GLAUCOMA IN DOGS

What is glaucoma?

Glaucoma is defined as increased pressure within the eye (called intra-ocular pressure or IOP) that causes degenerative changes in the optic nerves and retina with subsequent blindness. Other than the loss of vision, untreated, glaucoma is associated with severe pain.

What are the causes of glaucoma?

Cells inside the eye continuously produce a fluid that fills the front portion of the eye. Glaucoma develops when the normal flow of this fluid out of the eye is impaired.

- **Primary glaucoma**, which is most commonly seen in **pure bred dogs**, causes an increased of pressure in both eyes, without the presence of a primary eye disease. This is caused by a hereditary defect where the filtering mechanism is partially or completely blocked off.

- **Secondary glaucoma** refers to increased pressure in the eye due to other ocular diseases.

What are the signs of glaucoma?

The increased pressure within the eye seen in primary glaucoma can cause blindness in 24 to 72 days. Usually, the dog has glaucoma in one eye, the other eye being normal. A **red eye, bluish/cloudy cornea, pain, dilated pupil, discharge from the eye, and enlargement of the eye** are also noted.

![Blueish aspect of the cornea, dilated pupil, non visual eye in dog with glaucoma.](image1)

![Blueish aspect of the cornea and redness eye in a dog with glaucoma](image2)
**How can we diagnose glaucoma?**

The clinical signs, the breed, and the measurement of the pressure inside the eye (>30mmHg in a dog) are all used to diagnose glaucoma in dog. The measurement of the pressure inside the eye is called tonometry and can be performed with various instruments or tonometers. Vaudreuil Veterinary Clinic is using the **TonoVet®**, which is the instrument recommended by veterinary ophthalmologists.

**What are the treatment goals of glaucoma?**

The goals of glaucoma treatment are to decrease the intra-ocular pressure to save as much vision as possible for as long as possible and to keep the patient comfortable.

**How is glaucoma treated?**

The treatment program is determined by the type of glaucoma, the severity and duration, the pet’s other medical problems, the cosmetic considerations of the client (removing the eye as an option or not) as well as the financial restriction of the client.

The **medical treatment** generally consist in the instillation on the affected eye of a combination of several medications (drops, ointment) as to decrease efficiently the IOP.

The **emergency medical treatment** requires hospitalization and intensive therapy to administer an intravenous medication to rapidly decrease the IOP.

**Surgical treatment** may be necessary, such as removing the affected eye (enucleation) or specialized surgical procedures performed by certified veterinary ophthalmologists.

**What can I expect after treatment?**

Each patient requires careful and frequent re-evaluation so that the treatment program can follow the stages of the disease. Many patients vision loss can be postponed or prevented. Unfortunately, late diagnosis often leads to a more rapid vision loss.

**Prevention**

Early detection of glaucoma is possible by annual intra-ocular pressure screening measurement, especially in pure bred dogs that are at risk of primary glaucoma. Do not hesitate to talk about glaucoma with Vaudreuil Veterinary Clinic’s veterinarians.

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**Références:**