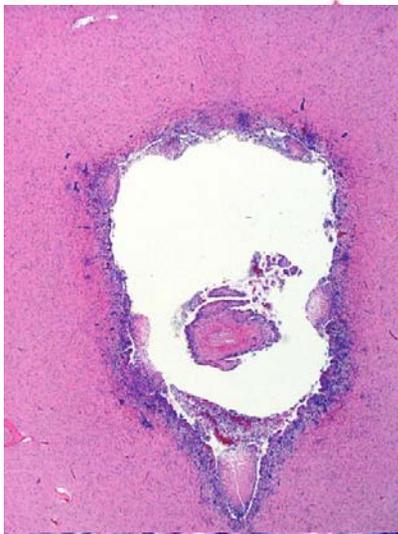
5) A specific disease suggested is Globoid Cell Leukodystrophy (“Krabbe’s“ Disease; Galactosyl-ceramidase deficiency) – the Dx in this case. Lesions typically are widespread in the brain and also in peripheral nerves. (Consulte literature for details)



**Case 3.3. – Midbrain (unspecified initially)**

**Review –**

- 1) There is a non-suppurative, predominantly lymphocytic inflammatory reaction with a distinct peri-aqueductal/ependymal orientation**
  - 2) An acceptable MDx might be – Encephalitis, periventricular with ependymitis, lymphocytic and histiocytic, subacute, moderate**
- (continued next slide)**

