

WSC 2009-2010, Conference 21, Case 1.

Tissue from a finch.

MICROSCOPIC DESCRIPTION: Proventriculus and ventriculus: In the ventriculus (**1 pt.**), within the koilin layer and the mucosa, there are moderate numbers of nematode adults and eggs (**1 pt.**). Nematode adults are approximately 175-225 um in diameter, with a ridged cuticle, thick polymyarian-coelomyarian musculature, a pseudocoelom, small lateral cords, an intestine with few multinucleated cells and gonads. (**1 pt.**) The uterus of mature females contains numerous embryonated or larvated eggs (**1 pt.**) which are 30um in diameter and have a thick refractile shell (**1 pt.**). The koilin layer is markedly thickened (**1 pt.**), and contains not only viable and degenerate nematode adults and eggs, but large colonies of 1-2um coccobacilli (**1 pt.**), degenerate heterophils, macrophages and lymphocytes (**1 pt.**), and wide open clear spaces (parasite tracts). The mucosa itself is mildly hyperplastic (**1 pt.**), and rare glands are dilated and contain numerous degenerate heterophils and epithelial cells, moderate amounts of bright eosinophilic protein, and abundant cellular debris (**1 pt.**). The lamina propria is diffusely expanded by low to moderate numbers of heterophils, lymphocytes, and macrophages, and small amounts of congestion and edema (**1 pt.**). In some areas, the lamina propria is also expanded by a moderate amount of fibrous connective tissue and glands are atrophic with pale-staining, attenuated epithelium (**1 pt.**). Similar nematodes are present within the mucosa of the proventriculus (**1 pt.**). The lamina propria of the proventriculus is also mildly and multifocally expanded by fibrous connective and small numbers of heterophils, congestion, and occasional glands are lined by attenuated epithelium and contain moderate amounts of protein and rare heterophils (**1 pt.**).

MICROSCOPIC DIAGNOSIS: 1. Ventriculus: Ventriculitis, chronic-active, diffuse, mild, with moderate koilin hyperplasia and numerous adult metastrongyle nematodes and eggs. (**3 pt.**)

2. Proventriculus: Proventriculitis, chronic-active, multifocal, mild, adult metastrongyle nematodes and eggs. (**1 pt.**)

O/C: (**1 pt.**)

Notes: No points associated with cause here. *Dysphaynx nasuta* is the most famous, but knowing the nematodes of the GI tract of the finch is probably not necessary for ACVP certification. But congrats if you know it!!! Also *Cryptosporidium* was seen in several sections, but not all (and not mine!)

WSC 2009-2010. Conference 21, Case 2

Tissue from a dog.

MICROSCOPIC DESCRIPTION: Jejunum: Infiltrating the mucosa (**1 pt.**), submucosa and the muscularis (**1 pt.**), is a moderately cellular, unencapsulated, poorly circumscribed well-demarcated neoplasm (**2 pt.**). Neoplastic cells are arranged in variably-sized mucin-filled glands and acini (**2 pt.**) which range up to a centimeter in diameter, on a moderate fibrous stroma (**1 pt.**). Neoplastic cells have indistinct cell borders with a moderate amount of lightly basophilic, granular cytoplasm (**1 pt.**) which often contains a prominent clear vacuole which expands the cell and peripheralizes the nucleus (**1 pt.**) (signet ring cells) (**1 pt.**). Nuclei are oval with finely stippled chromatin and one to two small basophilic nucleoli (**1 pt.**). Mitoses average 2 per 10 high power fields (**1 pt.**). Within the submucosa and muscularis, acini range up to 1 cm in diameter, partially lined with neoplastic epithelium and are filled with abundant wispy lightly basophilic mucin (**1 pt.**) (“mucin lakes”) which is often mineralized (**1 pt.**).

MORPHOLOGIC DIAGNOSIS: Jejunum: Mucinous adenocarcinoma. (**5 pt.**)

O/C – (**1 pt.**)

WSC 2009-2010, Conference 21, Case 3.

Tissue from a cat.

MICROSCOPIC DESCRIPTION: Cerebellum and brainstem: The brainstem (**1 pt.**) is infiltrated by large numbers of viable and degenerate (**1 pt.**) neutrophils (**1 pt.**) which often form discrete small aggregates (**1 pt.**) (microabscesses.) (**2 pt.**) In areas of heavy infiltration, the neuropil is mildly spongiotic (**1 pt.**) with expansion of Virchow-Robins spaces (edema) and neutrophils are admixed with shrunken, angular pink neurons (**1 pt.**), large swollen eosinophilic axons (spheroids) (**1 pt.**), increased numbers of glial cells (**1 pt.**) with rare reactive astrocytes, abundant cellular debris (**1 pt.**) and multifocal mild hemorrhage and fibrin (**1 pt.**). Endothelial cells of vessels in this area are markedly reactive and larger veins are surrounded by moderate numbers of lymphocytes and plasma cells (**1 pt.**) in the perivascular space.

MORPHOLOGIC DIAGNOSIS. Brainstem: Encephalitis, suppurative, diffuse, severe. (**3pt.**)

CAUSE: *Listeria monocytogenes* (**3 pt.**)

O/C - (**1 pt.**)

WSC 2009-2010, Conference 21 Case 4.

Tissue from a dog.

MICROSCOPIC DESCRIPTION: Cerebrum: Extending along the meninges (**1 pt.**) and compressing adjacent grey and white matter(**1 pt.**) is a multinodular, unencapsulated, moderately cellular well circumscribed, expansile neoplasm (**1 pt.**). The neoplasm is composed of sheets (**1 pt.**) of closely packed polygonal (**1 pt.**) cells on a scant fibrovascular stroma (**1 pt.**). Neoplastic cells have distinct cell borders and abundant finely granular eosinophilic cytoplasm (**1 pt.**). These neoplastic cells have irregularly round to oval, often compressed nuclei and 1 indistinct nucleolus (**1 pt.**); cytoplasmic invaginations are common. Mitotic figures are rare (**1 pt.**). There are small aggregates of lymphocytes and plasma cells around meningeal vessels (**1 pt.**) in areas of the tumor. At the advancing edge of the neoplasm, blood vessels are tortuous and have prominent endothelial cell (**1 pt.**)s. There is mild gliosis in the adjacent grey matter (**1 pt.**) with moderate numbers of reactive astrocytes (**1 pt.**).

MORPHOLOGIC DIAGNOSIS: Cerebrum: Granular cell tumor (**4 pt.**).

NAME AN APPROPRIATE SPECIAL STAIN: PAS (granules are lysosomes and stain PAS positive with diastase resistance. (**2 pt.**))

O/C: (**1 pt.**)