

WSC 2024-2025
Conference 4, Case 1
Tissue from a pig.

MICROSCOPIC DESCRIPTION: Haired skin: Two sections of haired skin are submitted for examination. Diffusely, the epidermis is thickened up to three times normal with the formation of prominent rete ridges **(1pt.)**. Throughout the epidermis, there is an infiltrate of large numbers of neutrophils **(1pt.)** which transmigrates all layers and forms large pustules **(1pt.)** in the overlying stratum spongiosum and corneum, and which extend down into hair follicles **(1pt.)**. There is a diffuse moderate parakeratotic hyperkeratosis **(1pt.)**, which is multifocally replaced with a serocellular crust **(1pt.)** containing abundant degenerate neutrophils, cellular debris, basophilic cocci **(1pt.)** and serum. There is multifocal erosion and rarely, full thickness loss (ulceration) of the epidermis **(1pt.)**. In these areas, the superficial dermis contains large numbers of neutrophils, with lesser numbers of histiocytes, lymphocytes and plasma cells **(1pt.)**. The inflammatory infiltrate surrounds hair follicles as well **(1pt.)**- there is multifocal marked neutrophilic mural folliculitis **(1pt.)** Diffusely, apocrine glands are markedly dilated. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Skin, epidermis and hair follicles: Epidermitis **(1pt.)** and folliculitis **(1pt.)**, suppurative **(1pt.)**, diffuse, severe, with multifocal epidermal ulceration and pustule formation **(1pt.)**,

CAUSE: Staphyococcus hyicus **(2pt.)**

NAME THE CONDITION: Greasy pig disease **(1pt.)**

O/C - (1pt.)

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Conference 2, Case 2

Tissue from a file-eared tree frog.

MICROSCOPIC DESCRIPTION: Eye: There is moderate autolysis **(1pt.)** of this globe, primarily affecting the anterior segment and retina in this sample. Along 75% of its length **(1pt.)**, the cornea is markedly and centrally, transmurally **(2pt.)** thickened by numerous acicular clefts **(1pt.)** (lipid) **(2pt.)** which separate and often replace corneal fibers **(1pt.)**. There is multifocal hyperplasia **(1pt.)**, erosion and ulceration **(1pt.)** of the corneal epithelium. Beneath the eroded area, the lipid laden corneal stroma is infiltrated by low to moderate number of granulocytes **(1pt.)** and infiltrating vessels (vascularization) **(1pt.)** and fibroblasts **(1pt.)** Extending from the limbus approximately 25% along the length of the cornea **(1pt.)**, the superficial stroma is expanded (in addition to the lipid) with melanin pigment **(1pt.)** and more prominent vessels than is seen in central stroma. The lens is artifactually compressing the anterior segment and abuts the cornea. The lens capsule is artifactually ruptured and there are bubbles (processing artifact) within the anterior lens fibers. There is focal hypertrophy of the retinal pigmented epithelium.

MORPHOLOGIC DIAGNOSIS: Eye, cornea: Lipidosis **(1pt.)**, focally extensive, severe, with multifocal mild ulcerative keratitis **(1pt.)**, vascularization, pigmentation **(1pt.)**, and corneal epithelial hyperplasia. **(1pt.)**

NAME THE CONDITION: Lipid keratopathy (lipid keratitis ok – but there isn't a lot of inflammation in non-ulcerated areas.) **(2pt.)**

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

WSC 2024-2025
Conference 4 Case 3.
Tissue from a dog.

MICROSCOPIC DESCRIPTION: Brainstem (pons?) **(1pt.)**: Diffusely throughout the section, the walls of venules are expanded by one or more of the changes: endothelial pyknosis and loss, **(1pt.)** mural expansion by hemorrhage **(1pt.)** and small amounts of pink protein, necrosis and karyorrhexis of smooth muscle cells **(1pt.)**, and adventitial and ring hemorrhages **(1pt.)**. Multifocally, few remnant endothelial cells **(1pt.)** contain a large eosinophilic intranuclear **(1pt.)** viral inclusion **(1pt.)**. The adventitia of the affected vessels and perivascular space is expanded by clear space (perivascular edema) **(1pt.)** which extends into the surrounding parenchyma. **(1pt.)** Neurons within surrounding parenchyma are occasionally contracted and eosinophilic with chromatin condensation or lack of nuclear staining (necrosis). **(1pt.)** There is mild diffuse gliosis **(1pt.)** within the parenchyma, with microglial activation **(1pt.)** and prominent halos surrounding glial cells, particularly astrocytes.

MORPHOLOGIC DIAGNOSIS: Brainstem at level of pons: Vasculitis **(1pt.)**, necrotizing **(1pt.)**, acute, diffuse, moderate with neuronal necrosis, mild gliosis, and rare endothelial intranuclear viral inclusions. **(1pt.)**

CAUSE: Canine adenovirus-1 **(3pt.)**

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

WSC 2020-2021
Conference 4 Case 4.
Tissue from a gecko.

MICROSCOPIC DESCRIPTION: Liver: One section of liver is submitted for examination; approximately 50% of the section is poorly fixed and cellular detail is poor. Within the remainder of the section, there is diffuse loss of normal hepatocellular plate architecture. **(1pt)** The normal architecture is distorted by moderate amounts of congestion, and fibrosis **(1pt)**. Hepatocytes demonstrate a range of cellular changes including swelling and vacuolation **(1pt)** (degeneration) **(1pt)**, as well as nuclear pyknosis, karyolysis and cellular fragmentation (necrosis) **(1pt)**. Scattered randomly throughout the hepatic parenchyma are numerous cross- and tangential sections of adult **(1pt)** and larval **(1pt)** rhabditoid **(1pt)** nematodes. Adults are approximately 50um in diameter with a smooth cuticle **(1pt)** which is asymmetrically expanded by a basophilic bacillary band **(1pt)**, a pseudocoelom, platymyarian-meromyarian **(1pt)** muscular a triradiate esophagus which is occasionally surrounded by prominent basophilic cells (stichosome **(1pt)**) and cross sections of a small intestinal tract with uninucleate columnar cells and cross sections paired reproductive tract. Larva are approximately 20um in diameter with a thin cuticle, numerous somatic cell nuclei, and occasionally a rhabditoid esophagus with an isthmus, corpus and bulb. **(1pt)** There are few oval 15x20 um basophilic shelled eggs **(1pt)** scattered throughout the parenchyma, often engulfed by macrophages. Degenerate nematodes are surrounded/engulfed by epithelioid macrophages, and fewer heterophils and foreign-body type macrophages **(1pt)**. There is moderate hyperplasia of biliary ductules within portal triads. **(1pt)** and numerous melanomacrophage centers

MORPHOLOGIC DIAGNOSIS: Liver: Hepatitis, necrotizing **(1pt)** and granulomatous **(1pt)**, chronic, diffuse, marked, with intraparenchymal rhabditoid **(1pt)** adults, larvae, and eggs.

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