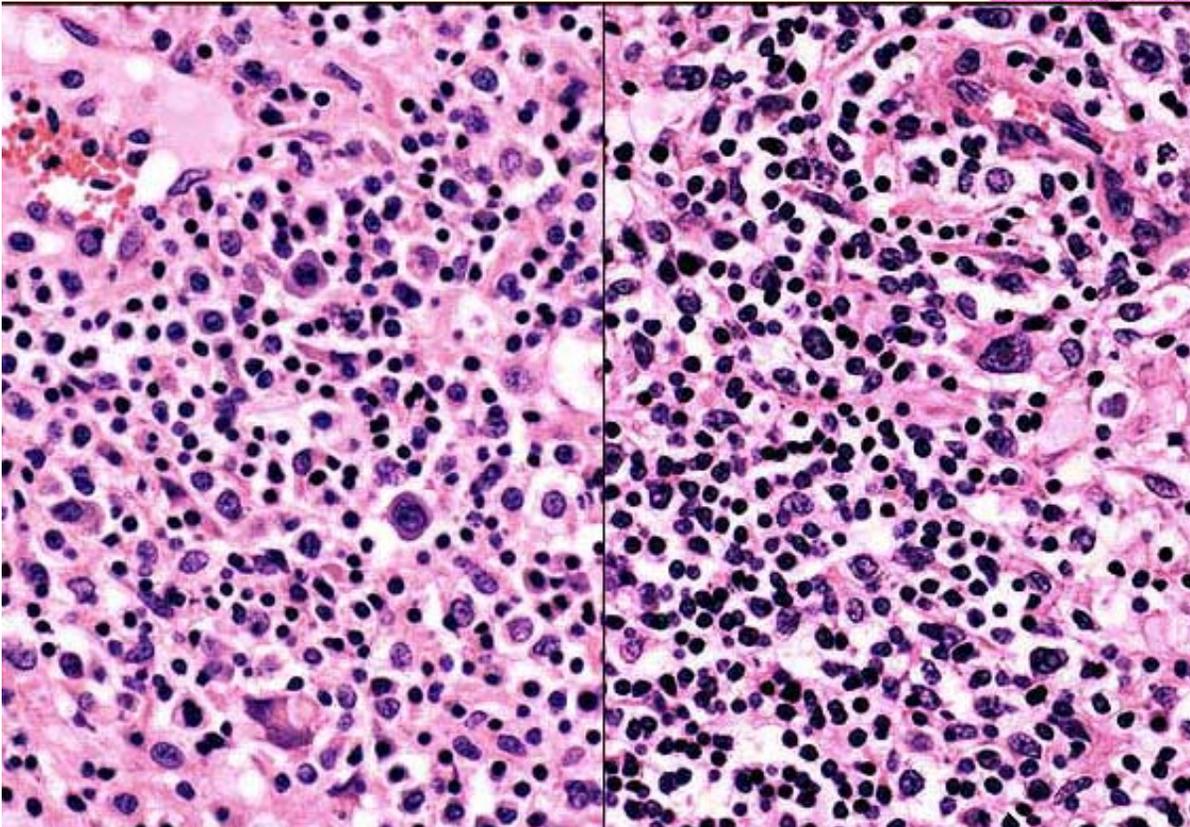
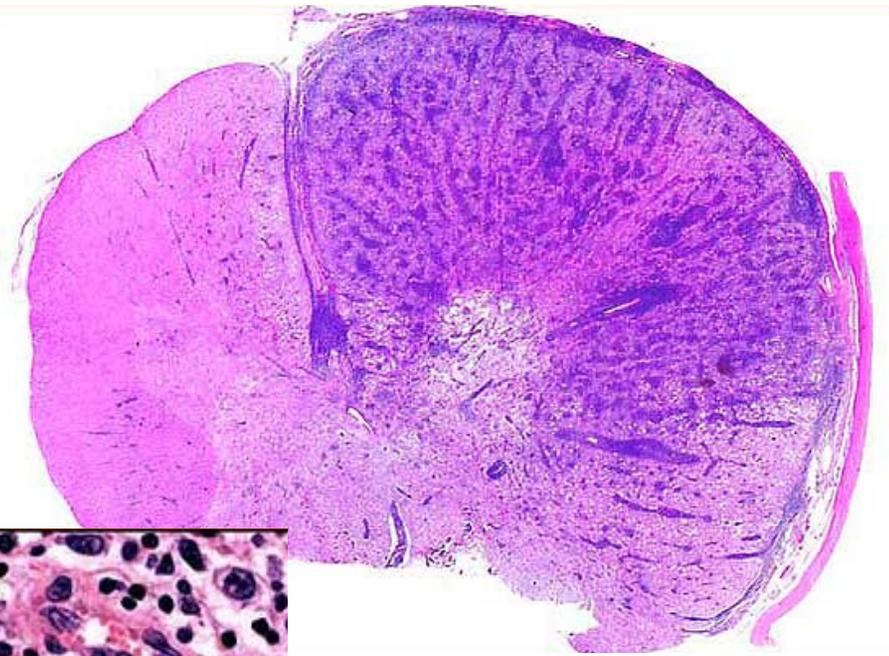


(continued from previous slide)

