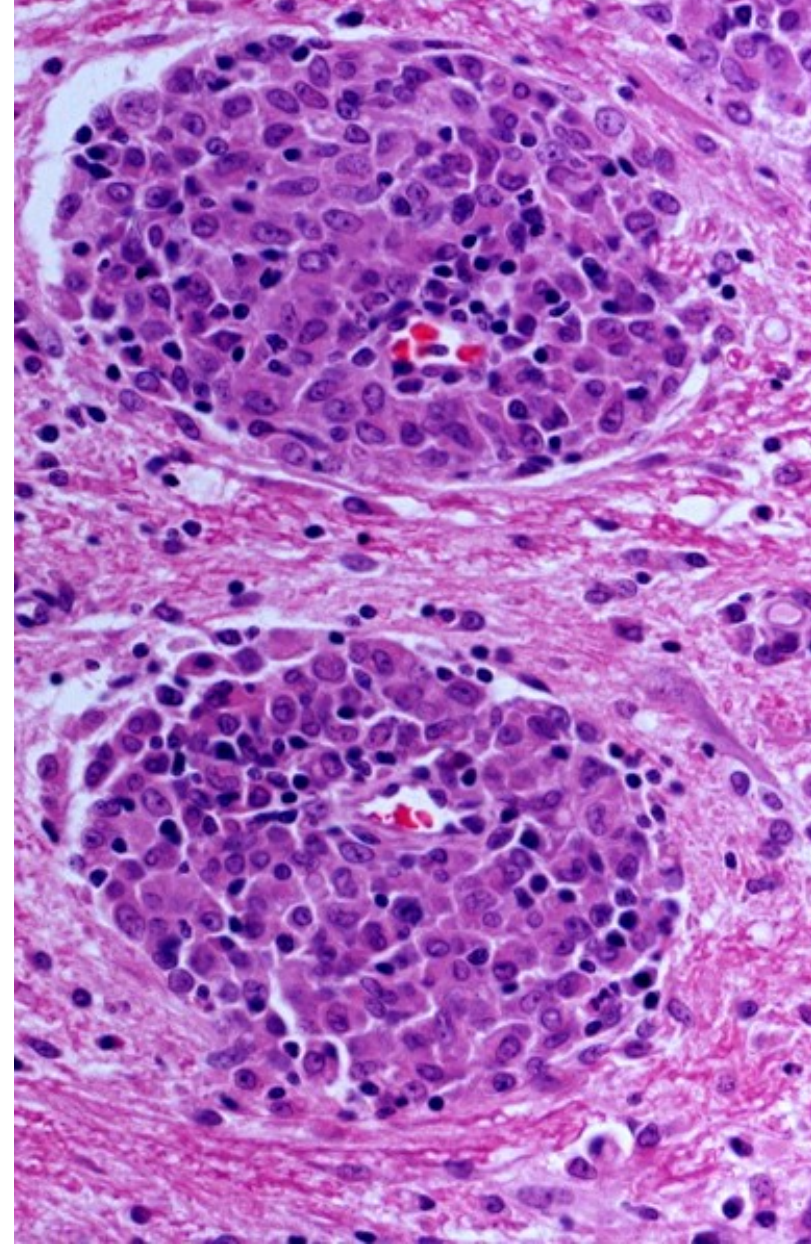
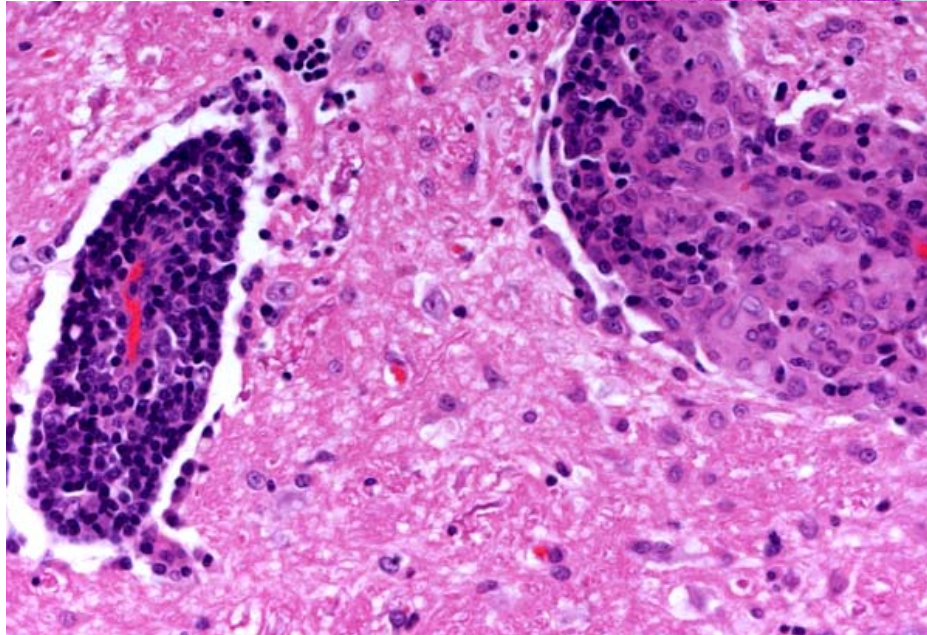
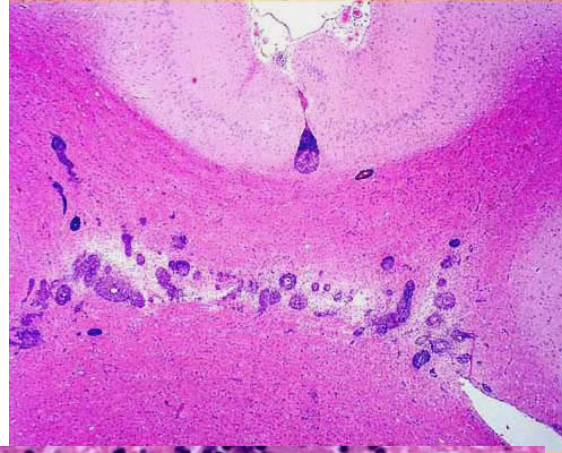
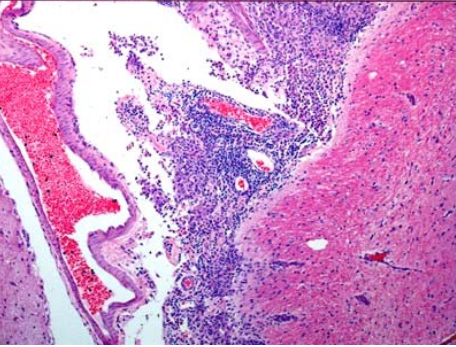
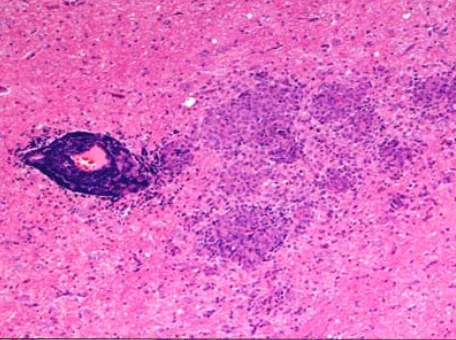


Case 8.1 – Dog. Lesions as depicted found in the brain and spinal cord.

