Eye Can’t Believe It’s Not Bacterial!

Case #: P17-45
Megan Zalek, Kurt Zimmerman, Julia Disney, Thomas Cecere

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Signalment and History

- 7-year old, intact male, Bloodhound
- Severe left periorbital swelling with mucohemorrhagic discharge
- 1x2 cm nodular swelling under right eye
- Mild cough
- History of epistaxis

Source: http://www.americanbloodhoundclub.org
Cytology

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Enucleation
Morphologic Diagnosis: “Eye Had a Blast!”

- Pyogranulomatous and necrotizing panophthalmitis with intralesional yeast.

- Additional diagnostics: Urine was positive for *Blastomyces* antigen by EIA (MiraVista Diagnostics).

Source: http://www.johnlund.com
Blastomycosis
Blastomycosis

- Blastomycosis (*Blastomyces dermatitidis*) is a fungal disease that is endemic in the southern United States
  - At risk groups: intact male, large breed young dogs, sporting dogs and hounds

- *Blastomyces* is a thermally dimorphic fungus
  - Mycelial (infectious)
  - Yeast forms

- Inhaling the conidia (produced by the infectious mycelial phase) from the environment inoculates the animal’s lungs with the organism

- Within the host’s body, the increase in temperature causes conversion from the spore phase to a broad-based budding yeast with thick, double-contoured walls and granular basophilic internal structures.

- In the lung, local pulmonary disease ranges from a self-limiting infection to severe pyogranulomatous pneumonia. The organism can spread through the vascular or lymphatic system, causing granulomatous or pyogranulomatous inflammation in many organs. The respiratory tract, lymphatics, eyes, skin and bones are most commonly affected.

- Ocular lesions occur frequently, taking place in 30–43% of dogs with systemic blastomycosis. Ocular infection with *Blastomyces* causes anterior uveitis, panophthalmitis, chorioretinitis, optic neuritis, retinal detachment, and secondary glaucoma.
Acknowledgments & References

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