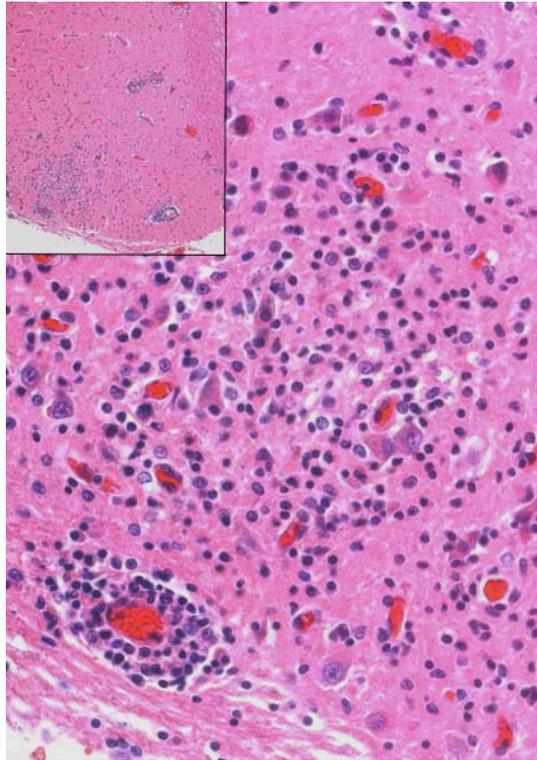
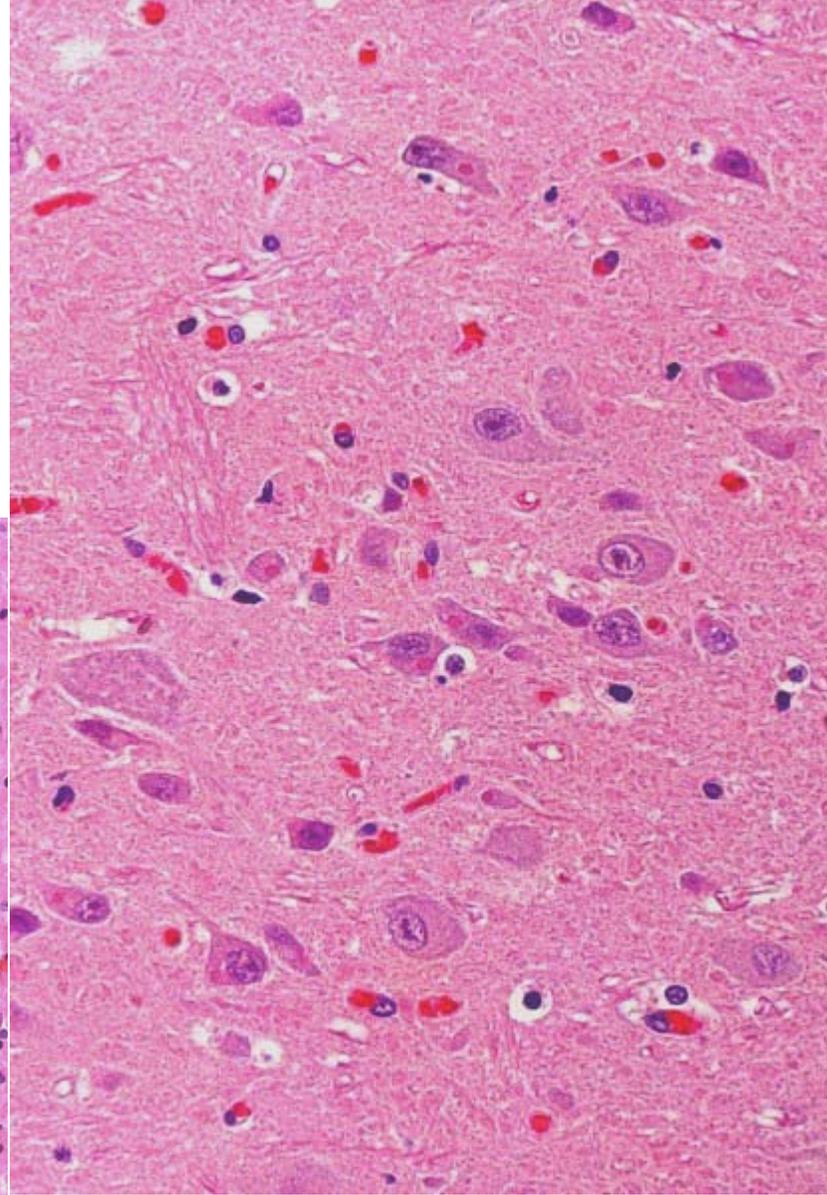
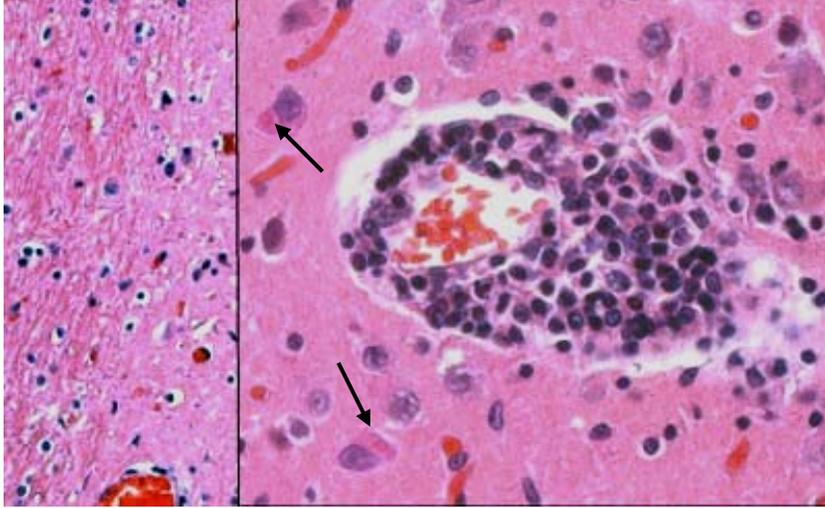
3) A specific disease suggested by this pattern of lesion a) in an ovine would be Visna, b) in an equine would be EIA.