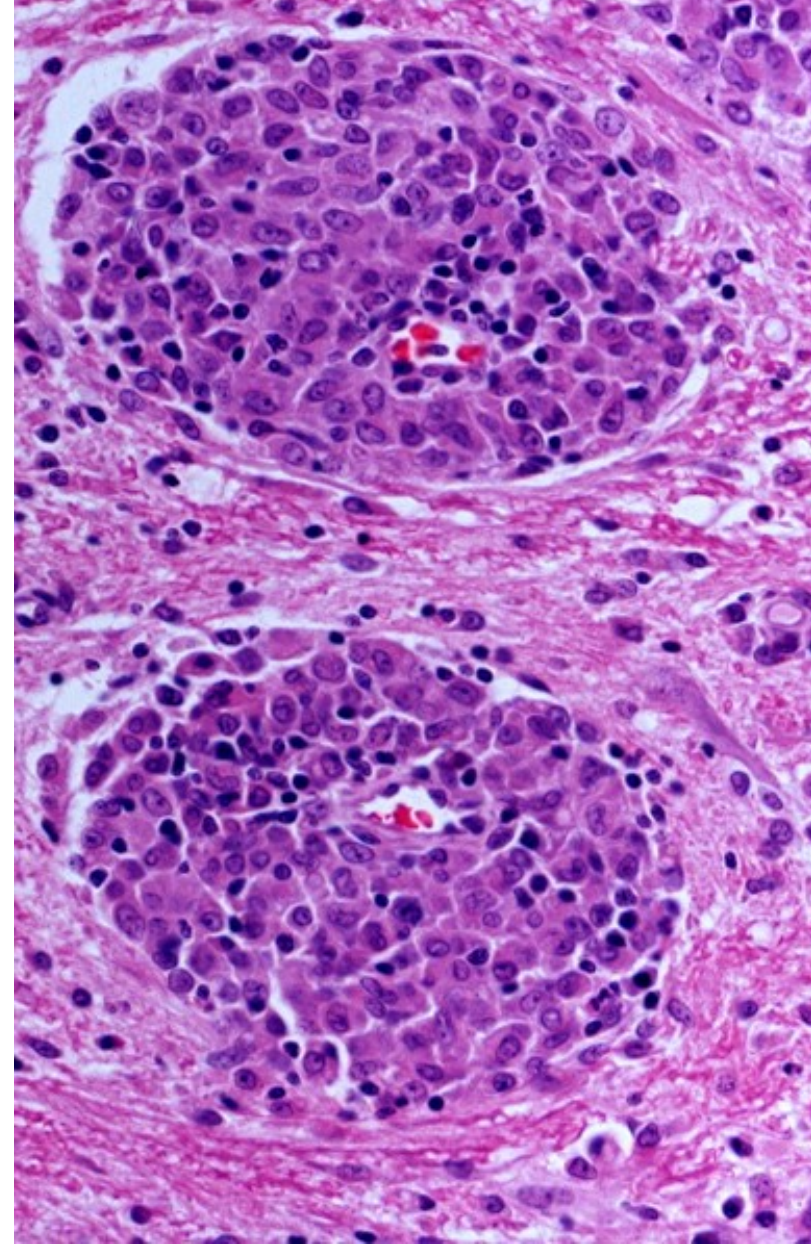
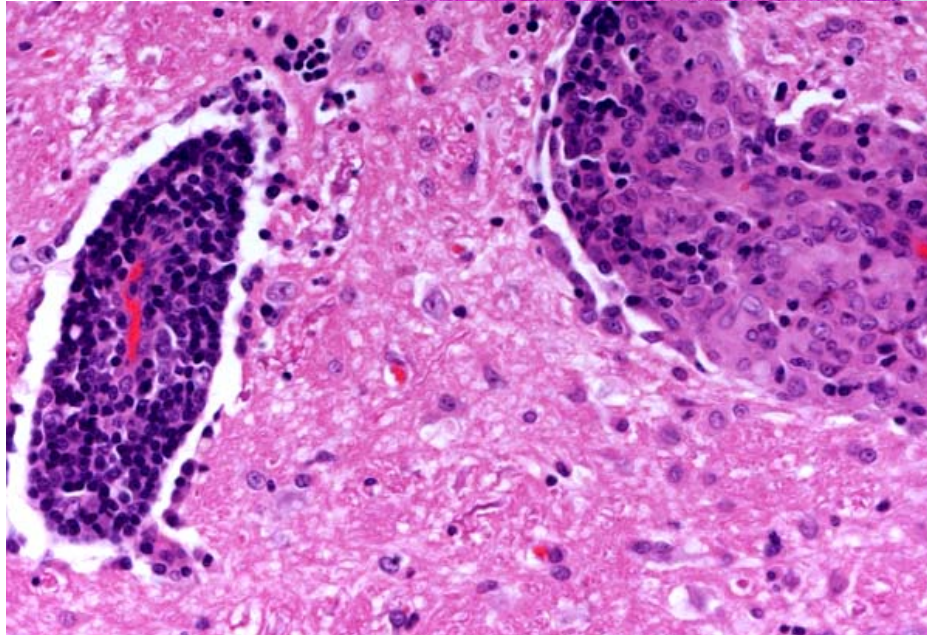
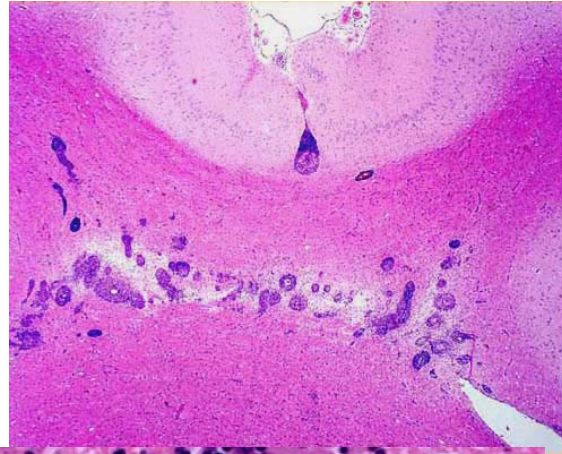
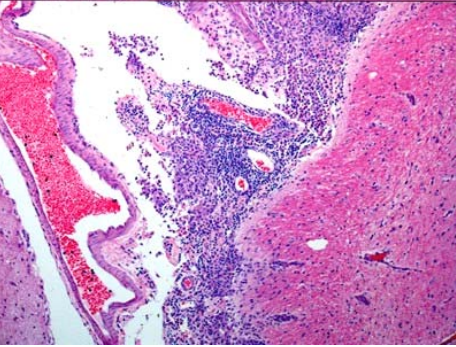
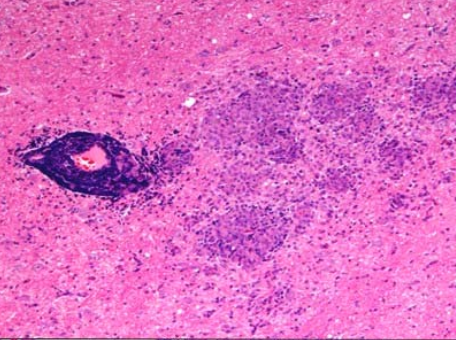
Review – With supplementary image.

