

Small

# OCULAR MISCONCEPTIONS

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## 1. Breed is not important

WRONG!

Breed predisposition is very important in veterinary ophthalmology. Most of the eye problems—apart from trauma—are breed-related.

Always check the breed predisposition lists in all purebred dogs and their primary crosses.

For the Animal Eye Care breed predisposition list go to [cve.edu.au/Common/Uploaded files/CT/Breed-Predisposition-to-Eye-Disease.pdf](http://cve.edu.au/Common/Uploaded files/CT/Breed-Predisposition-to-Eye-Disease.pdf).

*Veterinary Editors' comments: Almost all diseases in dogs are breed related, including many immune-mediated diseases and cancers; this is the problem with our owned dog population—it is essentially a population of pedigree dog hybrids, compared to cats where 80% of individuals are genetically diverse crossbreeds.*

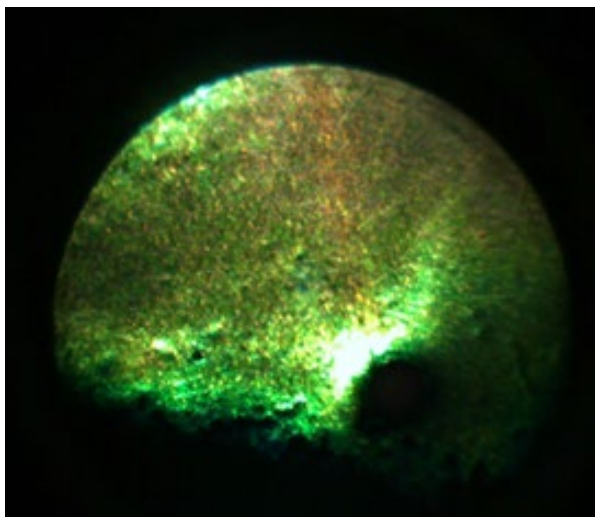


Figure 1. Fundoscopic appearance of advanced PRA. Note absence of any retinal vessels.

## Some Eye Diseases that are breed related

- Progressive retinal atrophy (PRA)—often patients present with poor night vision (Labradors, Australian Cattle Dogs, Poodles, Cocker Spaniels, Labradoodles).
- Lens luxation—always think of lens luxation in any terrier with a sore eye.
- Glaucoma—increased intraocular pressure (IOP)—Bassets, Cockers, Poodles, Maltese, Golden Retrievers

Beware of a one-eyed Pure-Bred dog! One eye may have been removed because of glaucoma pain—the other eye will be predisposed to glaucoma!



Figure 2. Lens luxation—Always think of lens luxation in any terrier with a sore eye. Beware of a one-eyed Terrier! One eye may have been removed because of pain—the other eye may be developing lens luxation!



Figure 3. Glaucoma

## 2. Schirmer Tear Tests are not needed as dry eye is pretty obvious

WRONG!

- One of our golden rules at Animal Eye Care is to always do a Schirmer Tear Test (STT) in all cases of corneal disease, conjunctival disease, and ocular disease.
- Dry eye can easily be missed, it does not always present with the classic clinical signs of a thick mucoid discharge that dries and crusts on the eyelids.
- Remember in dogs to always relate the clinical signs to the STT. If the eye looks dry and the STT is not too bad, consider treating the eye anyway. Some eyes are dry because the tear quality is low. Cyclosporin and tacrolimus will help these cases by increasing the tear quantity and also improving tear quality.
- Remember in cats they usually do not get the classic mucoid discharge that dogs do. Consider using Hylo-Forte® eye drops for about 6 weeks in all cats that have had viral keratitis and/or conjunctivitis.

### STT values

- Normal STT for dogs is > 15 mm wetting/minute
- Normal STT for cats > 9mm wetting/minute



Figure 4. KCS—classical features of dry eye syndrome

## 3. Oral NSAIDs are good enough

WRONG!

- Ocular trauma is common, and in many cases, oral cortisone is a better choice than oral

NSAIDs! In some cases, this can cause vision loss, and other uveitis induced sequelae.

