

EYEVET SERVICES

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IMMUNE MEDIATED DISEASE

It may seem quite bizarre, but there are a number of disease conditions in both animals and humans, where there is a reaction of the body against itself. These are called immune mediated or autoimmune diseases because the immune system is the major player in this battle.

Effectively, antibodies produced by the body result in destruction of a specific organ. Examples include: reaction against ones skin (blistering diseases), blood elements eg red blood cells (anaemia) and many others.

The eye is no exception to this situation. Examples include:

(1) **Lid disease** - severe inflammation of the lid margins (blepharitis)-reaction of the lids to the lipid secretion in the glands of the lid margin.

(2) **Corneal disease** - Pannus or Superficial Keratitis(German shepherds, Huskies, Greyhounds and Collie breeds) and Punctate Keratitis (seen especially in Fox Terriers).

(3) **Dry eye or Keratoconjunctivitis Sicca (KCS)** - diminution in aqueous tear production from the two major glands in the eye.

(4) **Episcleritis** - reaction of the sclera against the tissue surrounding the eye-a reaction of tissues around the eye to substances in the coat of the eye.

(5) **Uveitis** - inflammation of the iris and other associated structures.-eg as a result of mature cataract formation-in this situation the protein from inside the lens leaks out into the eye which does not recognise it as “self”. This sets up an inflammatory reaction which can cause serious damage to the eye unless controlled.

(6) **Choroiditis** - the choroid is the structure which supplies blood to the retina. Inflammation will cause fluid exudation and can result in retinal detachment. Medication may be needed by mouth to reach this area, drops are inadequate.

(7) **Optic neuritis** - inflammation of the optic nerve behind the eye.

When treating these inflammatory diseases several **specific principles of treatment** need to be considered:

(i) Anti-inflammatory drugs need to be used either by eye drop or by mouth. It may sometimes require a combination of two in order that the specific properties of one or the other are combined.

(ii) The degree of effect is proportional to dose or frequency of application, so to get a result initially high doses need to be used in these disease conditions eg 6-10 times daily.

(iii) There are a wide variety of anti-inflammatory agents which can be used - we will always use the best which may be the most expensive.

(iv) Treatment may only give **control not cure**. A low dose regime (say once a day or every other day) may be needed indefinitely. The consequence of not doing this is discomfort or blindness for your pet (missing 1 or 2 days once control is attained will not cause a problem).

(v) It may be worthwhile after several months, particularly if there is a change in circumstances(eg shifting to another location) and the problem is under good control, to reduce treatment and stop and watch for recurrence of signs.

(vi) Rechecks are necessary, in order that subtle changes which will not be noticed by you on a day to day basis, can be checked.

(vii) Eyedrops when placed in the eye are flushed out within 5 minutes by tears, so it is possible to medicate in a more convenient manner by using a drop now, one 20 min later and repeat 2 more times. Repeat this protocol at nite. This way you are effectively medicating 4 times in morning and nite within an hour or so –this is a lot more convenient if you are working and the effect is the same as spacing the drops out during your pets waking hours.

(viii) Cortisone tablets –eg Prednisone 5mg/20 mg –these drugs in some instances may be prescribed as an adjunct to the topical treatment with eye-drops in an effort to get things up to speed quicker ! Initially the dose may be quite high then tapering off over a 1-4 week period. A side effect of this initial high dose will be:

- Increased thirst
- Increased urination-possibly urinary incontinence in older female dogs
- Increased appetite-don't offer any more food than normal !!
- Panting
- Lethargy

These are all quite acceptable for a short period and they will disappear as dose reduces. **If there is any sign of vomiting, diarrhoea, poor appetite or depression while on these tablets, then stop them immediately and contact me or your own Vet.**

INSTRUCTIONS FOR GIVING EYE DROPS

- (1) Keep the drops out of sunlight in a cool place.
- (2) Shake the bottle well before use.
- (3) Use only one drop per eye.
- (4) Medicate the eye by everting the upper eyelid with the left hand and dropping a drop onto the cornea, holding the bottle in the right hand so the animal cannot see the dropper and approaching from behind the eye. Often a drop will appear with minimal pressure on bottle so lightly touch this to the cornea.
- (5) See (v) above - after several months try reduction to every other day or every three days - watch for recurrence of signs.

Thanks for reading this information. I hope it gives you a greater understanding of this particular problem and how we are going to achieve a desirable result.

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Contact me on craigeyevet@clear.net.nz if any problems or for reports on how treatment is going.