1) – Changes to be seen include: meningeal and intramedullary infiltrates composed of lymphocytes and histiocytoid cells in varying proportions; distinct angiocentric orientation with little parenchymal infiltration. (continued next slide)



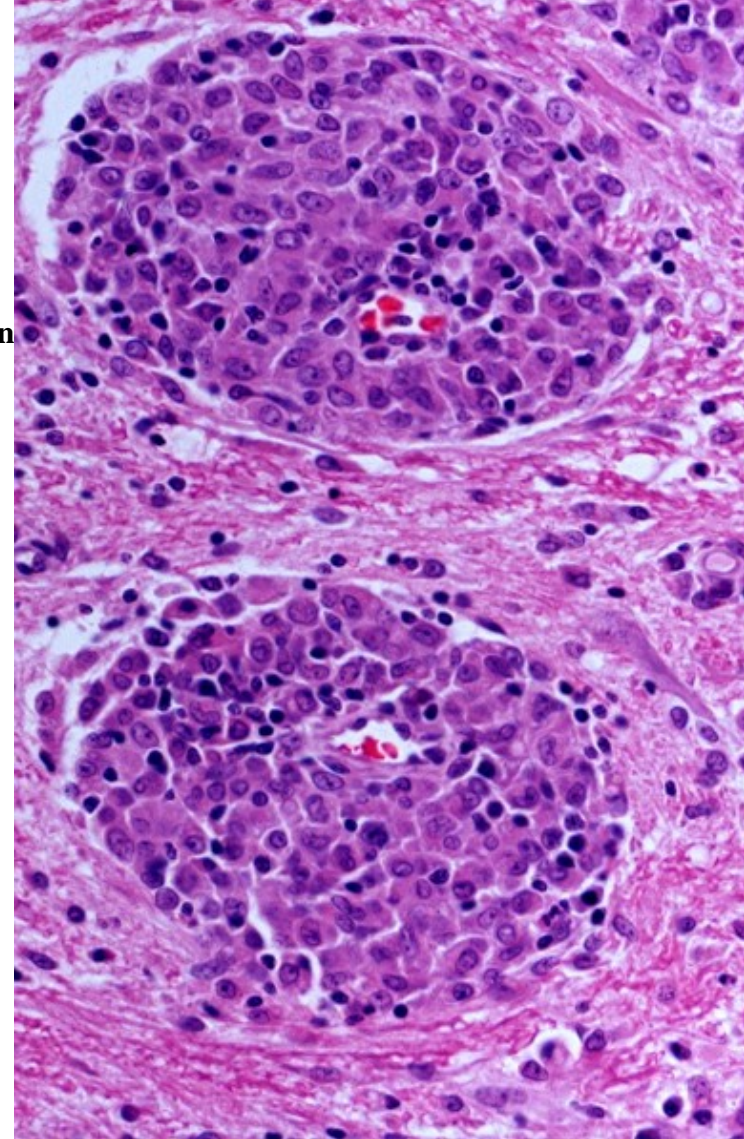
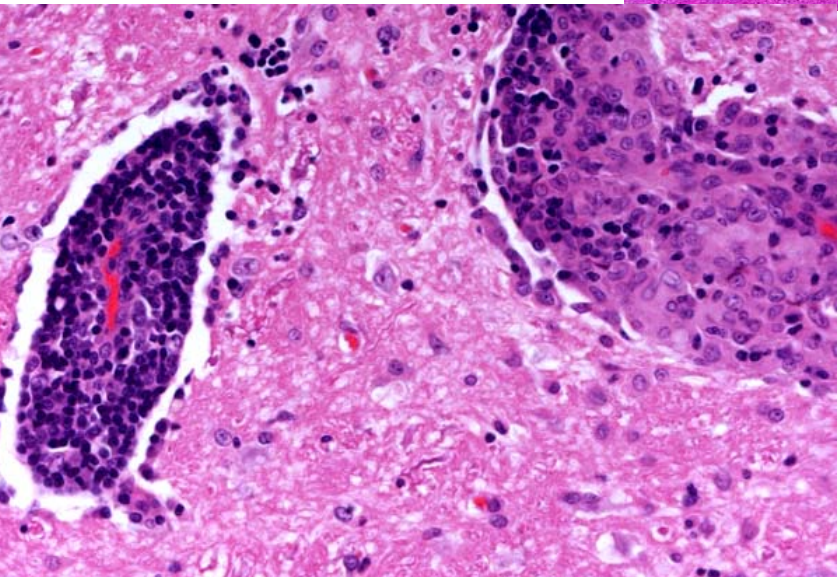
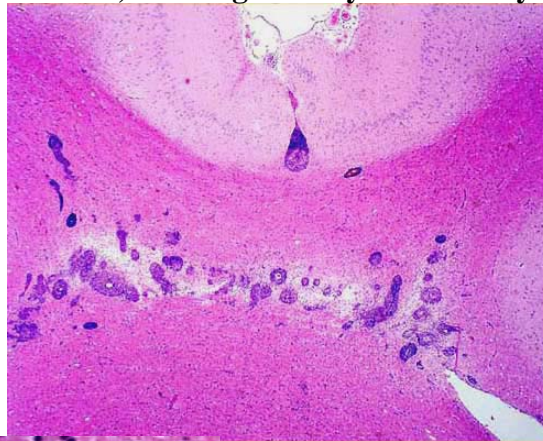
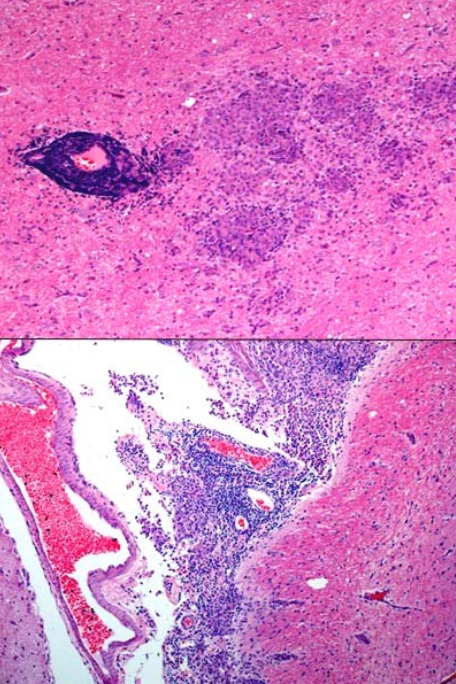
(continued from previous slide
2) – An acceptable MDx could be –
“Meningoencephalitis, lymphohistiocytic,
perivascular, subacute“