- Many cases of ocular trauma are treated with oral NSAIDs, but in severe cases, the oral NSAIDs are simply not enough to treat the uveitis and minimize potential damage to the eye.
- At Animal Eye Care, we prefer to use oral prednisolone for most cases of ocular trauma. In very severe cases we will also use epibulbar subconjunctival cortisone injections. We lose most eyes to uveitis rather than infection and or slow wound healing.

### When not to use oral prednisolone:

- i. Infections in the cornea—keratomalacia, corneal and or scleral lacerations that have not been sutured,
- ii. The animal is otherwise unwell or diabetic.



Figure 5. Ocular trauma: note the scleral haemorrhage and the small pupil

## 4. Using ointment to treat ocular trauma

As previously discussed, uveitis and ocular trauma cases need to be treated with anti-inflammatories. In most cases we should use oral anti-inflammatories—usually oral prednisolone rather than oral NSAIDs for severe cases of uveitis and ocular trauma.

**When you see a case of uveitis or ocular trauma consider using a potent topical anti-inflammatory –e.g., Maxidex® or Prednefrin® Forte eye drops rather than an ointment that contains an antibiotic and hydrocortisone. These ointments simply are not strong enough.**





Figure 6. PLR testing—Always use a bright focal light source. PLRs are way too basic to be useful for me

Topical anti-inflammatories obviously must not be used when the cornea is ulcerated. Use caution if the cornea is inflamed, or if the blink response is reduced after ocular trauma, or if the STT is less than 15mm wetting/minute. These cases are more likely to ulcerate.

## 5. PLRs are way too basic to be useful for me

WRONG!

We find pupillary light reflexes (PLRs) very, very useful in our practice.

The PLR can be affected by a number of factors.

Slow and incomplete PLR can be caused by:

- i. Weak focal light—make sure that you use a bright light source.
- ii. Nervous patient—adrenaline release will create a slow and incomplete PLRs.
- iii. Iris atrophy—older Poodles and other breeds can have slow PLRs due to iris atrophy.
- iv. Retinal disease—PRA and retinal inflammation.



Figure 7. Iris Atrophy causing polycoria—multiple pupils—highlighted by the cataract

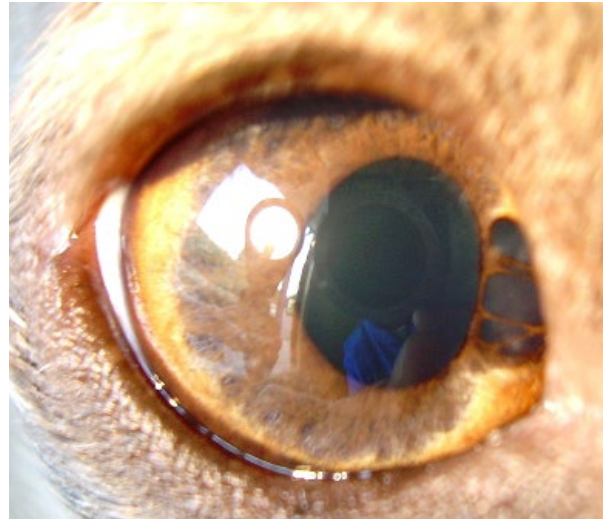


Figure 8. Note the iris atrophy medially—this dog would have a slow PLR

## 6. When dealing with a red eye, do not bother with the PLR

WRONG!

- At Animal Eye Care we always do a PLR in all eye cases and especially in red eyes.
- A dilated nonresponsive pupil and a red eye in a purebred dog is likely to be glaucoma. We suggest measuring the IOP in all red eyes, blue eyes and whenever you suspect glaucoma.
- We also recommend measuring the IOP in all cases of uveitis. The IOP is usually low, and this would confirm the diagnosis. Also, as the uveitis improves the IOP should increase. Again, check the IOP, if the eye looks better but the IOP is low the medication should be continued.