5) Given that the subject in this case was a caprine, a probable diagnosis would be CAEV (which was the case). However this “Visna-like” reaction is NOT TYPICAL of this infection and the classical lesions have a very different character (see the following slide).

Comment – periventricular inflammation is also a prominent feature of Feline Coronavirus (FIP), but the reaction usually features many neutrophils and plasma cells, and a fibrinous effusion.



**Case3.3 – with supplementary images to show the more typical type of lesion with CAEV infection. Lesions are localised areas of inflammatory demyelination, often in the spinal cord (as shown here). There is dense lympho-histiocytic infiltration, reactive astrogliosis and frequently eventual cavitation.**



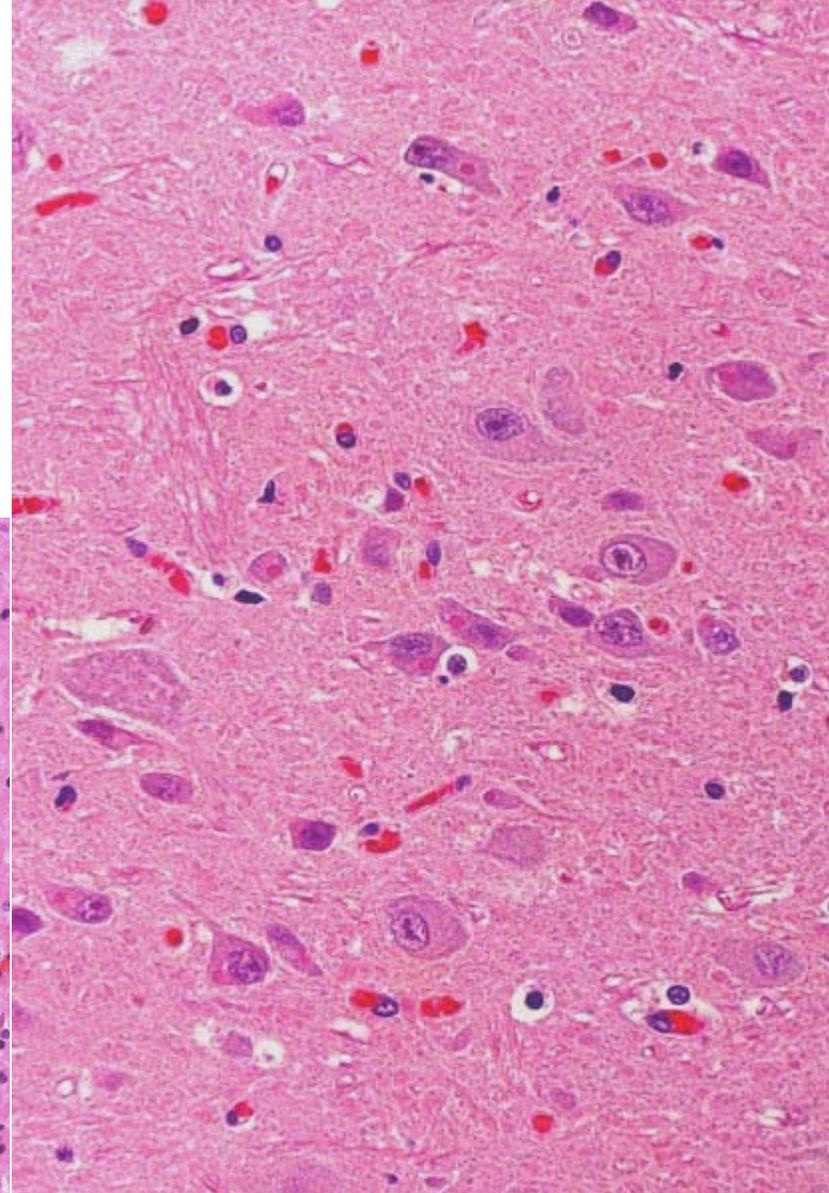
