WSC 2009-2010, Conference 14, Case 1.

Tissue from an aotus monkey.

MICROSCOPIC DESCRIPTION: Large artery (with attached lung tissue): Adjacent to the elastic artery, there is a large outpouching **(2 pt.)** which a markedly thickened intima **(2 pt.)**, and a markedly thinned media **(1 pt.)** (aneurysm) **(1 pt.)**. The endothelium lining the outpouching is multifocally lost **(1 pt.)**, and there are small fibrin thrombi **(1 pt.)** attached to the denuded aneurysm wall. Multifocally within the deep intima and media, fibroblasts and smooth muscle fibers are separated, surrounded, and replaced by abundant pink ground substance (pooled proteoglycans) **(1 pt.)**, as well as moderate numbers of macrophages **(1 pt.)** with abundant cytoplasm and numerous cytoplasmic lipid droplets **(1 pt.)** (foam cells) **(1 pt.)**, globular to acicular clear space (cholesterol clefts) **(1 pt.)** and small amounts of mineral **(1 pt.)**. Within these areas, smooth muscle cells are occasionally degenerate, exhibiting marked eosinophilia, hyalinization, and hyperchromatic to pyknotic nuclei **(1 pt.)**.

MORPHOLOGIC DIAGNOSIS: Large artery (presumably aorta): Aortic dissection (dissecting aneurysm), with medial lipid-laden histiocytes. **(4 pt.)**

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

(NOTE: There is significant variation in the slides with regard to thrombi and amount of lipid-laden macrophages.)

WSC 2009-2010. Conference 14, Case 2

Tissue from a cat.

MICROSCOPIC DESCRIPTION: Heart and adjacent great vessel (presumptive aorta): Within the epicardium **(1 pt.)**, compressing the left atrium and aorta **(1 pt.)**, there is an unencapsulated, expansile, nodular, well-demarcated, moderately cellular neoplasm **(2 pt.)**. Neoplastic cells are arranged in packets **(1 pt.)** on a fine fibrovascular stroma **(1 pt.)**. Neoplastic cells have distinct cell borders and a moderate amount of finely granular **(1 pt.)** brown cytoplasm. Nuclei are irregular round, located randomly within the cytoplasm, with finely stippled chromatin and 1-2 small basophilic nucleoli **(1 pt.)**. Mitotic figures are rare **(1 pt.)**. There is mild myofiber atrophy **(1 pt.)** and interstitial fibrosis **(1 pt.)** of the adjacent compressed atrial myocardium. The atrial epicardium in mildly thickened by aggregates of low to moderate numbers of lymphocytes **(1 pt.)** and dilated lymphatics. Within the epicardial tissue adjacent to several large vessels, there are foci of neoplastic cells **(1 pt.)** admixed with moderate numbers of lymphocytes. Multifocally, there are aggregates of fibrin **(1 pt.)** admixed with low numbers of histiocytes, neutrophils, and mildly reactive mesothelium scattered along the epicardium. The aortic valve is multifocally thickened by accumulation of abundant grey granular ground substance and a focus of chondroid matrix (degeneration) **(1 pt.)**.

MORPHOLOGIC DIAGNOSIS: 1. Heart, epicardium adjacent to great vessel: Chemodectoma (paraganglioma, aortic body tumor). **(4 pt.)**

2. Heart, epicardium: Epicarditis, lymphocytic, multifocal, mild to moderate.

3. Heart, aortic valve: Fibromyxomatous degeneration (endocardiosis), multifocal, moderate.

O/C – **(1 pt.)**

WSC 2009-2010, Conference 14, Case 3.

Tissue from a pig.

MICROSCOPIC DESCRIPTION: Heart, myocardium: Multifocally, the ventricular myocardium is expanded by several discrete, well-demarcated nodules **(2 pt.)** of myofibers. Within these nodules, myocardiocytes vary markedly in size **(2 pt.)**, and are expanded up to 4-5 times normal diameter **(2 pt.)** by abundant homogeneous to lacy pink cytoplasm (glycogenosis) **(2 pt.)**. There is necrosis of rare cardiomyocytes **(2 pt.)** and infiltration of the sarcolemma by low numbers of histiocytes **(2 pt.)**, which extend into the surrounding interstitial fibrous connective tissue. Adjacent to one of the nodules, two myocytes contain numerous 2-4um diameter basophilic banana-shaped zoites (sarcocysts) **(1 pt.)**.

MORPHOLOGIC DIAGNOSIS: 1. Heart, ventricular myocardium: Rhabdomyomas, multiple. (or Heart, myocardium: Glycogenosis, multifocal to coalescing, severe, with mild multifocal myocardial necrosis.) **(5 pt.)**

2. Heart, ventricular myocardium: Sarcocysts, multiple. **(1 pt.)**

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

WSC 2009-2010, Conference 14, Case 4.

Tissue from a cat.

MICROSCOPIC DESCRIPTION: Heart, endocardium: There is diffuse, marked thickening of the endocardium **(1 pt.)** up to 1mm in diameter **(1 pt.)** by abundant fibrous connective tissue **(2 pt.)** , moderate numbers of fibrocytes **(1 pt.)**, moderate amounts of granular blue matrix **(2 pt.)**, a few small caliber vessels, rare hemosiderin-laden macrophages and one to multiple (**dependent on your section**) nodules of chondroid matrix. **(2 pt.)** Underlying the thickened endocardium, myofibers are separated and surrounded by small to moderate amounts of loosely arranged fibrous connective tissue, adipocytes **(1 pt.)**, and dilated lymphatics **(1 pt.)** . Within the myocardium, myofibers are multifocally separated by small to moderate amounts of fibrous connective tissue **(1 pt.)** and edema fluid.

MORPHOLOGIC DIAGNOSIS**:** Heart, endocardium: Fibrosis, diffuse, moderate with chondroid metaplasia and mild myocardial fibrosis and edema. **(4 pt.)**

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

NAME THE CONDITION: Restrictive cardiomyopathy **(3 pt.)**