(continued next slide)



(continued from previous slide)

3) – This a case of GME. Major characteristics of the reaction are- multifocal to confluent dense perivascular cuffs which may consist largely of lymphocytes or histiocytoid cells, or various combinations of both, with plasma cells and rarely neutrophils; Little tendency for parenchymal infiltration; Lesions occasionally localised but more typically widely disseminated; More concentrated in white than in grey matter ; Most intense in cerebellum/medulla; Meninges always extensively involved.

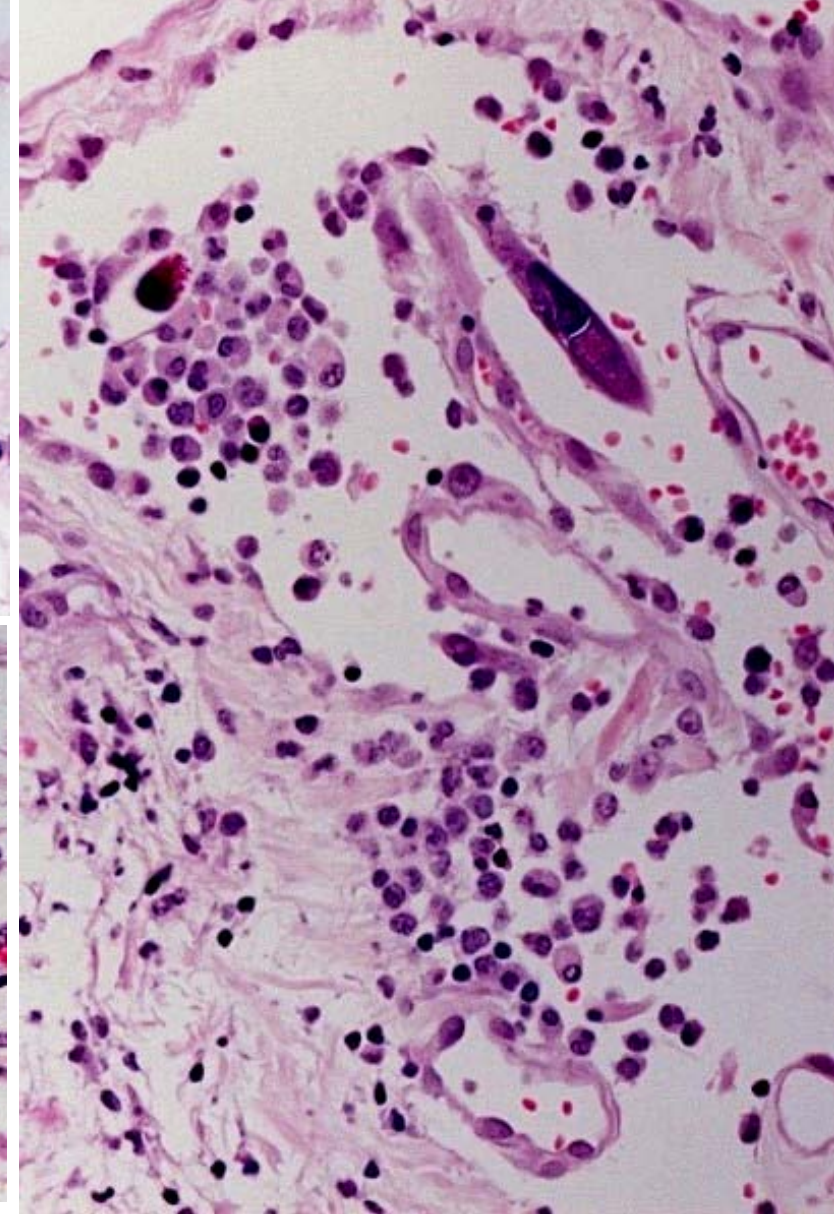
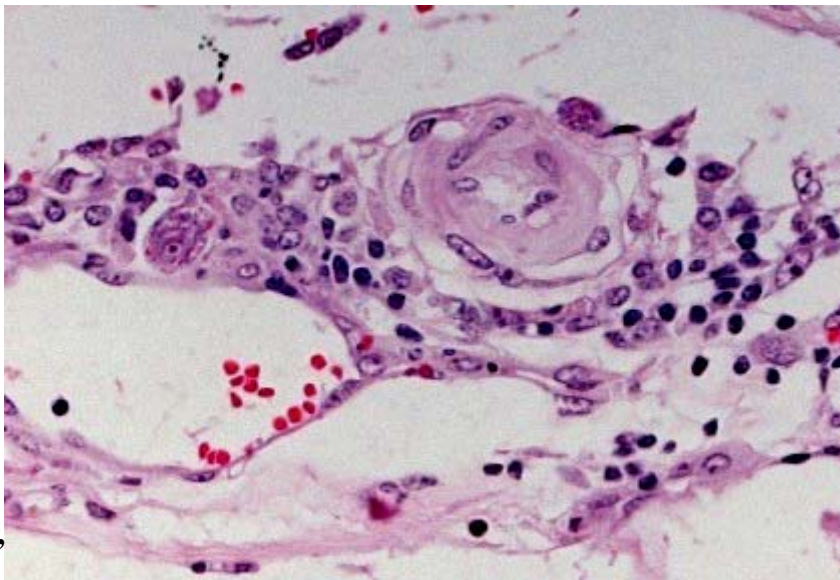
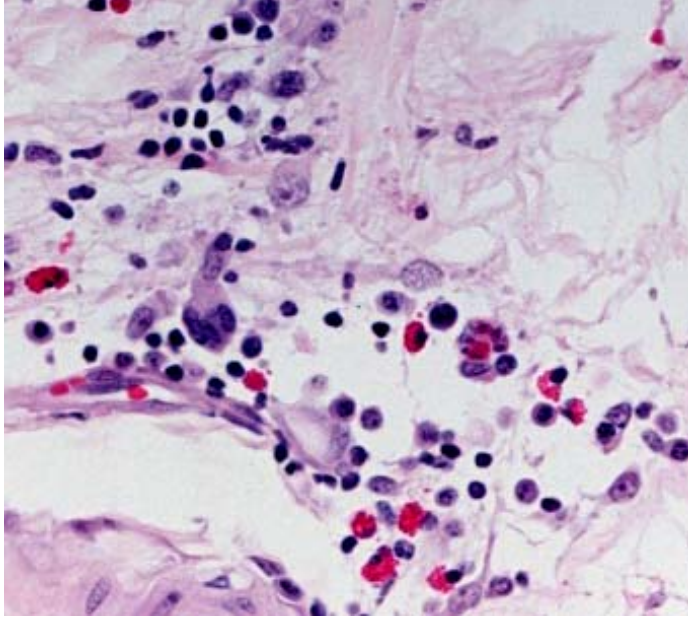


