ECVP/ESVP Summer School in Veterinary Pathology

Marie Curie Training Courses

Summer School 2008 – Mock Exam Case 10

ECVP MOCK EXAMINATION, JACA, 2008 **HISTOPATHOLOGY**

Slide n°10: Tissue from a Porcine (Bar = 2 µm)

Description:
Intestine:
In the picture, there are the apical parts of two polarized cylindrical epithelial cells on the villous tip. The nuclei are not visible. The cells possess microvilli forming a brush border projecting into the apical lumen. The cells are connected via apical junctional complexes. In the cytoplasm, there are abundant mitochondria, primary and secondary lysosomes, rough endoplasmic reticulum and free polyribosomes. There are many oval to round, electron-lucent bodies within the cytoplasm of the epithelial cell which measure approximately 1.5-2 µm (consistent with swollen mitochondria with loss of cristae). Granular bodies scattered throughout the cytoplasm are compatible with free ribosomes. There are several electron-dense, slightly curved, rod-shaped structures with rounded ends within the cytoplasm which measure up to 2 µm long and up to ~0.7 µm wide. Their cell wall is double-layered and relatively thin (consistent with gram-negative bacteria).

Etiology:
Lawsonia intracellularis

Ultrastructural feature	Points
Intestine	1
Junction between epithelial cells	1
Microvilli	1
Rough endoplasmic reticulum	1
Swollen mitochondria	1
Electron lucent	1
Loss of cristae	1
Dimensions (1.5-2 µm)	1
Granular bodies in cytoplasm	1
Ribosomes	1
Electron dense structures	1
Cytoplasm	1
Dimensions (2 µm x ~0.7 µm)	1
Curved rods	1
Rounded ends	1
Bacteria	1
Etiology	2
Style	2
Total	20