

# The Thai Journal of Veterinary Medicine

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Volume 38  
Issue 2 June, 2008

Article 7

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6-1-2008

## Ophthalmology Snapshot

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### Recommended Citation

Tuntivanich, Nalinee (2008) "Ophthalmology Snapshot," *The Thai Journal of Veterinary Medicine*: Vol. 38: Iss. 2, Article 7.

Available at: <https://digital.car.chula.ac.th/tjvm/vol38/iss2/7>

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## Ophthalmology Snapshot

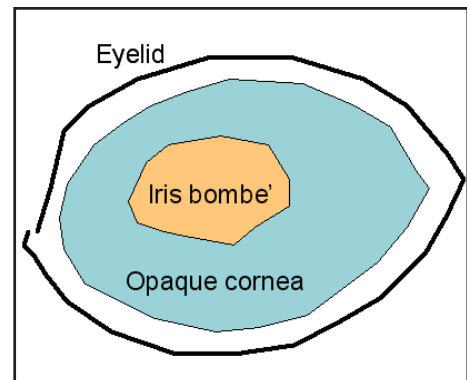
Nalinee Tuntivanich



**Figure 1.** Front view of a cat.



**Figure 2.** The cat's left eye.  
(close up)



**Figure 3.** Schematic diagram of Fig. 2.

### History

A domestic short-haired cat had a history of cat fighting in year 2004. At that time, her left eye was treated for severe ulcerative keratitis and anterior uveitis. After the cornea was less opaque (keratitis and uveitis had improved), the cat was diagnosed with traumatic cataract and posterior synechia.

This cat was brought back to the hospital in year 2007 with an enlargement of the left globe (Fig. 1) and sign of ocular discomfort. Ophthalmic examinations revealed edema of an entire cornea and iris bombe' (Figs. 2 & 3). Intraocular pressure (IOP) was 65 mmHg on the left eye while 20 mmHg on the right eye. Fluorescein staining was not up taken on the corneal surface.

### Questions

1. What is your diagnosis?
2. What is the cause of answer to question 1?

(For better quality, figures can be viewed in the TJVM website.)

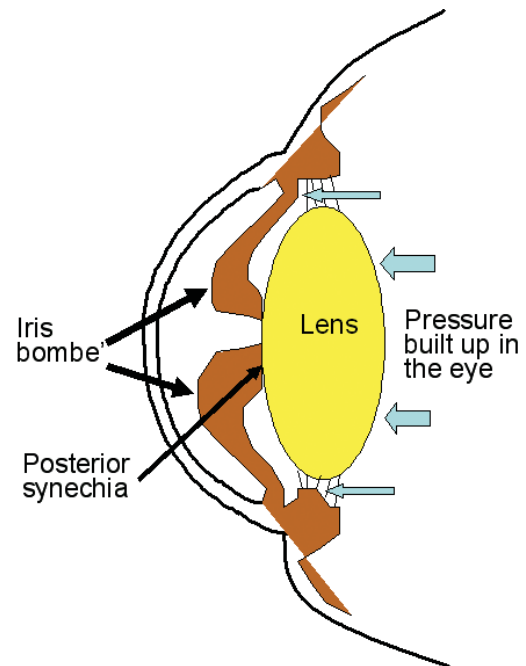
Please turn to the next page for answers .....

## Answers

1. Glaucoma on the left eye; normal right eye
2. Change of microenvironment in the anterior chamber and components of the aqueous humor due to traumatic cataract was the cause of anterior segment inflammation, leading to posterior synechia. As a result, there was an obstruction of aqueous outflow from the posterior through the pupil that led to an elevation of the intraocular pressure (uveitis-induced glaucoma) (Fig. 4)
3. The cause of glaucoma should be determined and treated (if possible), along with a rapid reduction of high IOP to relieve pain. Carbonic anhydrase inhibitor in combination with beta blocker agent can be topically applied 2-3 times a day. Topical and/or systemic anti-inflammatory agent should be administered. If the IOP remains high, surgery to reduce the IOP should be considered. Otherwise surgery to remove the blinded eye should be suggested.

## Comments

1. Feline glaucoma is usually unilateral and due to secondary ocular disease. Systemic disorder is also occasionally found as a cause of glaucoma therefore the fellow eye should be evaluated.
2. Prostaglandin analog should be avoided to treat feline glaucoma because not only it is less effective compared to other medications but it also causes profound miosis.



**Figure 4.** Schematic diagram of elevated intraocular pressure and iris bombe' induced by posterior synechia.

## References

- Barnett, K.C. and Crispin, S.M. 1998. *Feline Ophthalmology. An Atlas and Text.* W.B. Saunders, London.
- Gelatt, K.N. 1991. *Veterinary Ophthalmology.* 2<sup>nd</sup> ed. Lea & Febign, Philadelphia.