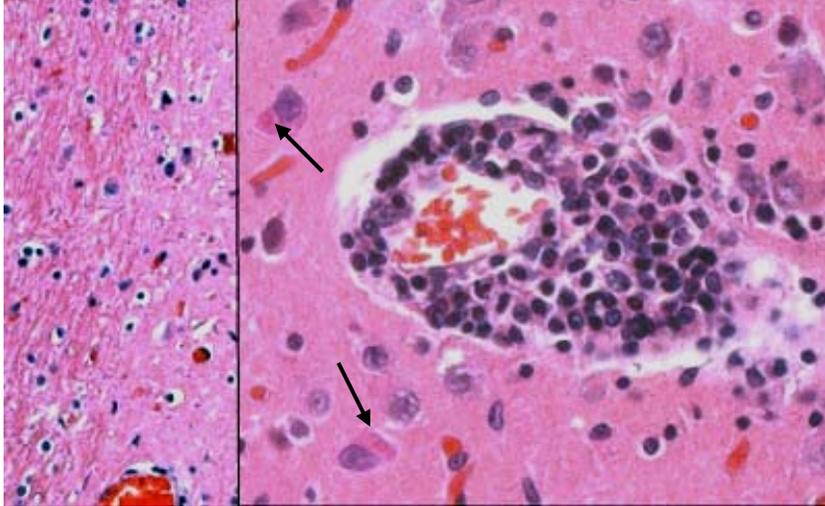
**Case 3.4 – Thalamus of a cat – Hx of acute seizures and death**

**Review – with supplementary image – adjacent thalamus**

**1) The general features are perivascular lymphoid cuffing and localised parenchymal hypercellularity, probably due to a combination of microgliosis and cellular infiltration. In addition, some neurons contain large, eosinophilic, intracytoplasmic inclusion bodies (arrows)**

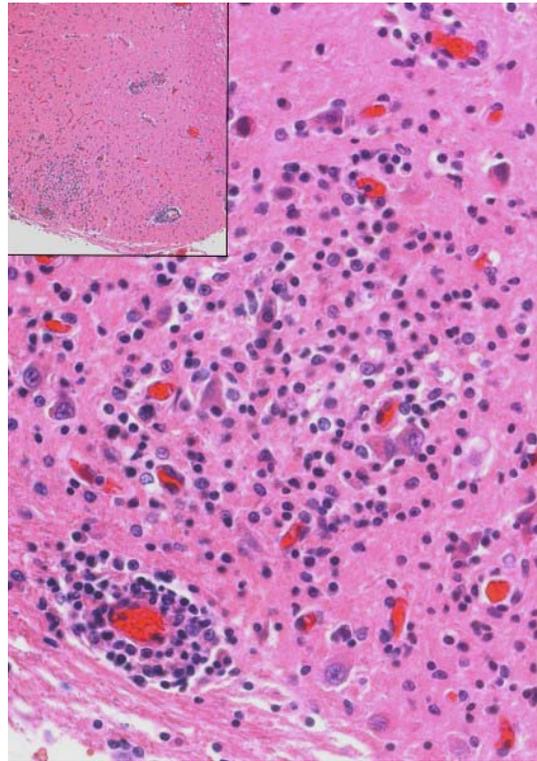
**2) MDx – Encephalitis, Subacute non-suppurative, thalamus, with intracytoplasmic neuronal inclusion bodies. The disease which should be excluded is Rabies (or other Lyssavirus infection?)**

