WSC 2010-2011, Conference 6, Case 1.

Tissue from a gueraza monkey.

MICROSCOPIC DESCRIPTION: Liver: Throughout the liver, there are multifocal to coalescing granulomas **(1pt.)** characterized by a large central area of acellular eosinophilic necrotic debris **(1pt.)**, which is surrounded by a thick rim of foamy epithelioid macrophages **(2 pt.)** admixed with variable combinations and concentrations of neutrophils **(1pt.)**, lymphocytes **(1pt.)**, and lesser numbers of plasma cells, edema fluid and cellular debris, and in turn surrounded by loosely arranged fibrous connective tissue and active fibroblasts **(1pt.)**. Some granulomas lack a central core of necrosis, while others, due to their size and plane of section, are comprised primarily of fibrous connective tissue. The loosely arranged fibrous connective tissue fingers into and replaces adjacent hepatocytes **,** and remaining hepatocytes at the edges of inflammatory foci are often shrunken and atrophic **(1pt.)**. Interspersed among the inflammatory cells within the wall of the granulomas are numerous 20-30um **(1pt.)** round amebic trophozoites **(1pt.)** with a moderate amount of finely vacuolated cytoplasm **(1pt.)** and a single round nucleus with a prominent karyosome **(1pt.)**. There is moderate multifocal congestion and hemorrhage **(1pt.)** with mild compression of hepatocytes. Portal triads are expanded with low to moderate amounts of collagen **(1pt.)**, and the hepatic capsule is mildly thickened by collagen.

MORPHOLOGIC DIAGNOSIS: Liver: Hepatitis, granulomatous, multifocal to coalescing, moderate, with numerous amebic trophozoites. **(3 pt.)**

Cause: *Entamoeba histolytica***(2pt.)**

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

WSC 2010-2011. Conference 6, Case 2

Tissue from an ox.

MICROSCOPIC DESCRIPTION: Mammary gland **(1pt.)**: Remaining ducts and acini are widely separated by thick bands of fibrous connective tissue **(2pt.)** throughout which are scattered numerous pyogranulomas **(1pt.)**, which ranged up to 750um in diameter **(1pt.)**. The granulomas are centered on mammary ducts and composed of a central area of necrotic cellular debris**(1pt.)** and mineral **(1pt.)**, which often contains large numbers of degenerate neutrophils **(1pt.)**. This area is surrounded by a rim of large numbers of epithelioid macrophages **(1pt.)**, fewer eosinophils, lymphocytes, and plasma cells **(1pt.)** enmeshed in concentric rings of fibrous connective tissue **(1pt.)** and plump fibroblasts. Remaining acini are widely separated and surrounded by moderate amounts of mature collagen **(1pt.)** throughout which are scattered moderate numbers of lymphocytes, plasma cells, neutrophils and histiocytes **(1pt.)**. Acinar tissue is atrophic **(1pt.)**, and acini are often dilated, containing a small amount of eosinophilic protein, rare sloughed cells, or both.

MORPHOLOGIC DIAGNOSIS: Mammary gland: Mastitis, pyogranulomatous, chronic, diffuse, severe, with marked fibrosis and acinar atrophy **(3 pt.)**

CAUSE: *Mycoplasma bovis* **(2 pt.)**

O/C – **(1 pt.)**

WSC 2010-2011, Conference 6, Case 3.

Tissue from a rhesus macaque.

MICROSCOPIC DESCRIPTION**:** Pancreas **(1pt.)**: There is diffuse severe loss of pancreatic acinar tissue **(1pt.)** and dense bands of slightly disorganized mature fibrous connective tissue and plump fibroblasts **(1pt.)**, throughout which are scattered essentially normal profiles **(1pt.)** of pancreatic ducts and islets. There are aggregates of moderate numbers of lymphocytes **(1pt.)** and macrophages **(1pt.)**, and rare neutrophils and plasma cells which are often centered on atrophic **(1pt.)** pancreatic acini. In these areas, acinar cells are shrunken **(1pt.)** and contain few, if any, zymogen granules **(1pt.)**. Rarely, acinar cell nuclei are expanded by a single deeply basophilic homogenous intranuclear viral inclusions **(2pt.)**; some of these cells are sloughed into the lumen. There are rare lymphocytes and neutrophils infiltrating between ductal epithelial cells and rare necrosis within the ductal epithelium. The fibrous connective tissue between remaining acini contains low numbers of lymphocytes, histiocytes, and rare neutrophils, eosinophils, and plasma cells dispersed evenly throughout it **(1pt.)**.

MORPHOLOGIC DIAGNOSIS(ES):
Pancreas: Pancreatitis, necrotizing, chronic, diffuse, mild with marked fibrosis, acinar atrophy and loss, moderate lymphohistocytic interstitial pancreatitis, and rare intranuclear viral inclusions. **(4 pts)**

CAUSE: Simian adenovirus **(3 pts)**

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

WSC 2010-2011, Conference 6, Case 4.

Tissue from a horse.

MICROSCOPIC DESCRIPTION: Pituitary gland: There is perivascular cuffing **(2pt.)** primarily within the pars nervosa and intermedia **(2pt.)** (and to a lesser extent the pars glandularis **(1pt.)**) by moderate numbers of lymphocytes **(2pt.)**and lesser numbers of histiocytes **(2pt.)**. The inflammatory cells extend into and replace small amounts of glandular tissue **(1pt.)**. Within the pars nervosa, nerve bundles are separated not only by inflammatory cells but by small amounts of edema **(2pt.) .**There are low numbers of lymphocytes and plasma cells within the adjacent meninges **(2pt.)**. There is mild multifocal vascular congestion.

MORPHOLOGIC DIAGNOSIS**:** Pituitary gland: Adenitis and hypophysitis, lymphohistiocytic, diffuse, mild to moderate. **(4pt.)**

NOTE: There is moderate variation in slides on this case. This is not truly a good descriptive slide.

O/C - **(2 pt)**