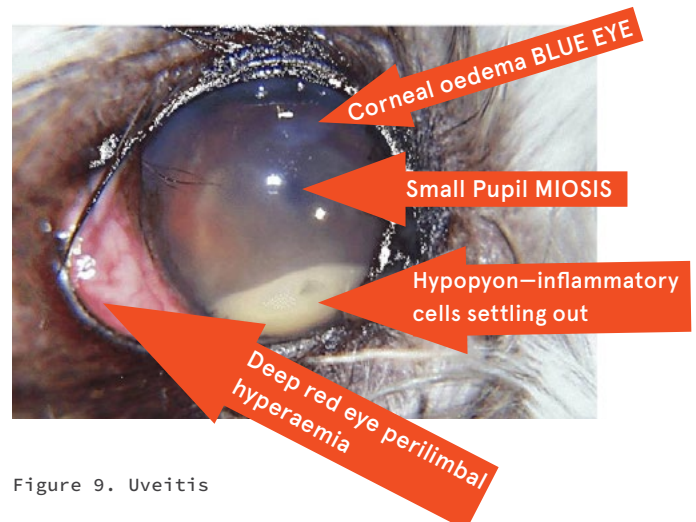


Figure 9. Uveitis

## 7. Use the largest possible suture when doing cherry eye surgery

WRONG!

- Cherry eye surgery can be a challenge especially in large breed dogs. In problem cases that have had previous surgery we often find that large sutures have been used. We also find large knots on the inside of the third eyelid that cause corneal ulcers.
- At Animal Eye Care we normally use 6/0 Vicryl for most cherry eye surgeries. We use a modification of Morgan technique.
- For large breed dogs over 25 kgs we often place 3 inverted simple interrupted sutures to help hold (and reinforce) the bulbar aspect of the third eyelid. We do this before closing the mucosal pocket that is created to replace the prolapsed third eyelid gland.
- We usually do a continuous suture to close the mucosal pocket. You can either bury the starting and finishing knots into the mucosal pocket OR you can place these knots on the eyelid side of the third eyelid, and then pass the suture into the pocket. Remember to include some of the connective tissue under the conjunctiva as you close the conjunctiva.

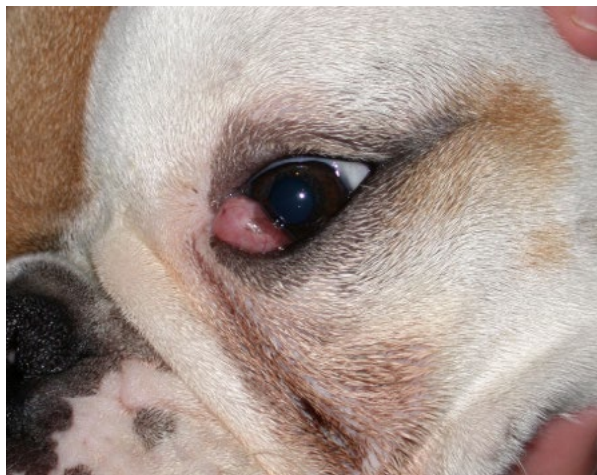


Figure 10. Cherry eye

## 8. Eyelid surgery is easy

Eyelid surgery can be tricky, and it is very important to use the right surgical equipment and also the right sutures. Unfortunately, from time to time we see eyelid surgeries where inappropriate sutures have used.

- Entropion surgery, eyelid tumour removals  
Use soft, fine, absorbable suture—e.g.,

5/0 Vicryl or 5/0 Maxon. These sutures do not need to be removed, so the ends can be cut short. Some like to use 4/0 Vicryl Rapid sutures. In some cases, these sutures dissolve out too quickly.



Figure 11A and B. Two entropion patients.



Figure 12. An eyelid tumour—trickier to remove than you might think.



- If the entropion is associated with a corneal ulcer and blepharospasm—consider placing lateral temporary tarsorrhaphy (TT) suture at same time as entropion correction. The TTs can help protect the cornea and can make the eye much more comfortable. We would use 5/0 to 4/0 nylon suture for the TTs, and we would remove these TTs (temporary tarsorrhaphy) sutures after 10 to 14 days.

## 9. Topical NSAIDs can be used on corneal ulcers

Topical NSAIDs such as Acular® and Voltaren® eye drops can be very useful in Veterinary Ophthalmology.

There is a common misconception that topical NSAIDs can be used on corneal ulcers.

This is WRONG!

At Animal Eye Care we see lots of melting corneal ulcers, corneal perforation, and delayed corneal healing with the use of topical NSAIDs.