**(continued next page)**



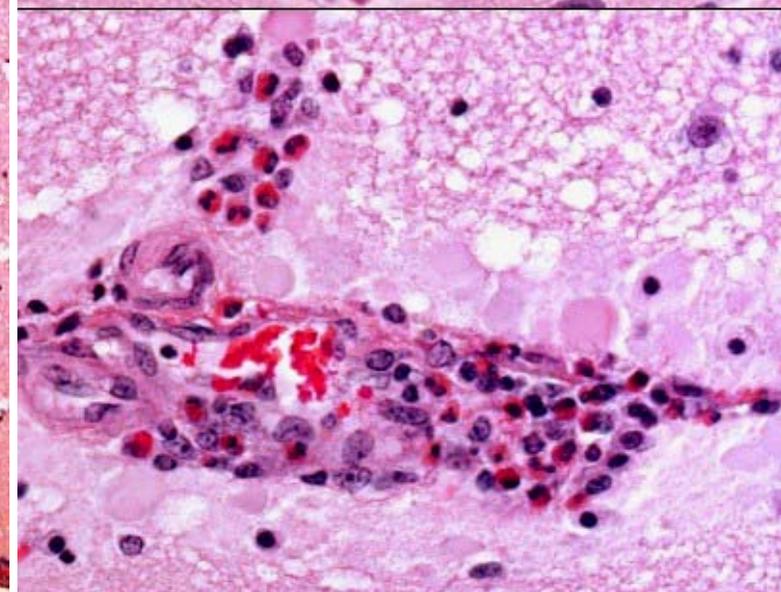
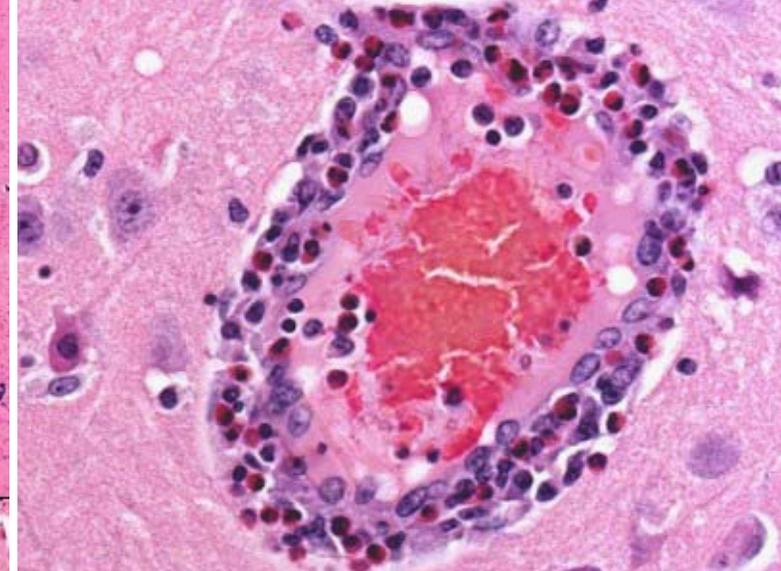
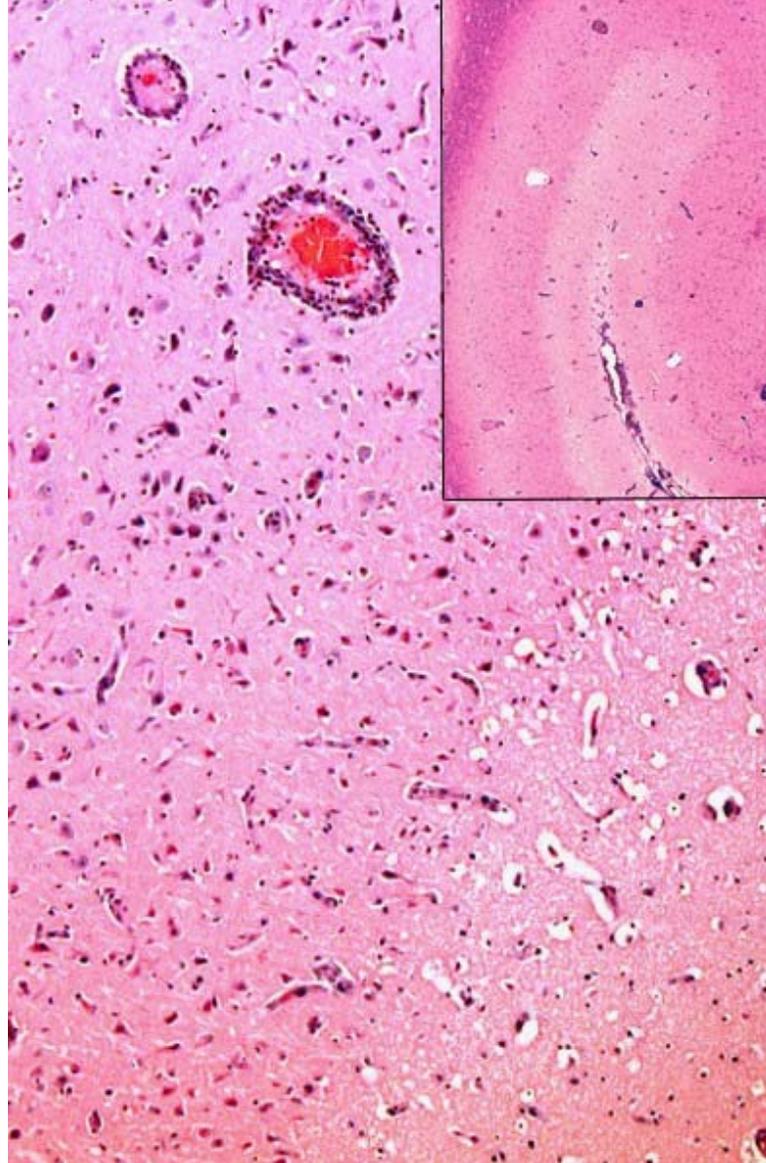
(continued from previous slide)