Case 8.2 – Brainstem of a horse – there was extensive involvement of the meninges by the process illustrated. Review – with one image substituted to provide more detail.

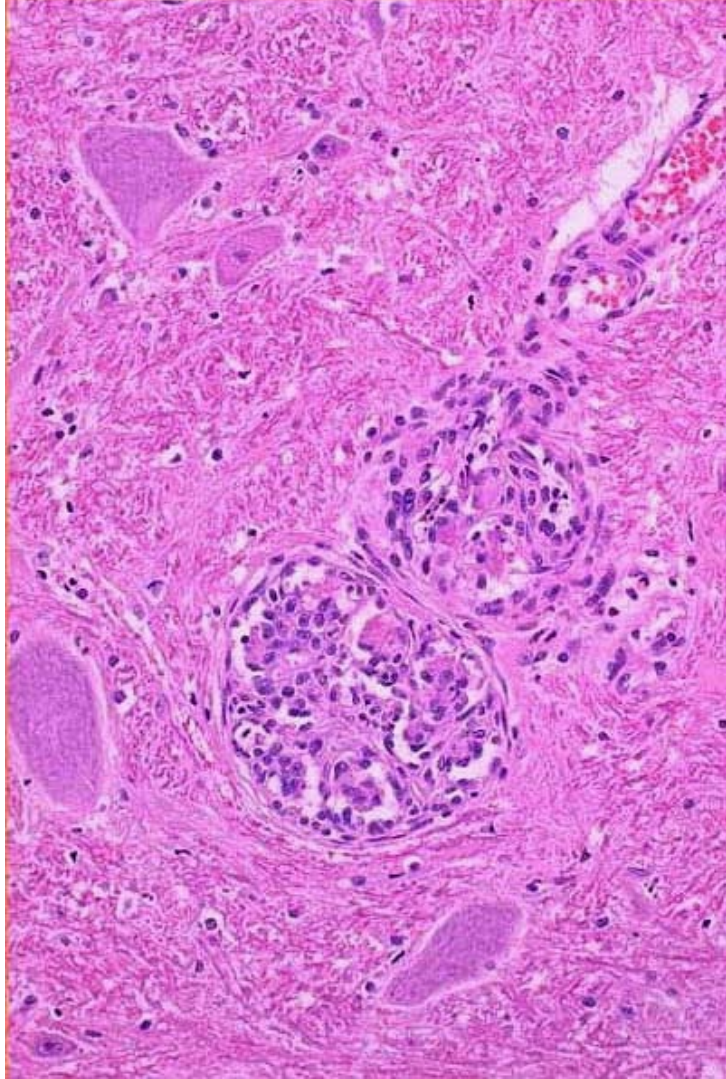
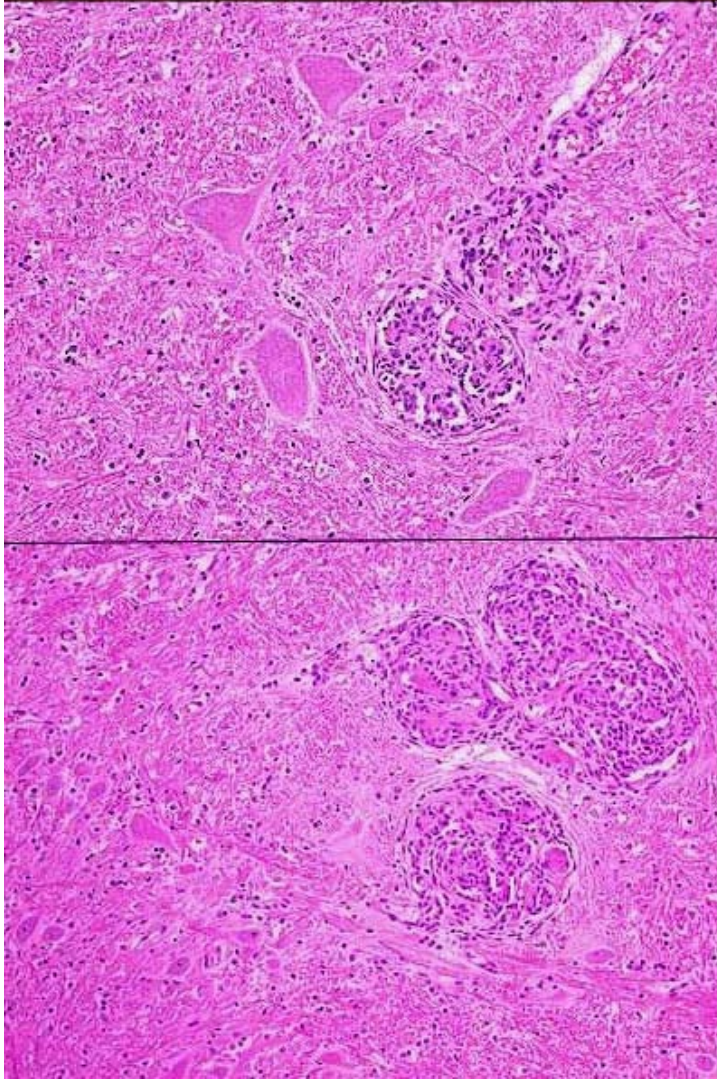
1)– There is mild leptomeningeal hypercellularity due to a mixed infiltrate which includes lymphoid cells, eosinophils, and macrophages,

occasionally multinucleated. Several structures suggestive of nematode forms are evident in cross and longitudinal section.

