Hindsight is 20/20

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Signalment and History:

- Stray, 17-year-old, spayed female, calico domestic shorthair feline
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2000: Cutaneous *Actinomyces* sp. and secondary coagulase positive *Staphylococcus* sp.
- Treated with antibiotics (Doxycycline, Baytril, and Clindamycin): 3 mos.
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- 2012: Neurologic signs began

- 2015: Euthanized due to progression of neurologic signs
Relevant Gross Finding:

- Moderate periocular crusting
- Bilateral tan ocular discharge exuding from medial canthus

Significant Gross Findings (not relevant to ocular lesions):

- Poorly differentiated renal carcinoma with metastasis to heart, brain, lung and lymph nodes
Normal Feline Retina; H&E

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Photo: http://www.vetmed.ucdavis.edu/courses/vet_eyes/eye_path/epath_overview_index.html
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Diagnosis:

Retinal Degeneration consistent with Fluoroquinolone toxicity

- Severe retinal degeneration/atrophy

(Not shown: Poorly differentiated renal carcinoma with metastasis to heart, brain, lung and lymph nodes)
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- This case: 30 mg/kg/d for a 12 days; dosing before and after in the range of 10 mg/kg/d

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    • Defect allows transport of the Fluoroquinolone to the retina
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  • Feline-specific amino acid changes in this gene
    • Functional defect of the transport protein
    • Defect allows transport of the Fluoroquinolone to the retina
  • Fluoroquinolones are known to be photoreactive
  • Reactive oxygen species generated → light exposure leads to retinal degeneration and blindness
Case Summary

• Ocular lesions are an incidental finding

• Primary disease: Metastatic renal carcinoma

• The poorly differentiated renal carcinoma and metastasis responsible for neurological signs and decision for humane euthanasia
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• Case provides a very interesting example of Baytril toxicity in a young systemically healthy cat leading to retinal degeneration.
References


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