Systemic Amebiasis

Case 64, Slide 14-001895

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HISTORY AND SIGNALMENT

7-year-old, male castrated, Labrador Retriever.

• Allergic dermatitis treated with prednisone for 20 days.
• One month later: lymphocytosis, anemia and thrombocytopenia.
• Auburn University Teaching Hospital-oncology service: chronic lymphocytic leukemia.
  ➢ Organomegaly, peripheral lymph node enlargement, lymphocytosis.
  ➢ FNA cytology of liver, spleen and lymph node: Lymphoproliferative disease (lymphoma vs. lymphoid leukemia).
  ➢ Chemotherapy for 2.5 months: prednisone, L-asparaginase, vincristine, cytarabine, doxorubicin and chlorambucil with partial response.
  ➢ Signs of acute pancreatitis and relapsed leukemia.
  ➢ Five days later the dog was laterally recumbent and obtunded.
  ➢ Euthanasia.
Morphologic Diagnosis:

Heart: Myocarditis, pyogranulomatous and necrotizing, multifocal to coalescing, severe, with amoebic trophozoites.

Heart: Intramuscular protozoan cyst, consistent with Sarcocystis spp.
Ancillary testing:

**CDC-Infectious Diseases Pathology Branch (IDPB)**

- Immunohistochemistry
- PCR
Systemic amebiasis

- *Acanthamoeba* spp. and *Balamuthia mandrillaris:*
  - Encephalitis
  - Disseminated infection

- Treatment with chemotherapeutic and immune-modulation drugs presumably predisposed to systemic infection.

- Systemic amebiasis has been observed in dogs treated with prednisone.
Sarcocystis spp.

- Sarcocystis of unknown species
- Incidental finding
- Cardiac and skeletal muscle of dogs
- No associated inflammation or clinical signs of myositis.
Sarcocystis spp.

- *Sarcocystis canis* is related to *S. neurona*
- Life cycle unknown; only the schizont stage is known.
- Hepatitis in dog, chinchilla, bear, horse, sea lion, dolphin.

- *Sarcocystis caninum*
- Reported in 4 dogs
- Severe myositis
- Only the sarcocyst stage is known.
SPECIAL THANKS TO

• Dr. Jey Koehler
• Staff of the histopathology lab, AU
• Fellow residents
• Dr. Dianna Ng
  • CDC-Infectious Diseases Pathology Branch (IDPB)
References