2) – An acceptable MDx could be “Leptomeningitis, mild, lymphohistiocytic and eosinophilic, with intralesional nematode forms“.



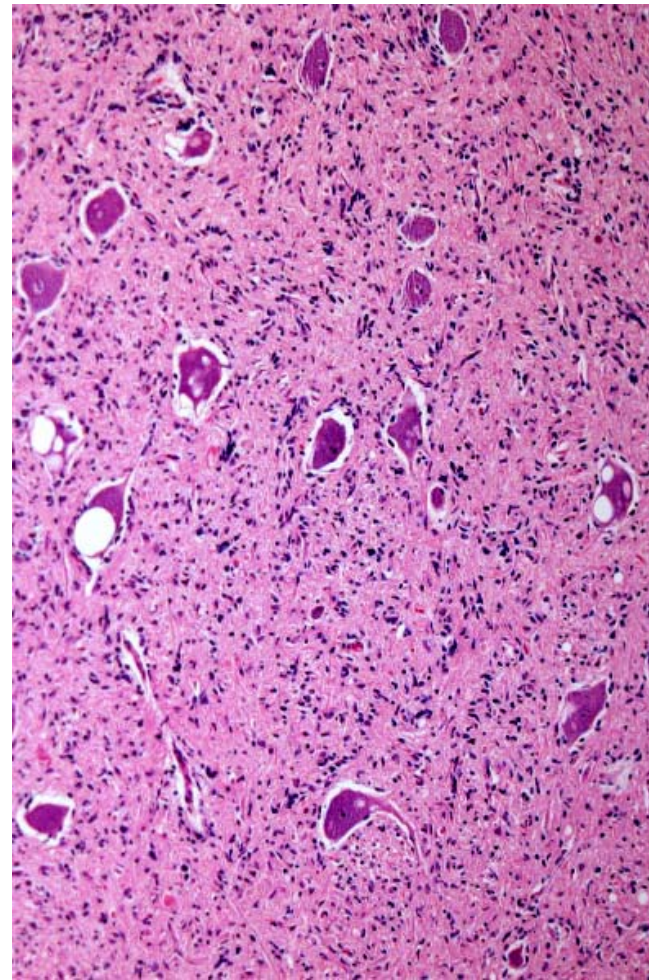
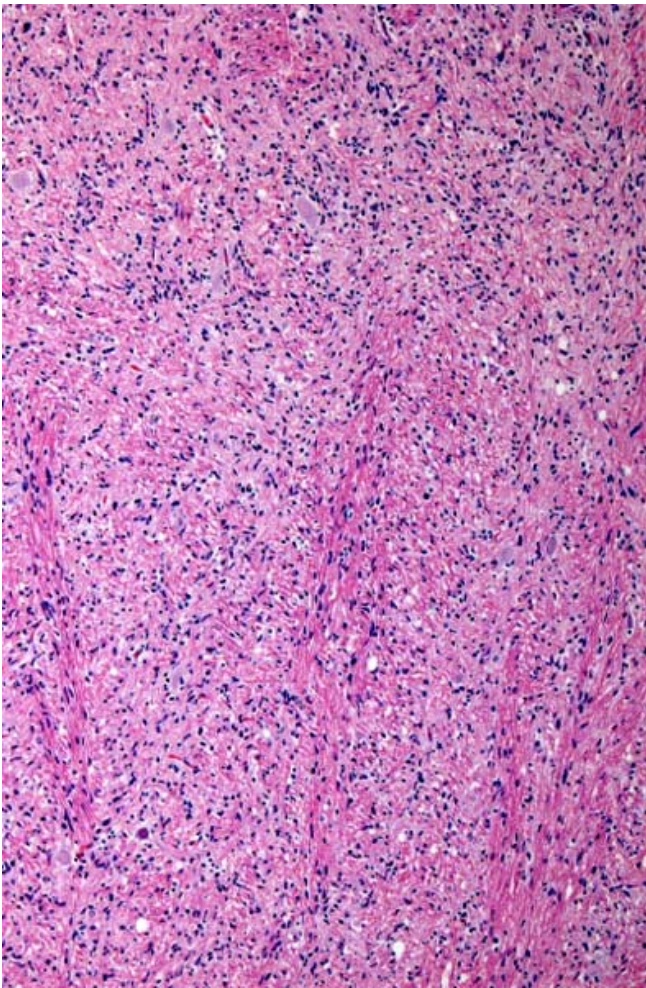
2) – The major aetiological possibility is *Halicephalobus gingivalis*“, which was the diagnosis in this case. Also in this case parasites were rather sparse, and the reaction quite mild. Parasites are often present in massive numbers and the lesion may penetrate into the parenchyma.



Case 8.3 – Caudal brainstem of a young adult cat – multifocal and extensive changes. Similar lesions were present in heart and kidney.

Review –

- 1)- There are multiple glomeruloid structures within dilated arterioles and perhaps venules. The surrounding neuroparenchyma appears normal.**
- 2) – Possible basic pathologic processes could include, malformative, neoplastic or reactive intravascular proliferation of presumptive endothelial or mesenchymal cells. Lesions are not typical of recanalised thrombi, and there is no evidence of vascular leakage or ischemic degeneration in adjacent tissue.**
- 3) – This is an example of a recently described uncommon idiopathic disease of the cat for which the name “ Feline Systemic Reactive Angioendotheliomatosis“ has been proposed. In the heart the changes are associated with thrombosis and myocardial injury.**



Case 8.4 – Aged dog. The lesion depicted was extensive in grey and white matter from the cerebrum to the caudal brainstem. Neurons shown on the right were in the motor nucleus of CN5.

