Pelioid Hepatocellular carcinoma in a Ferret

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Signalment

- 8.5 year old
- Female
- Domesticated ferret (Mustela putorius furo)
Clinical Signs

- 1 year history of kidney disease (per owner)
- Inactivity, lethargy, inappetence
- Diarrhea which progressed to a lack of defecation
- Rapid deterioration (1 month)
Gross Lesions

- Kidneys (left and right)
  - Nodular
  - Mottled tan to dark red
  - Focal cyst
- Liver
  - Left medial lobe markedly enlarged and tan
    - Multifocal hemorrhage on cut surface
    - Multifocal necrosis
- Heart
  - Markedly enlarged and rounded
  - White fluid in pericardial sac
Histopathology

- Kidney
  - Chronic, mild to moderate, fibroging, lymphocytic interstitial nephritis

- Adrenal glands
  - Multifocal cortical hyperplasia
Histopathology

- Liver mass
  - Infiltrative, poorly-demarcated
  - Multiple cystic, blood-filled spaces containing fibrin and hemorrhage
  - Cystic spaces lined by neoplastic hepatocytes
Virology

- PCR for *Orthohepadnaviruses* was negative
Neoplasia in Ferrets

- Traditionally considered rare due to short life span
- Adrenal cortical, islet cell, and lymphoma most commonly reported
- Hepatocellular neoplasms extremely rare
- Pelioid type not previously reported
WHO Classification of Hepatocellular Carcinomas

- Period
- Sarcomatoid
- Trabecular
- Pseudoglandular
- Compact
- Carcinosarcoma
- Fibrolamellar
- Schirrous
- Mixed
- Combined (hepatocellular/Cholangiosarcoma)
Scirrhous
Pseudoglandular
References