Metropolitan Veterinary Hospital

Cataract Surgery

Cataracts are a leading cause of visual impairment among dogs. This opacification of the lens has various causes and may or may not progress to total blindness. The vision of affected dogs can often be significantly improved by surgical removal of the cataractous lens. Below are some important facts pertaining to cataract surgery and intraocular lens implantation in dogs.

What is a cataract?

The term cataract refers to any opacity of the lens, a structure that lies within the eye (Figure 1). The function of the lens is to help focus light onto the retina. Cataracts decrease vision by interfering with light reaching the retina. Advanced cataracts are a leading cause of blindness among dogs. Cataracts can be caused by genetic disorders, diabetes, aging and secondary to other diseases of the eye such as progressive retinal atrophy (PRA) and inflammation.

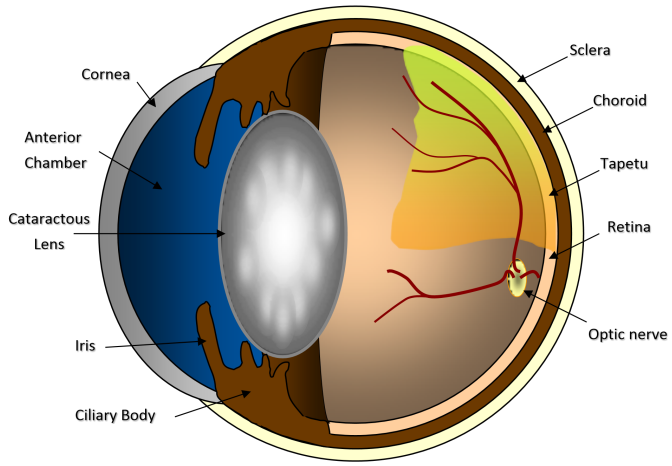

Figure 1. Diagram of the anatomy of the canine eye. A cataract, or white opacity in the lens, is present, which can impede vision and is a leading cause of blindness in dogs.

Dogs affected with inherited cataracts should not be involved in breeding programs. Cataract formation is less commonly associated with diabetes mellitus, advanced age,

trauma, or retinal disease. Depending upon the cause, cataracts may or may not progress to total blindness.

The rate of progression is often variable, ranging from weeks to years depending upon the underlying cause of cataract formation. For example, cataracts associated with diabetes mellitus can develop quickly. In some cases, diabetic cataracts can progress very rapidly, requiring immediate attention to prevent or address secondary complications associated with the cataract progression.

A frequent consequence of cataract formation is the development of inflammation within the eye which, left untreated, can potentially damage the internal structures of the eye and lower the prognosis for a successful visual outcome following cataract surgery. Therefore, early evaluation by a veterinary ophthalmologist is recommended.

How are cataracts treated?

Presently, the only effective treatment of advanced or rapidly progressing cataracts is through surgical removal of the affected lens. This is accomplished under general anesthesia by making a surgical incision into the eye and using special instrumentation to ultrasonically fragment and remove the lens material. When possible, once the cataractous lens has been removed, an artificial intraocular lens is implanted into its place.

The success rate of uncomplicated cataract surgery is approximately 85-90 percent. This success rate may vary depending upon the overall health of the affected eye. An assessment should be made by a veterinary ophthalmologist to determine the relative risks and benefits of surgery.

It is imperative to note that even though there is a relatively high success rate, there are cases in which complications do arise. The consequences of these complications vary in severity and can include, but are not limited to, excessive inflammation, corneal edema (cloudiness), secondary glaucoma (an increase in the intraocular pressure), retinal detachment, intraocular infection, and total blindness. Please note there is a 10-15% chance of an irreversible **BLINDING** complication following cataract surgery in dogs that are deemed ideal candidates for surgery. This means that roughly 1 in 10 dogs that are considered ideal candidates will have a blinding complication after the procedure. In dogs with other ocular abnormalities this percentage may be higher. Some complications may necessitate intensive long-term medical therapy or even additional surgeries. Although uncommon, these complications do occur. Facts pertaining to the surgery will be discussed in detail during your dog's initial cataract evaluation appointment.

What is involved in cataract surgery?

