

Glaucoma in Cats

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BASIC INFORMATION

Description

Glaucoma is an increase in pressure within the eye. In contrast to dogs, primary or inherited glaucoma is rare in the cat. Both eyes are predisposed with primary glaucoma. Secondary or acquired glaucoma is the most common type of glaucoma in the cat and may affect only one eye, depending on the underlying cause.

Causes

Chronic uveitis (inflammation of the iris and surrounding tissues) is the most common cause of glaucoma in the cat. Other causes of secondary glaucoma include dislocation (luxation) of the lens, bleeding in the eye (hyphema), tumors, trauma, and other conditions. In rare cases, fluid in the front part of the eye may be directed backward, and pressure may become elevated (aqueous misdirection syndrome).

Primary glaucoma is rare but has been seen in Siamese and domestic shorthair cats. Glaucoma most often affects middle-aged to older cats, although it can occur in kittens. Congenital glaucoma is very rare.

Clinical Signs

Acute glaucoma can cause redness, watery discharge, pain (squinting, rubbing the eye), cloudiness, and blindness in the affected eye. Because many cats are quite stoic and can function normally with vision in just one eye, glaucoma may not be discovered until it becomes chronic and the eye enlarges. Signs of glaucoma are also similar to those of many other eye diseases. In some cases, glaucoma is discovered when the eye is examined for other problems, such as uveitis. Acute glaucoma usually affects one eye initially, unless uveitis is present in both eyes.

Diagnostic Tests

Glaucoma is diagnosed by measuring the pressure in the eye using a tonometer. A thorough eye examination is done to search for an underlying cause. If uveitis is present, laboratory testing is often needed to search for the cause of the uveitis. (See the handout on **Anterior Uveitis**.)

Primary glaucoma is diagnosed when none of the causes of secondary glaucoma are found. If the diagnosis, type, and cause of glaucoma are uncertain or if specialized treatment is needed, your veterinarian may refer your cat to a veterinary ophthalmologist for further evaluation.

TREATMENT AND FOLLOW-UP

Treatment Options

The goals of therapy are to lower the pressure, save or maintain vision, and relieve pain. Because primary glaucoma is rare and acute glaucoma is uncommonly recognized, most cats are treated for chronic, secondary glaucoma. Treatment of secondary glaucoma involves administration of anti-glaucoma drugs and therapy for the underlying cause. For example, surgery may be done to remove a dislocated lens, the eye may be removed if a tumor is suspected, or treatment may be started for uveitis.

Topical glaucoma medications are commonly used in both primary and secondary, acute and chronic glaucoma. Many different types of glaucoma medications may be used in cats, and the following are safe to use in the presence of uveitis:

- Beta-blockers: timolol (*Timoptic*), levobunolol (*Betagen*), betaxolol (*Betoptic*)
- Carbonic anhydrase inhibitors: dorzolamide (Trusopt), brinzolamide (*Azopt*)
- Combination products: timolol/dorzolamide (*Cosopt*)

If the glaucoma or underlying cause cannot be successfully controlled and the eye is blind, then an enucleation (removal of the eye) may be considered. In the rare cases of primary glaucoma, topical glaucoma medications are started in the normal eye to prevent or delay the onset of glaucoma in that eye.

Follow-up Care

Eyes with glaucoma require frequent monitoring and adjustment of medications. Over time, affected eyes may become less responsive to topical medications. Changes in medications or an enucleation may be needed, especially if the eye is blind and becoming larger. If the glaucoma can be controlled with medications, therapy may be lifelong.

Mild to moderate alterations in pressure within the eye may not cause a visible change and may be detected only with repeated pressure measurements (tonometry). Notify your veterinarian immediately if any increase in redness, cloudiness, or decreased vision occurs, because these signs may indicate worsening of the glaucoma.

Prognosis

Glaucoma does not always respond to medications; the medications must be administered painstakingly, and some are expensive. Prognosis for secondary glaucoma varies, depending on the cause. Many cats with mild glaucoma associated with uveitis respond well to medications, and vision can be saved. Primary glaucoma is often difficult to treat, and most affected eyes eventually go blind.