

WSC 2020-2021
Conference 17, Case 1.

Tissue from a pig.

MICROSCOPIC DESCRIPTION: Left ventricle and atrioventricular valve: Expanding and effacing the left atrioventricular valve **(1pt)**, and extending into the aortic lumen **(1pt)** is a large fibrin thrombus **(1pt)** which contains large enmeshed and coalescing colonies of 1-2um cocci **(1pt)**, admixed with moderate numbers of necrotic neutrophils **(1pt)** entrapped erythrocytes, and abundant cellular debris **(1pt)**. The thrombus is multifocally attached to the valve leaflet, resulting in segmental loss of the lining endothelium, and marked distortion and expansion of the valve leaflet **(1pt)** by variably mature granulation tissue **(1pt)**. The granulation tissue contains sheets of fibroblasts with prominent mitotic activity as well as developing capillaries and large numbers of heterophils admixed with cellular debris. **(1pt)** A similar change is present along ventricular endocardium **(1pt)** in apposition to the valve leaflet, with loss of endocardium and extension of granulation tissue into the underlying myocardium where it separates atrophic myofibers **(1pt)**. The epicardium is diffusely thickened by an irregular layer of granulation tissue, hemorrhage and fibrin which infiltrates and often replaces epicardial fat. **(1pt)**

MORPHOLOGIC DIAGNOSIS: Heart, left ventricle and AV valve: Valvulitis **(1pt)** epicarditis, and endocarditis, **(1pt)** fibrinosuppurative **(1pt)**, focally extensive, severe, with granulation tissue formation and numerous colonies of cocci **(1pt)**.

CAUSE: *Streptococcus suis* **(3pt)**

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

WSC 2020-2021
Conference 17 Case 2.

Tissue from a pig.

MICROSCOPIC DESCRIPTION: Haired skin, pinna: Multifocally, the epidermis is thickened up to three times normal **(1pt.)** with the formation of broad rete ridges **(1pt.)**, and in many of these areas, the thickened epidermis is lifted off of the underlying dermis, and in extensive areas, lost entirely. **(1pt.)** At the periphery of these lesions, keratinocytes at all levels of the epidermis **(1pt.)** and within adjacent follicular epithelium **(1pt.)** are expanded by abundant intracytoplasmic edema **(2pt.)** (ballooning degeneration) **(1pt.)** and contain multiple intracytoplasmic 2-4um irregularly round eosinophilic viral inclusions **(2pt.)**. In the ulcerated central areas of the lesions, the denuded dermis is infiltrated by large numbers of neutrophils **(1pt.)** (which also infiltrate the epidermal and follicular epithelium undergoing ballooning degeneration) **(1pt.)** admixed with abundant cellular debris and dermal edema **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Ear, pinna, haired skin, epidermis and follicular epithelium: Dermatitis, necrotizing **(1pt.)** and proliferative, **(1pt.)**, multifocal, moderate, with ballooning degeneration and intracytoplasmic viral inclusions. **(1pt.)**

Cause: Suid poxvirus **(3pt.)**

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

WSC 2020-2021

Conference 17, Case 3.

Tissue from a pig.

MICROSCOPIC DESCRIPTION: Haired skin: Multifocally, there are several discrete vesicles **(2pt)** formed by the separation of the epidermis from the dermis at the dermoepidermal junction **(1pt)**, with the largest at one edge of the section (subepidermal clefts). The basal epithelium forms the roof of these vesicles **(1pt)**, and rare individualized or clustered basal epithelial cells cling to the underlying denuded dermis. These vesicles contain variable combinations and concentrations of eosinophils **(2pt)**, fewer neutrophils **(1pt)** and rare detached and swollen basal epithelial cells (acantholytic cells) **(1pt)** admixed with moderate amounts of polymerized fibrin **(1pt)** and cellular debris. There are eosinophilic pustules **(1pt)**, transmigrating eosinophils, and scattered apoptotic keratinocytes in suprabasal layers **(1pt)**, and mild orthokeratotic hyperkeratosis. In the underlying dermis, moderate perivascular edema **(1pt)** in the underlying dermis with extravasation of moderate numbers of eosinophils and fewer lymphocytes, rare neutrophils and plasma cells, and vessels are lined by hypertrophic endothelial cells. Similar, although less severe vascular changes are seen in deeper regions of the dermis.

MORPHOLOGIC DIAGNOSIS: Haired skin: Dermatitis, vesicular **(1pt)** and eosinophilic **(1pt)**, sub-basal, multifocal moderate to severe with eosinophilic pustules **(1pt)**, eosinophilic perivascular dermatitis **(1pt)**, and mild orthokeratotic hyperkeratosis.

Name the condition: Bullous pemphigoid **(2pt)**

Name a likely breed of swine: Yucatan **(1pt)**

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

WSC 2020-2021
Conference 17, Case 4.

Tissue from a pig.

MICROSCOPIC DESCRIPTION: Colon, multiple sections **(1pt.)**: Within all sections, there are multifocal to coalescing areas of mucosal erosion **(1pt.)** with infiltration of moderate numbers of neutrophils **(1pt.)**. Areas of erosion are covered by a serocellular crust **(1pt.)** composed of necrotic neutrophils, fibrin **(1pt.)**, small amounts of hemorrhage, abundant cellular debris, and numerous robust bacilli **(1pt.)**. Subjacent to areas of erosion, the lamina propria **(1pt.)** is expanded by infiltration of low to moderate numbers of neutrophils **(1pt.)** admixed with hemorrhage and cellular debris, and in some areas, marked edema **(1pt.)**. Crypts are often dilated and expanded by mucin and occasionally contain robust bacilli. There are increased numbers of mitotic figures within glandular epithelium. **(1pt.)** There are decreased numbers of goblet cells within the mucosa. **(1pt.)** The submucosa is mildly hypercellular with increased numbers of histiocytes, and fewer neutrophils, lymphocytes and plasma cells. **(1pt.)**

MORPHOLOGIC DIAGNOSIS: Colon: Colitis **(1pt.)**, erosive **(1pt.)** and neutrophilic **(1pt.)**, multifocal to coalescing, moderate, with glandular hyperplasia and edema **(1pt.)**.

CAUSE: *Clostridioides difficile* **(3pt.)**

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