

Ophthalmology Snapshot

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History

A five year-old male Shih Tzu had traumatic injury approximately a month ago. He was diagnosed by a private veterinarian with right eye glaucoma and blindness. He had been treated with oral antibiotics, topical non-selective beta-adrenergic receptor blocking agent and artificial tears. Two weeks following

treatment, ocular pain was more severe. He was then referred to the Ophthalmology Clinic, Animal Teaching Hospital, Faculty of Veterinary Science, Chulalongkorn University.

The dog had severe blepharospasm. Intraocular pressure was 23 mmHg. Wound was noticed at the center of the cornea, together with creamy yellowish exudates.



Figure 1 Photograph of the right eye of Shih Tzu.
(For better quality of photographs, please visit the TJVM website)

Question

What is your diagnosis?

Please turn to next page for the answer.

Answer

Post traumatic bacterial endophthalmitis



Figure 2 Photograph of the right eye (sagittal plain) revealing marked inflammation of intraocular tissues.

Comments

Bacterial endophthalmitis is an inflammatory reaction of intraocular tissues caused by microorganism. In this case, bacteria entered into the eye possibly via vascular system (endogenous route of entry) in association with ruptured cornea (exogenous route of entry). It is likely that previous treatment with systemic antibiotic was insufficient to control infection. With penetration through the cornea, rapid and aggressive bacterial proliferation occurred. Increased blood ocular barrier breakdown resulted in more severe inflammation. Destruction at all tissue levels that were in contact with inflammatory cells and toxin were then observed in this case.

Culture and sensitivity test of purulent discharge on the cornea should be determined for type of microorganism and antibiotic sensitivity. *Staphylococcus epidermidis* is the most frequent pathogen

reported (Puliafito et al., 1982). Investigation of changes within the globe via B-scan ultrasonography would highly be suggested prior to surgical intervention.

Surgery should urgently be considered. If early diagnosis is achieved, pars plana vitrectomy could be performed in association with intravitreal injection of antibiotics. However, if marked inflammation is apparent, removal of the eye would be recommended.

Reference

Forster RK, Abbott AL and Gelender H, 1980. Management of infectious endophthalmitis. *Ophthalmol.* 87(4), 313-319

Puliafito CA, Baker AS, Haaf J, Foster CS, 1982. Infectious endophthalmitis: review of 36 cases. *Ophthalmol.* 89(8), 921-929