Cataract surgery is performed using a process called Phacoemulsification. The procedure is performed under general anesthesia, which always carries certain risks that can include death. Phacoemulsification uses an instrument to deliver ultrasonic energy to the cataract. The instrument is introduced into the eye through a very small incision made into the cornea. The ultrasonic energy of the instrument results in the breakup of the cataract so that it can be aspirated from the eye. An artificial lens is generally placed into the eye, but in rare instances placement of the artificial lens is not possible. The entire procedure is performed under an operating microscope with microsurgical instruments. Usually the patient goes home the same day barring any unforeseen complications. Your pet will be dropped off between 7:30 a.m. and 8:00 a.m. on the day of surgery and will go home between 4:30-5:30 unless otherwise arranged. We ask that your pet does not eat after 10pm the night before surgery. Your pet can have small amounts of water. If any oral medications need to be given the morning of they can be given with a small amount of cheese, lunch meat, ect. Please be sure to bring all of your pets medications in their bottles the day of surgery. You may also bring some food or we have hospital food that we would be happy to offer.

Your local veterinarian's role

Your local veterinarian plays a key role in proper maintenance of your dog's overall health, and their role in the successful management of cataracts is no exception. Early detection of cataracts by your veterinarian with referral for subsequent evaluation by a veterinary ophthalmologist can have a positive influence on eventual outcome. Surgery is not indicated in every case; however, it often restores functional vision to dogs whose sight was impaired due to cataracts. In addition, preoperative blood work is required and dental cleaning is often recommended prior to cataract surgery. This is often performed with your local veterinarian.

What to expect after surgery

Successful cataract surgery requires a firm commitment from the owner. Cataract surgery can be an outpatient procedure. We can hospitalize patients the night before and/or after surgery as a convenience to owners for an additional fee per night. Surgery patients are dropped off between **7:30-8 AM** the morning of surgery and postoperatively patients are often ready to go home by 5:00PM. Rechecks are frequent following surgery and are usually done the day following surgery, one week, 3-4 weeks, two months and 4-5 months after surgery and then once or twice yearly.

Patients need to be on oral medications for one week, wear an e-collar for two-three weeks, and have restricted activity and bathing for one month. Patients are often on frequent drop medications for approximately 4 months, however will likely benefit from having once daily drop medications lifelong. The standard postoperative schedule is for

routine patients with no complications; if complications were to occur we may need to recheck more frequently or have different medication requirements.

Some post-operative inflammation and discomfort following cataract surgery is expected. Typically, the eyes may become more reddened, there may be a slight increase in ocular discharge, mild clouding, as well as minimal squinting. All of these signs represent a normal response to surgery and should resolve over the first 1-2 weeks, with marked improvement noticed over the first 3-4 days. A common question after cataract removal is “how well can my dog see?” In certain cases, vision can be difficult to assess immediately after surgery but is usually noticeable within two days with continual improvement over the first two weeks. It is not normal for the eyes to remain painful or vision to fail to improve or worsen over the first two weeks.

Medical therapy: The overall success of cataract surgery is highly dependent upon close compliance with the prescribed medication schedule. Medication should be given at evenly spaced intervals during waking hours. If two drops are to be given at the same time, allow at least five minutes between drops to allow maximal absorption of each medication.

E-collar: This collar should be left in place at all times for the first 2-3 weeks following surgery.

Exercise: Restrict your dog’s exercise. It is advisable to keep your dog confined to a small room indoors with supervised short walks outside. Avoid leashes when possible, using a harness if necessary, to limit the amount of pressure on the neck which can elevate intraocular pressure. Do not bathe your dog or encourage roughhousing until told to do so.

Rechecks: The initial recheck appointment is scheduled for the day after surgery and one week following cataract surgery. Recheck exams are crucial in the management of cataract patients as important recommendations will be made based on post-operative progress. Additional recheck appointments will be scheduled as necessary but are typically recommended at three weeks, two months, and four months, then semiannually or annually thereafter.

Problems: In most cases, complications are minimal. However, in the event an ocular problem develops or if you have questions or concerns pertaining to post-operative management, please notify the Ophthalmology Service at Metropolitan Veterinary Hospital.

Please Contact Dr. Schaefer or her staff with any questions during regular business hours or after hours by calling our emergency department.

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