Disseminated Idiopathic Myositis in a Ferret

Disseminated Idiopathic Myofascitis

- Since late 2003, previously unrecognized
- Observed across the country
- Disease of young ferrets:
  - rapid onset of clinical signs
  - high fever, neutrophilic leukocytosis
  - treatment failure and death (or euthanasia)
  - severe suppurative myositis (esophagus)
A 7-months old female, spayed ferret was submitted dead for necropsy to the Diagnostic Center for Population and Animal Health at Michigan State University.
Clinical Signs

- 3-month history of:
  - High fever
  - Lethargy and ataxia
  - Pain when moving
  - Anorexia

- Blood work:
  - Marked leukocytosis with mature neutrophilia (34,000)
  - Moderate, nonregenerative anemia (HCT-25%)
  - Mild elevation of ALT
  - Mild hyperglycemia and hypoalbuminemia
Treatment

• Antibiotics
• Anti-inflammatory drugs
• Glucocorticoids

However, the ferret continued to deteriorate for the last weeks and was euthanized with subsequent submission for a full necropsy.
Morphological Diagnosis

Skeletal muscle, diffuse, severe, suppurative myofascitis
Microbiology

Bacterial cultures and PCR for protozoa and FECV were negative on submitted tissue samples
Etiopathogenesis

- Unknown
- Presentation and microscopic lesions suggest an infectious etiology, most likely bacterial infection:
  - Poor response to a broad variety of antibiotics
  - No bacteria observed microscopically
  - Fresh samples rarely available for culture or originate from ferrets treated with antibiotics
- Other differentials:
  - Vaccine-related polymyositis in humans
  - Vaccine reactions in ferrets (sarcoma)
  - Myositis not described as adverse affect
  - Vaccine history of ferrets not consistent
  - Heritable disease unlikely, ferrets from different breeding facilities
References