**DO NOT USE TOPICAL NSAIDs on an active corneal ulcer or in cases when the cornea could ulcerate.**

**We recommend oral NSAIDs and topical and oral antibiotics in all cases of corneal ulceration.**

## 10. When to use a topical NSAID

At Animal Eye Care we use topical NSAID drops e.g., Voltaren® or Acular® eye drops for:

1. The treatment of Lens induced uveitis (LIU)—e.g., cataracts and also for lens rupture.
2. To treat vascular keratitis, and also to reduce vascularization/fibrosis once an ulcer has healed.
3. Uveitis in cats in dogs and cats.
4. This can be very useful in cats as topical cortisones may reactivate a latent Feline Herpes Virus (FHV-1) keratitis.
5. To prevent post-operative inflammation after cataract surgery. ◆



### Further Reading

C&T No. 5601 Entropion in Eyes, Robin Stanley, Issue 286 March 2017



Figure 13. Corneal ulcer. Note the uptake of fluorescein.

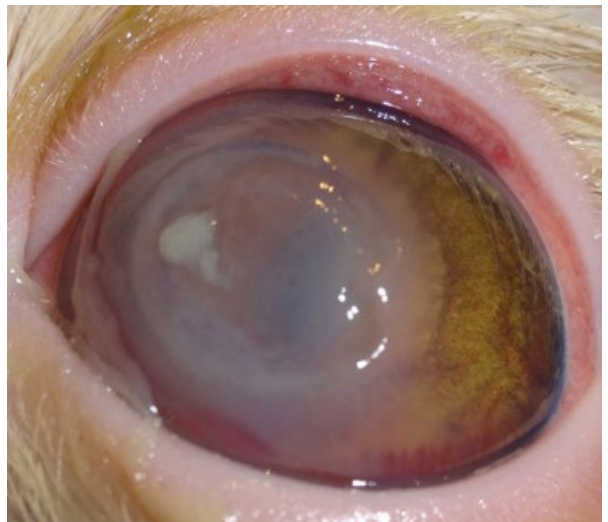


Figure 14. In this case, there is a stromal corneal ulcer with some purulent discharge (arrow). You can see blood vessels ventrally. Topical NSAIDs should not be used on this eye.

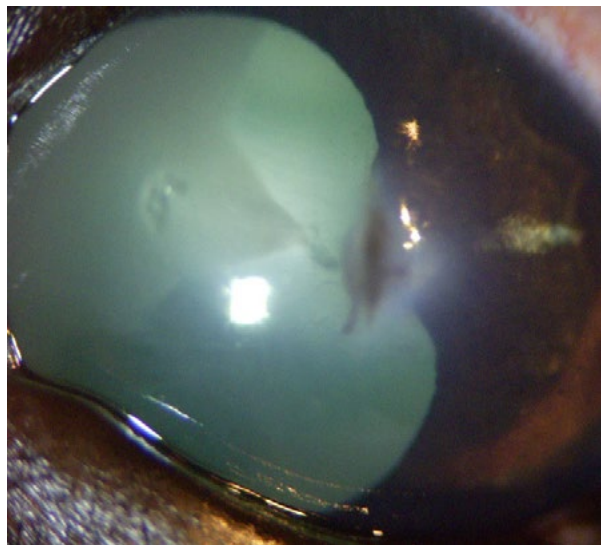


Figure 15. Lens rupture in a dog after a cat scratch



Figure 16. The ulcer in the ventrolateral cornea has healed with blood vessel—no dye uptake

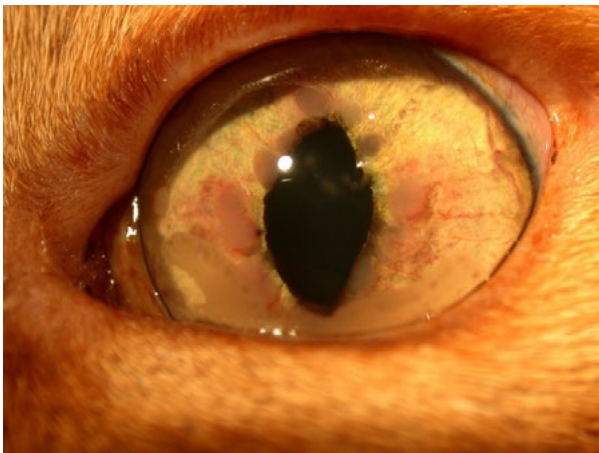


Figure 17. Fibrinous uveitis in cats

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