

# Canine Glaucoma Surgery: Non-Visual Eye

## UTCVM OPHTHALMOLOGY

Surgical options are available for glaucoma when there is minimal to no response to medical therapy, vision is already lost, and the main goal is pain relief.

### 1) Enucleation (eye removal)

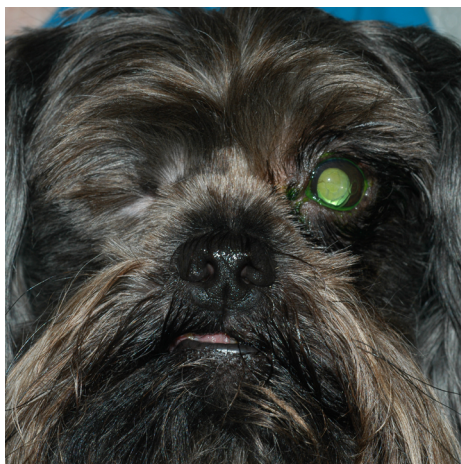
The eye is removed and the eyelids are permanently closed. This procedure rarely requires overnight hospitalization. Immediately following surgery you can expect to see some swelling and bruising around the surgical site. Possible complications are rare but include cyst formation, dehiscence of sutures, or infection. Most often pets are back to their normal selves (prior to experiencing ocular pain) within 2-5 days. Any non-absorbable sutures are removed after 10 to 14 days when the incision has healed. Post-operative care can include oral anti-inflammatories / pain medication and use of an Elizabethan collar. If desired, and provided there is not an infection or cancer present within the orbit, a silicone implant may be placed in the eye socket to prevent a sunken appearance. While the risk is low, there is a potential for complications of the orbital implant to require a second surgery. Orbital implants are not necessary for this procedure to have a good cosmetic outcome.

### 2) Ciliary Body Ablation (CBA) by Injection

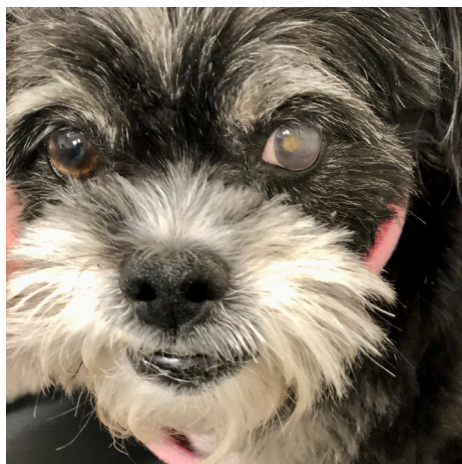
Either an antibiotic or an antiviral is injected into the eye while the patient is under a short general anesthesia. These medications destroy a significant portion of the ciliary body which is the tissue inside the eye that produces fluid (aqueous humor), thereby reducing pressure. The procedure is successful in 80-90% of patients with the first injection, depending on the form of glaucoma. The injection typically takes 2-3 weeks to work; therefore, anti-glaucoma medication should not be discontinued until the pressure is controlled. Should the eye pressure remain elevated following the procedure, a second injection can be attempted. Many eyes following injection become smaller in size (which can be dramatic), although this is not thought to be uncomfortable. Other potential complications include bleeding within the eye, changes in color to the eye (blue, red, or brown), chronic inflammation, and corneal ulceration. Even when successful, some patients still need long term topical medications such as dry eye medications, anti-inflammatories, or rinses.

### 3) Evisceration with Intrascleral Implant

This surgical procedure provides a cosmetic alternative to enucleation. In order to be a candidate for the surgery, the eye must have normal tear production and have a healthy cornea (i.e. no corneal ulcer). The surgery involves making an incision through the conjunctiva and sclera (the white shell of the eye) and removing the contents within the eye. A silicone sphere implant (prosthesis) is then placed within the eye, and the conjunctiva and sclera are sutured closed. Post-operative therapy includes oral and topical antibiotics and an oral anti-inflammatory / pain medication and use of an Elizabethan collar. This procedure may require 1-2 days of hospitalization for pain control. Expected results: Initially the eye becomes progressively red for about 1-2 months, then the cornea will turn a grey to hazy black color. In the final results the pet has what appears to be a functional though non-visual eye. They are able to move the eye and blink as before. This procedure is purely for aesthetic purposes. Patients with intrascleral prostheses may require routine lifelong care to maintain optimal corneal health including long term medications. It is also important to be aware that these patients can still accidentally injure their corneas and require treatment.



An example of a patient several weeks after enucleation of the right eye



An example of a patient several weeks after a CBA of the left eye

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