Ophthalmology
VCA West Los Angeles Animal Hospital
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Golden Retriever Pigmentary and Cystic Glaucoma

Michael Chang, DVM, DACVO

This is an ocular syndrome described as the presence of pigment dispersion onto lenticular, iridal, and corneal endothelium in the golden retriever. It has been referred to as “pigmentary uveitis” or “golden retriever uveitis”.

Uveitis is a result of breakdown in the blood – aqueous barrier, mediated by proteins such as histamine, serotonin, prostaglandins, and leukotrienes. The underlying causes include infectious, neoplastic, immune mediated and idiopathic.

It is first described in a retrospective histopathological series of 25 cases of glaucoma in golden retrievers. Thirteen of 25 cases have presence of thin-walled cystic structures. Another study demonstrated the clinical findings of similar diseases with progressive anterior uveitis associated with cystic structures in 75 golden retrievers.

This is a serious condition because it is chronic and can result in vision loss.

Etiology

The etiology of this syndrome is poorly understood, however, genetic factors have been proposed. The inheritance is unknown but autosomal dominant with incomplete penetrance or autosomal recessive is suspected.

continued

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Golden Retriever Pigmentary and Cystic Glaucoma *continued*

History

The mean age of affected dogs at the time of diagnosis is 8.6 years (range 4.5-14.5 years). The affected dogs have a history of intermittently red/inflamed eyes for years. This hyperemic conjunctiva is often mistakenly attributed to allergies (allergic conjunctivitis) and temporarily resolves with topical anti-inflammatory medication. Both eyes can be affected

Clinical signs

Some of the features of this condition are iris cysts, pigment dispersion across the anterior lens capsule often in a radial orientation, decreased intraocular pressure, fibrinous infiltrates at the anterior chamber, corneal edema, cataract, secondary glaucoma, and blindness.

The thin walled iris cysts can range from light to dark brown, transparent, or blood filled and typical location for the cysts is from the medial section of the posterior chamber. Cataract formation and glaucoma are common sequelae of this condition.

Treatment

There is no best standard treatment regimen as treatment depends on the stage of disease. Treatment consists of topical and oral anti-inflammatory medications as well as anti-glaucoma therapy. Life long topical anti-inflammatory medication, such as 1% prednisolone acetate, is usually needed.

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It is not common for the lens to develop a mature cataract but cataracts can certainly impair the vision. Cataract surgery is usually not recommended since postoperative uveitis is severe and usually cannot be adequately controlled.

If secondary glaucoma occurs, topical anti-glaucoma medications, dorzolamide with or without timolol, is recommended. If the intraocular pressure is poorly controlled and the eye is blind, enucleation, evisceration with silicone prosthesis or chemical ablation can be performed to relieve the discomfort associated with glaucoma.

Prognosis

The overall prognosis for this ocular syndrome is guarded. Blindness typically results from glaucoma.

This is a serious chronic progressive condition, which could lead to blindness. With early detection, consistent therapy and regular monitoring by a veterinary ophthalmologist, some affected dogs will maintain vision without major complications for years.■

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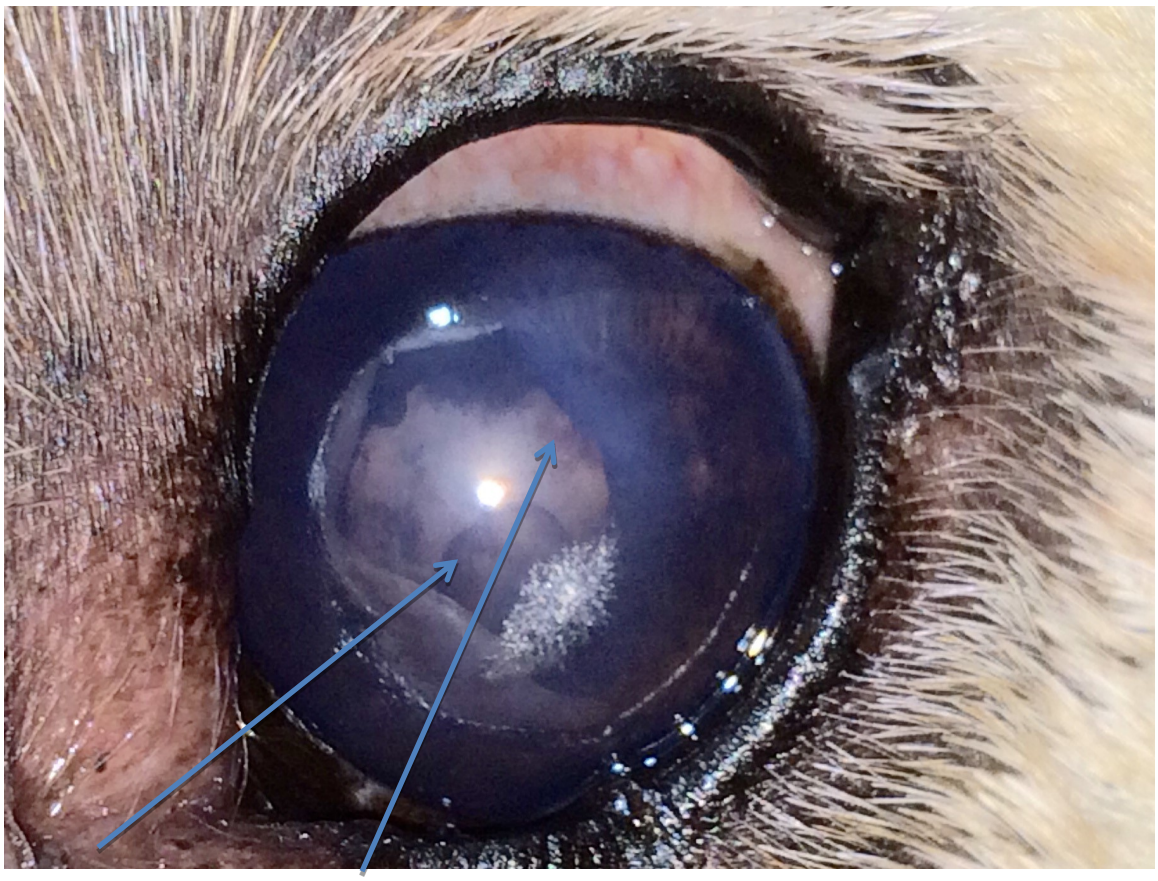
Golden Retriever Pigmentary and Cystic Glaucoma *continued*

Fig 1: Golden Retriever Pigmentary and Cystic Glaucoma



Iridal ciliary cysts, dispersion of pigment on anterior lens capsule noted

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Dr. Chang received his DVM degree in Taiwan and received his ECFVG certificate from Purdue University. He completed an internship at VCA West Los Angeles Animal Hospital and then a residency in Comparative Ophthalmology at Purdue University. Dr. Chang is available for consultation and referral for medical and surgical ophthalmologic cases.