



## OPHTHALMOLOGY REFERRALS

Miss Sally Turner | MA VetMB DVOPhthal MRCVS | RCVS Specialist in Veterinary Ophthalmology

### Glaucoma

#### What is glaucoma?

Glaucoma is a group of eye disorders which result in permanent damage to the optic nerve and retina due to a raised pressure within the eye. This results in blindness. The pressure increases because there is an obstruction to the normal drainage of fluid from the eye.

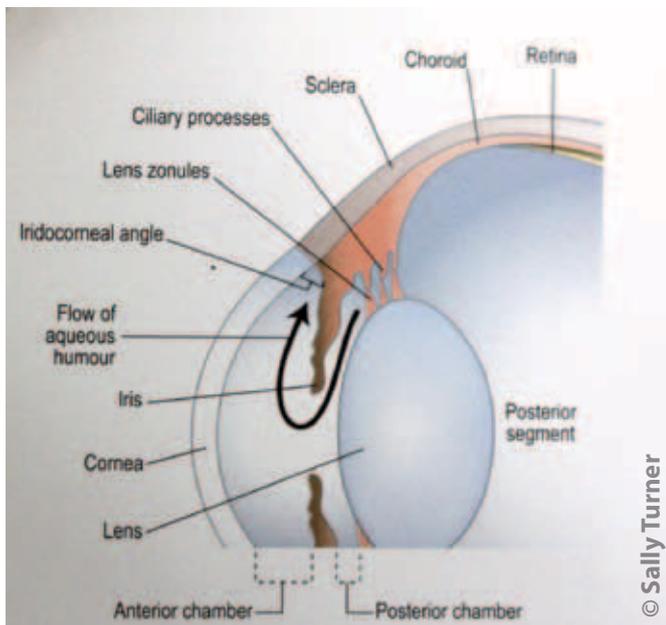


Diagram illustrating the flow of aqueous in the eye – arrows show the production from the ciliary processes and outflow through the iridocorneal angle

#### Signs of glaucoma

Glaucoma can develop very rapidly. The eye becomes red, painful and swollen and a bluish tinge forms over the cornea at the front of the eye. Often patients are depressed. Blindness can develop suddenly with acute glaucoma. In some cases the pressure goes up more slowly and the signs are less noticeable although a gradual deterioration in vision is apparent (chronic glaucoma). The eye might appear bulging. The pressure is measured (tonometry) using a small instrument to touch the cornea under local anaesthesia.



Cloudy, red, painful eye in a dog with acute glaucoma

### Causes of glaucoma

Many cases of glaucoma are inherited - the animal is born with an abnormal drainage passage (drainage angle) - and develops glaucoma in middle age. This is called primary glaucoma. Affected breeds include the Bassett Hound, Welsh Springer Spaniel, American Cocker Spaniel, Siberian Husky, Great Dane and Flat-coated Retriever amongst others. Often one eye is affected initially, but it is usual for the second eye to develop the condition at some stage in the future. A special contact lens (goniolens) can be placed on the eye to examine the drainage angle (gonioscopy) and determine whether the eye is prone to develop glaucoma. A type of chronic glaucoma associated with pigmentary changes in the eye is seen in Cairn terriers and Golden Retrievers.

Other causes of glaucoma are secondary – that is they develop as a result of other disease in the eye such as inflammation or a lens luxation or due to the presence of a tumour. In these cases the underlying condition must be treated as well as the resultant glaucoma.

### Treatment

The aim of treatment is to save vision, if at all possible, and relieve the pain caused by the raised pressure. Treatment can be medical – involving one or more types of drops – or surgical. Sometimes a combination of treatment types is required. Surgery for glaucoma is most commonly via laser technology, although drainage implants can also be used. Unfortunately the long term success rate for surgery is poor and some patients require repeated procedures to control the pressure and try to save vision. The condition can prove difficult to control in some cases. Regular check-ups are required to monitor the pressure and check the second eye. There is no known treatment to stop the second eye becoming affected in cases of primary glaucoma although the use of drops can delay the development of the condition in some cases.

If the eye is blind and control of the pressure is not successful the eye will cause the pet a lot of discomfort. In these cases removal of the affected eye is the most humane treatment and most patients are much happier once this has been done.

### Monitoring

Glaucoma is a very serious problem and regular rechecks are required to monitor the condition. These will include a full ophthalmic examination as well as checking the intraocular pressure and altering medication as required.