

WSC 2020-2021  
Conference 3, Case 1.

Tissue from a dog.

**MICROSCOPIC DESCRIPTION:** Liver: There is diffuse necrosis **(1pt)** of centrilobular **(1pt)** and midzonal **(1pt)** hepatocytes, which are characterized by a loss of differential staining, loss of plate architecture (stromal collapse) **(1pt)** , rounding up and individualization of hepatocytes, granular eosinophilic cytoplasm **(1pt)** and karyolysis. Areas of necrosis are suffused with poorly-stained hemorrhage **(1pt)** , as well as low numbers of viable and degenerate neutrophils **(1pt)** and cellular debris. Central veins **(1pt)** are often surround by 3-5 layers of degenerate neutrophils and macrophages, and their lumen often contains necrotic hepatocytes (this is how effete centrilobular hepatocytes often disappear – flushed down the central veins and out of the liver). Within the periportal areas of the lobule, hepatocytes are swollen **(1pt)** with granular cytoplasm, numerous poorly demarcated clear vacuoles **(1pt)** , and occasional cytosegresomes (degeneration). **(1pt)** There are individualized necrotic hepatocytes within periportal areas as well. **(1pt)** Within portal areas, biliary epithelium is also necrotic **(1pt)** , and portal areas contain low numbers of macrophages and lymphocytes, and lymphatics are distended. **(1pt)**

**MORPHOLOGIC DIAGNOSIS:** Liver, hepatocytes: Necrosis, centrilobular to midzonal (massive OK), diffuse, with marked hemorrhage. **(2pt)**

**CAUSE:** Trimethoprim sulfa (Amanita, halothane, acetaminophen, blue-green algae and a number of others all OK) **(3pt)**

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

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Conference 3, Case 2.

Tissue from a dog.

**MICROSCOPIC DESCRIPTION: Stomach (1pt)** : The gastric mucosa is diffusely thickened **(1pt)** and thrown into exaggerated polypoid rugae **(1pt)**. There is diffuse severe loss of glands at all levels of the mucosa **(1pt)**, and are replaced by edematous **(1pt)** fibrous connective tissue with plump fibroblasts often oriented perpendicularly to the mucosal surface. The fibrous stroma is expanded by edema, moderate numbers of lymphocytes and plasma cells with fewer macrophages and neutrophils **(1pt)** , dilated and congested vessels, multifocal hemorrhage, and scattered cellular debris. Within the superficial mucosa, glands are hypertrophic **(1pt)**, tortuous **(1pt)** and lined by basophilic columnar epithelium lacking zymogen granules or mucin. **(1pt)** Deeper within the mucosa, more typical glands containing chief and parietal cells are present. Glands are often dilated **(1pt)**, some up to 500 um, and rarely contain eosinophilic cellular debris. Remaining lobules of glands are surrounded and separated by moderate numbers of lymphocytes and plasma cells **(1pt)** and lymphocytes often infiltrate glands in basal locations **(1pt)** as well as the superficial mucus epithelium. Numerous lymphoid follicles are present within the deep mucosa **(1pt)** , and there are multifocal areas of hemorrhage within the mucosa and submucosa.

**MORPHOLOGIC DIAGNOSIS: Stomach: Gastritis, hypertrophic (1pt), chronic, diffuse, severe, with mucous metaplasia (1pt), marked glandular atrophy and loss (1pt), and lymphocytic inflammation (1pt).**

**NAME THE CONDITION: Hypertrophic gastritis (Menetrier's Disease OK) (2pt)**

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

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Case 3. Tissue from a patas monkey.

**MICROSCOPIC DESCRIPTION:** Spleen (2 sections): Diffusely, within the red pulp **(1pt)** of both sections, there is a proliferation **(1pt)** of short, prominent vascular channels **(1pt)** which are lined by endothelium with prominent round nuclei **(1pt)** with densely clumped chromatin **(1pt)** and small to imperceptible amounts of pink granular cytoplasm. **(1pt)** Normal vessels are scattered among them and throughout the red pulp. Within one section, there are randomly scattered nodules **(1pt)** ranging up to 1.5 mm **(1pt)** in which these vascular channels are surrounded and separated by a pink collagenous matrix **(2pt)** that effaces normal red pulp architecture and abuts or incorporates mildly atrophic white pulp. **(1pt)** Erythrocytes are present both within these vessels and circulating small amounts circulate within the matrix of these nodules. **(1pt)** There are low to moderate numbers of siderophages **(1pt)** scattered throughout these nodules as well as the red pulp. There is moderate smooth muscle hyperplasia of small splenic arterioles. **(1pt)** White pulps appears to be within normal limits with few active follicles; many follicles are contracted with moderate amounts of pink globular protein within. There is mild capsular mesothelial hyperplasia. **(1pt)**

**MORPHOLOGIC DIAGNOSIS:** Spleen, red pulp: Vascular proliferation **(1pt)**, diffuse, mild to moderate, with endothelial hypertrophy **(1pt)** and random nodular sclerosis **(1pt)**

Name the condition: Sclerosing angiomatoid nodular transformation **(1pt)**

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

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Case 4. Tissue from a horse.

**MICROSCOPIC DESCRIPTION:** Placenta (chorioallantoic membrane) **(1pt)**: Focally, extending from the allantoic epithelium to a depth of 2.3mm **(1pt)**, there is a 6mm diameter nodule **(1pt)** expanding the chorioallantoic stroma. The nodule is composed of tortuous glands **(1pt)** oriented perpendicularly to the allantoic **(1pt)** surface which measure up to 350umx200um in diameter. **(1pt)** The glands are lined by cuboidal epithelium **(1pt)** with a moderate amount of homogenous eosinophilic cytoplasm and a single nucleus. **(1pt)** Glands contain variable amounts of eosinophilic secretory material **(1pt)** which occasionally has condensed to form corpora amylacea. **(1pt)** Glands are separated by abundant mildly edematous hyaline collagen which contains numerous haphazardly arranged proliferating capillaries **(1pt)** and small amounts of hemorrhage. At the periphery of the nodules, the fibrous connective tissue is more mature and condensed and capillaries are well formed with a discrete endothelial lining and are markedly congested. **(1pt)** Chorioallantoic vessels are congested. The allantoic epithelium overlying the nodule is markedly hyperplastic and pseudostratified columnar. **(1pt)** The villi lining the chorion in apposition **(1pt)** to the allantoic nodule lack differential staining and nuclear features (coagulative necrosis) **(1pt)**, and there is marked capillary proliferation within the underlying chorionic stroma. **(1pt)**

**MORPHOLOGIC DIAGNOSIS:** Placenta, allantois: Hyperplasia **(1pt)**, adenomatous **(1pt)**, focally extensive, moderate, with fibrosis, neovascularization and coagulation necrosis of opposing chorionic villi. **(1pt)**

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