Practice Lab Exam for General Pathology

ANSWERS

Winter 2010
Q1. (next slide for Question)
Q1.

Tissue from a bovine

A) Morphologic diagnosis?
   multiple renal infarcts (or multifocal renal infarction)

B) What type of necrosis is this?
   coagulation necrosis

C) What are the distinguishing histologic features of this type of necrosis?
   original cell shape and tissue architecture preserved,
   acidophilic cytoplasm,
   nuclear pyknosis / karyolysis / karyorrhexis
Q2. (next slide for Question)
Q2. Tissues from a sheep
(note tissue on far left is from a normal animal; while two other tissues are from affected animals)

A) Morphologic diagnosis?
   *Serous atrophy of bone marrow fat*
   *(or bone marrow, serous atrophy of fat)*

B) Give 2 possible causes?
   1. starvation
   2. cachexia of neoplasia or chronic disease *(discussed in Neoplasia)*

C) What is the significance of this lesion?
   *indicates complete utilization of body fat (energy) stores, recall fat is mobilized first from subcutis, then from visceral fat stores and finally from bone marrow*
Morphologic Diagnosis: Subcutaneous Edema

List 2 possible etiologies:

1. Right Heart Failure (Increased hydrostatic pressure)
2. Glomerulonephritis (protein losing nephropathy – decrease colloid osmotic pressure)

Would also accept – lymphatic obstruction. Or any other disease which would result in generalized edema.
Q4. Tissue from a horse

1. Morphologic Diagnosis:
   - Pulmonary Artery Thromboembolis
   - (would also accept pulmonary artery thrombus)

2. Where could this structure have come from?
   - Thrombus in vein – likely jugular vein…
Dog, adult female

History of pain at urination, some yellow-white viscous fluid in urine.
Q5. Kidney, cut surfaces

1.1 Description:
On cut surface, the renal pelvis is moderately distended with abundant pale-yellow, viscous fluid (suppurative exudate). The thickness of the medulla is reduced (atrophy). The adjacent cortex shows multiple areas of red and white.

1.2 Morphologic diagnosis:
Pyelonephritis, suppurative, diffuse, acute, severe

1.3 Etiology: Bacterial
This was an ascending bacterial infection, most likely due to Proteus spp, E. coli, Enterobacter spp. or Pseudomonas aeruginosa

1.4 The most abundant cell would be the neutrophil
Caribou, adult female

No history, found dead by the road. Traumatic lesions indicate that cause of death was a vehicular trauma (hit by car).

At necropsy, the liver had interesting lesions. There were numerous nodules throughout its parenchyma.
Closer look at the wall.

2.1 What are these cells, comprising the majority of the inflammation?

a) Plasma cells
Q6.

2.2 What cells surround this vein in the hepatic parenchyma?

c) Eosinophils
2.3 Morphologic Diagnosis:
Cholangiohepatitis, eosinophilic, multifocal, subacute to chronic, marked

2.4 Considering the type of inflammatory cell most prominent in the liver, what is the most likely etiology?

   d) Parasite

This was caused by

*Fascioloides magna,*

a trematode or liver fluke