Case 14-496

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Signalment

- 1 year old intact male North American beaver
History

- No indication of illness the day before
- Found dead in the enclosure the following morning
Morphological Diagnosis

- Multifocal eosinophilic encephalitis with intralesional nematode larvae
The Uninvited Guest

- Thick multilayered cuticle
- Lateral alae
- Intestinal tract lined with cuboidal cells
  - Basal oriented nuclei
- Coelomyarian musculature
- 55-70µm in diameter
Final Diagnosis

- *Baylisascaris procyonis*, neural larval migrans
  - The Raccoon Roundworm
In humans, eggs hatch after ingestion, and larvae penetrate the gut wall and migrate to a wide variety of tissues and cause VLM and OLM.

In paratenic hosts (small mammals and birds), larvae penetrate the gut wall and migrate into various tissues where they encyst.

Paratenic host containing encysted larvae is eaten by raccoons.

Raccoons

Larvae develop into egg-laying adult worms in the small intestine.

* Dogs can apparently be reservoir hosts as they harbor patent infections and shed eggs.

Eggs hatch and larvae are released in the intestine.

Eggs ingested

Eggs passed in feces

Embryonated egg with larva

External Environment (2-4 weeks until infective)

Eggs

https://web.stanford.edu/class/humbio103/ParaSites2002/baylisascarisis/paraSite%20finished%20draft.html
Clinical Signs

- Depression
- Lethargy
- Head/body tilt
- Circling
- Opisthotonos
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- Opisthotonos
- Sudden death
Acknowledgements

- Dr. Linden Craig
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- UTCVM Pathology Department
- UTCVM Histology Lab
Having survived the shipwreck, Pinocchio finds himself alone in beaver infested waters.