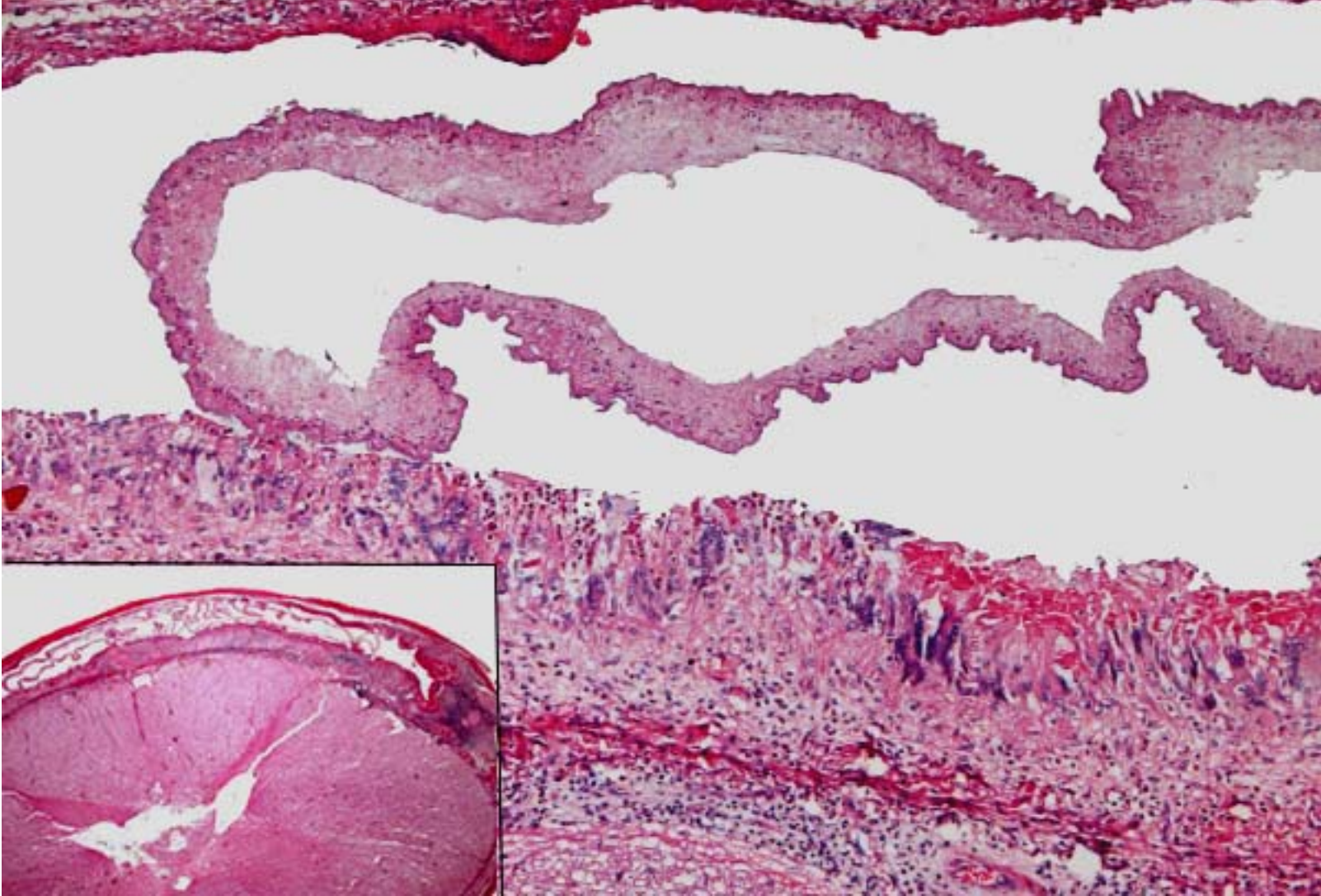
Review –

– Significant features are: Diffuse, even, hypercellularity of the neuroparenchyma in both grey and white matter; An absence of overt degenerative changes in neuroparenchyma; Large intraneuronal vacuoles in CN5.

2) – Pathologic processes evident are: isomorphic diffuse gliosis by cells which phenotypically most resemble microglia, and which appears to be “primary“ rather than “reactive“;

3) – “Scrapie-like“ neuronal vacuoles are sometimes found incidentally at this site in the dog, as they are in the bovine red nucleus. No other neurons were so affected in this case – thus the lesion was not considered significant.

