

WSC 2020-2021

Conference 25 Case 1.

Tissue from a dog.

MICROSCOPIC DESCRIPTION: Kidney: Throughout the section, the renal artery and its branches **(1pt)** throughout the renal parenchyma tortuous **(1pt)** and markedly thickened **(1pt)** with disorganized arterial walls and various degrees of luminal compromise. The internal elastic lamina is lost **(1pt)** and the tunica intima and tunica media are effaced **(1pt)** by abundant loosely arranged collagen **(1pt)** with scattered invading fibroblasts **(1pt)** and haphazardly arranged remnant smooth muscle cells, as well as aggregates of histiocytes with abundant foamy cytoplasm (foam cells) **(1pt)**, cholesterol clefts **(1pt)**, mineral **(1pt)**, and small amounts of hemorrhage and cellular debris. **(1pt)** These changes are most profound in the inner half of the tunica media, but in some vessels are transmural. **(1pt)**. The adventitia is expanded by loosely arranged collagen and fibroblasts which minimally infiltrate adjacent renal parenchyma and are admixed with low numbers of lymphocytes and plasma cells.. Changes in the renal parenchyma unrelated to the vascular changes include dilation of Bowman's spaces **(1pt)** which are filled with proteinaceous material and mild expansion of glomerular mesangium, tubular epithelium swelling and vacuolation **(1pt)** , tubular proteinosis **(1pt)** , abundant lipofuscin**(1pt)** within tubular cytoplasm, and multifocal mild interstitial fibrosis, multifocal edema and small interstitial aggregates of lymphocytes and plasma cells.

MORPHOLOGIC DIAGNOSIS: 1. Kidney, renal, arcuate and sublobular arteries: Atherosclerosis, diffuse, severe. **(3pt.)**

2. Kidney: Nephritis, interstitial, lymphoplasmacytic, chronic, diffuse, mild. **(1pt.)**

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

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Conference 25 Case 2.

Tissue from a cat.

MICROSCOPIC DESCRIPTION: Heart, left ventricle **(1pt.)**: There is diffuse, marked thickening of the endocardium **(1pt.)** up to 1mm in diameter **(1pt.)** by abundant fibrous connective tissue **(2pt.)** populated by moderate numbers of fibrocytes **(1pt.)**, and moderate amounts of granular blue matrix **(1pt.)**, which multifocally undergoes chondromatous change **(1pt.)**. This change extends along the root of the mitral valve. **(1pt.)** Multifocally, loosely arranged and mildly edematous collagen extends from the expanded endocardium to surround and separate underlying myocytes, **(1pt.)** which are shrunken and hypereosinophilic (atrophy) **(1pt.)**. Multifocally, there are cystic endothelial-lined areas of the endocardium (both outside and inside the infiltrated myocardium) which occasionally contain blood and polymerized fibrin. **(1pt.)** There are low numbers of siderophages scattered through the collagen. The endocardium of the left atrium is also expanded by a moderate amount of loosely arranged collagen, but without the basophilic matrix seen in the ventricle. **(1pt.)** The walls of coronary vessels are expanded by abundant blue myxomatous matrix between smooth muscle cells. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Heart, left ventricle, endocardium: Fibrosis **(1pt.)**, diffuse, severe with chondroid metaplasia **(1pt.)** and mild subendocardial fibrosis **(1pt.)** and edema.

NAME THE CONDITION: Endomyocardial restrictive cardiomyopathy **(2pt.)**

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

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Conference 25, Case 3.

Tissue from a dog.

MICROSCOPIC DESCRIPTION: Heart: Diffusely, cardiomyocytes are surrounded, separated, and rarely replaced (**1pt.**) by low to moderate numbers of lymphocytes (**2pt.**) and fewer macrophages (**1pt.**) and enmeshed in loosely arranged thin bands of edematous collagen (**1pt.**). Cardiomyocytes are shrunken (**1pt.**) with normal cellular architecture (atrophy) (**2pt.**), and often have enhanced cross-striations. Rarely, cardiomyocytes are fragmented and hypereosinophilic (**1pt.**) (degeneration) (**1pt.**). Scattered low numbers of cardiomyocyte nuclei (**1pt.**) contain a 5-10 um diameter basophilic intranuclear inclusion body that completely fills the nucleus (**1pt.**). Diffusely the endomysial fibrous connective tissue is expanded by clear space and beaded eosinophilic proteinaceous fluid and lymphatics are markedly dilated (edema) (**1pt.**).

MORPHOLOGIC DIAGNOSIS: Heart: Myocarditis, lymphocytic (**1pt.**), diffuse, marked, with cardiomyocyte atrophy (**1pt.**) and loss, and cardiomyocyte intranuclear inclusion bodies. (**1pt.**)

CAUSE: Canine parvovirus 2 (CPV-2) (**3pt.**)

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

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Conference 25, Case 4.

Tissue from a dog

MICROSCOPIC DESCRIPTION: Soft tissues of the neck, containing salivary gland, salivary duct, lymph node, and multiple sections of peripheral nerve **(1pt.)**: Within the peripheral nerves, axons sheaths are dilated **(1pt.)** and the axon is often replaced by granular eosinophilic axonal debris. debris **(2pt.)**. Rarely, Gitter cells replace axons in dilated myelin sheaths. **(1pt.)** The epineurium and often the nerve fiber is infiltrated by low to moderate numbers of neutrophils **(2pt.)** and fewer histiocytes **(1pt.)** and lymphocytes, and the endoneurium is multifocally and mildly expanded by edema. Within inflamed nerves, Schwann cell nuclei are hypertrophic. Rarely, Schwann cell nuclei **(1pt.)** are expanded **(1pt.)** by a deeply basophilic **(1pt.)** intranuclear viral inclusion **(1pt.)** that is rarely surrounded by a clear space. Lymph nodes are markedly hypocellular **(1pt.)**, and few depleted germinal centers remain.

MORPHOLOGIC DIAGNOSIS: Peripheral nerves: Neuritis, necrotizing **(1pt.)** and neutrophilic **(1pt.)**, diffuse, marked with rare cytomegalic intranuclear inclusions. **(1pt.)**

CAUSE: Macacine betaherpesvirus **(3pt.)**

O/C: (1pt.)