3) Cautionary note – in several species “pseudo-Negri bodies“ can occur in certain regions of the brain. In the cat, this includes the lateral geniculate body (as in this case) and the hippocampus. The third image here shows numerous such bodies in the LGN of the cat in this case. Note also that Negri bodies without inflammation does not exclude rabies. In this case rabies was excluded by immunocytochemistry.



**Case 3.5 – Cerebral cortex - unspecified Review –**

- 1) The significant features illustrated are: Palor, vascular prominence and rarefaction of the neuropil in outer cortical grey laminae; Numerous eosinophilic neurons; perivascular protein globules; Venules with hypertrophied endothelium and perivascular infiltration by numerous eosinophils and mononuclear cells**
- 2) Processes that can be identified are: extensive acute laminar ischemic neuronal necrosis and vasogenic oedema of the neuropil, with moderate inflammatory response, predominantly eosinophilic**



**(continued next slide)**

(continued from next slide)

3) An acceptable MDx could be: Cerebrocortical neuronal necrosis, acute, laminar, with moderate perivascular eosinophilic meningoencephalitis. These changes are consistent with acute salt poisoning/water deprivation in the pig, and this was the diagnosis in this case.

**Comment:** The combination of cortical necrosis and eosinophilic inflammation is virtually pathognomonic for this porcine disease. The pathogenesis of the eosinophilia is unknown, but acute inflammatory infiltrates in pigs often contain many eosinophils.