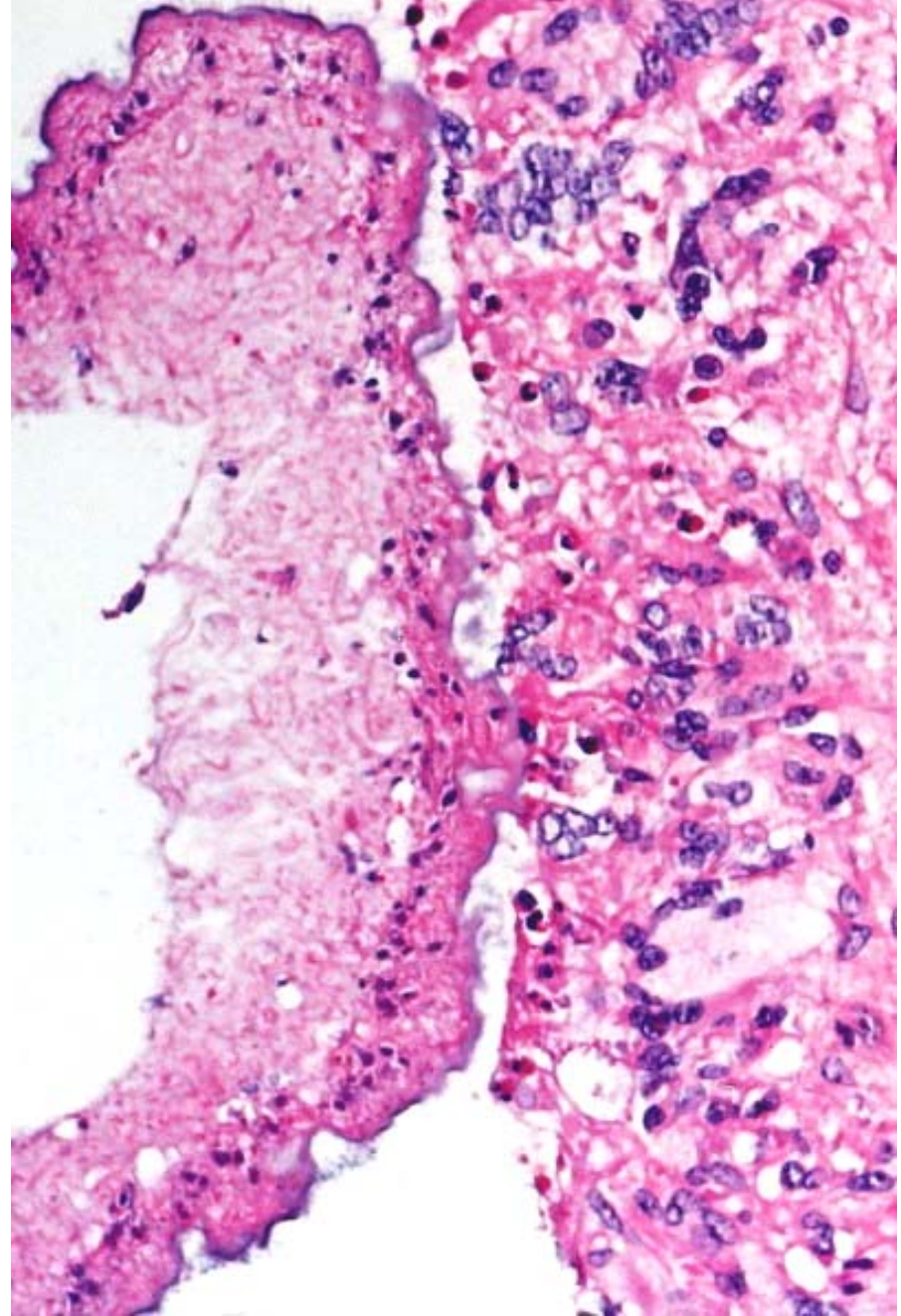
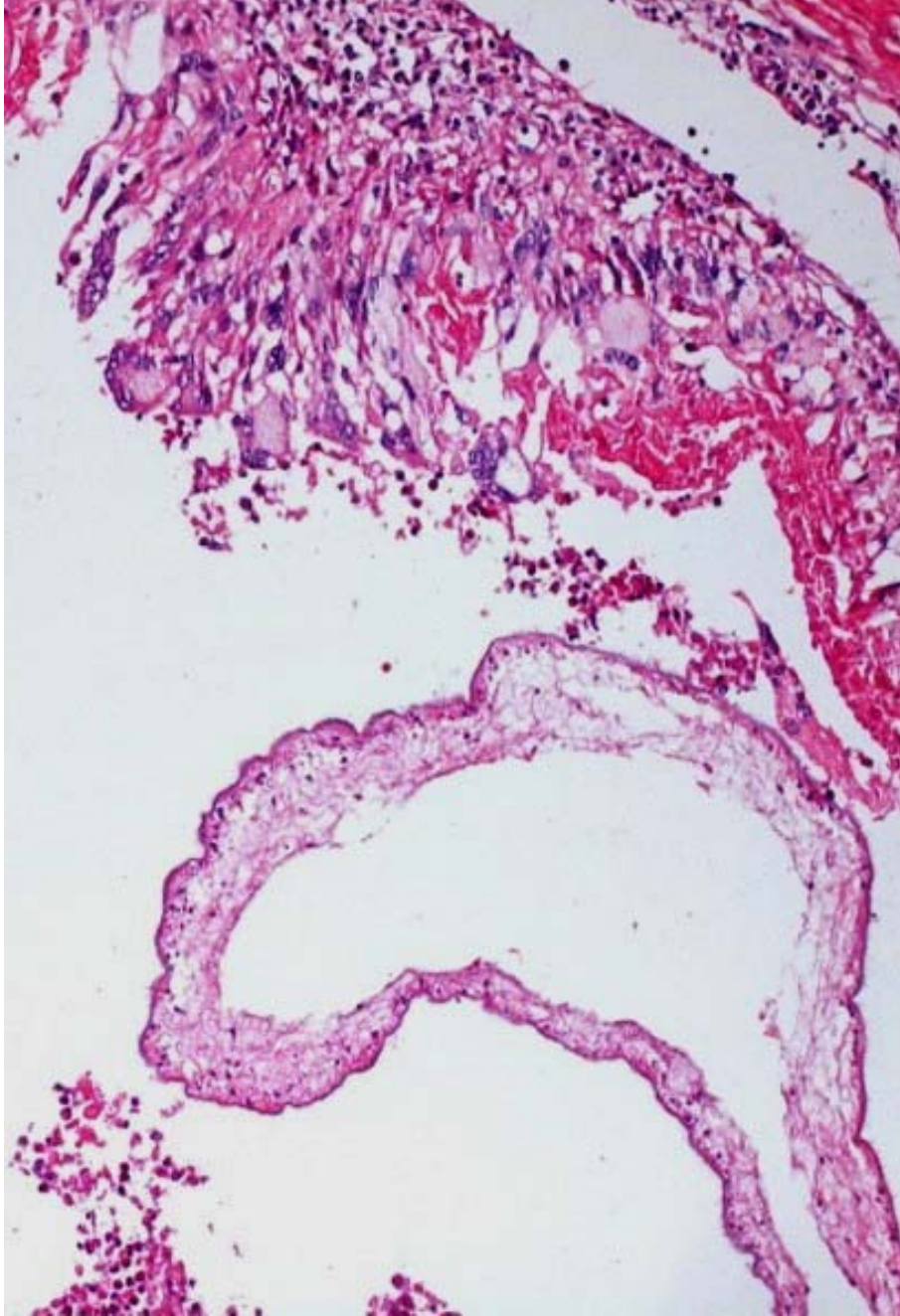
4) – This extensive, apparently primary gliosis is consistent with a diagnosis of “gliomatosis cerebri“. At this stage it is considered to be a diffuse neoplastic process.



Case 8.5 – Spinal cord of a sheep. Focal lesion

Review – see also two supplementary images in the following slide

- 1)– There is an intradural, extramedullary, apparently unilocular cystic structure with an associated intense leptomeningeal reaction in which there are prominent epithelioid macrophages and smaller numbers of eosinophils and lymphoid cells. There is also the impression of organising fibrin exudate. The cyst has an outer thin “tegument“ to a wall composed of loosely arranged paucicellular tissue.**
- 2) – An acceptable MDx might be “Meningitis, locally extensive, granulomatous, lympho-eosinophilic with intralesional larval cestode cyst.**
- 3) – The cyst does not have the features of a hydatid, but could be either a cysticercus or a coenurus. No scolices are evident in the section, making it impossible to discriminate between the two. In this case the cyst was *Coenurus cerebralis* (*Taenia multiceps*).**



Case 8.5 – Spinal cord of a sheep. Focal lesion
Review – Supplementary images to previous slide