Diseases of the Iris & Anterior Chamber

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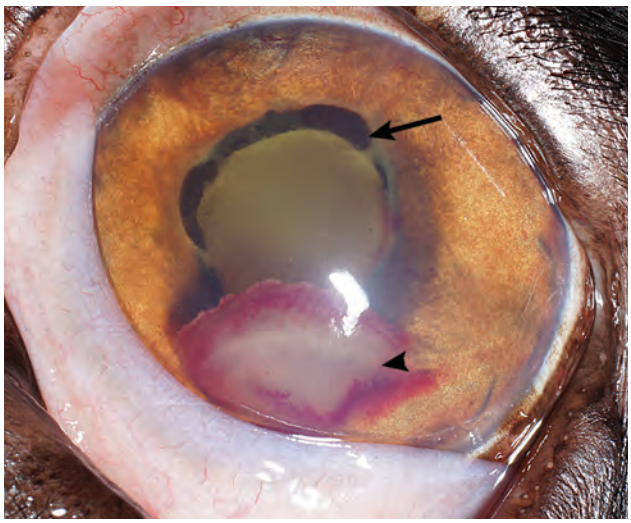
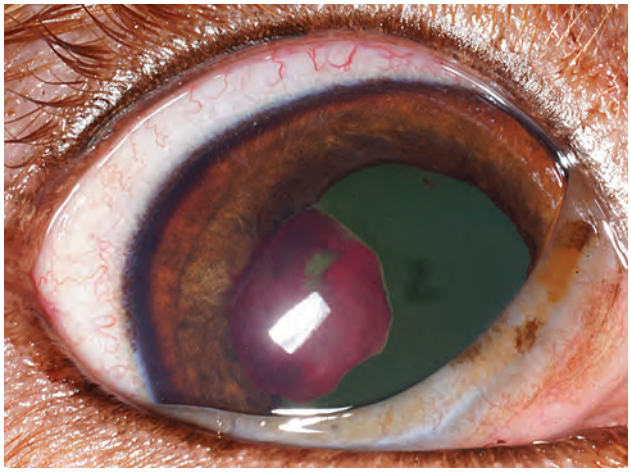
Evaluation of the iris and anterior chamber should be a routine part of every physical examination. A light source should always be used during this evaluation.

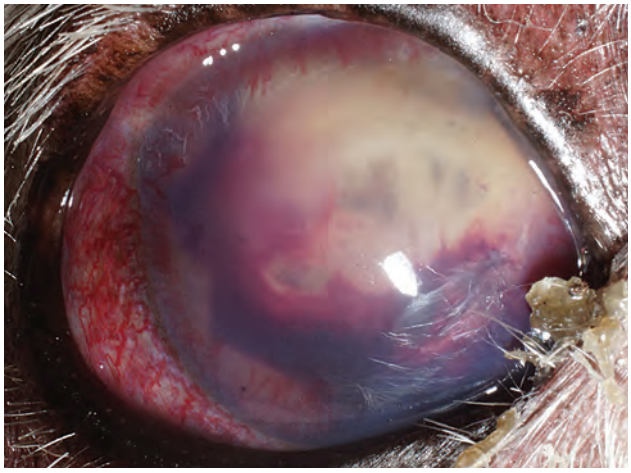


▲ **FIGURE 1** Left eye of a 9-year-old neutered male Bernese mountain dog presented for uveitis and secondary glaucoma. Examination showed a diffusely thickened iris with ectropion uvea (ie, pupillary margin and posterior surface of the iris protrude anteriorly; ***arrow***). Hyphema and fibrin (***arrowhead***) were admixed in the ventral anterior chamber. Histopathologic evaluation of the enucleated eye revealed an iris melanoma.

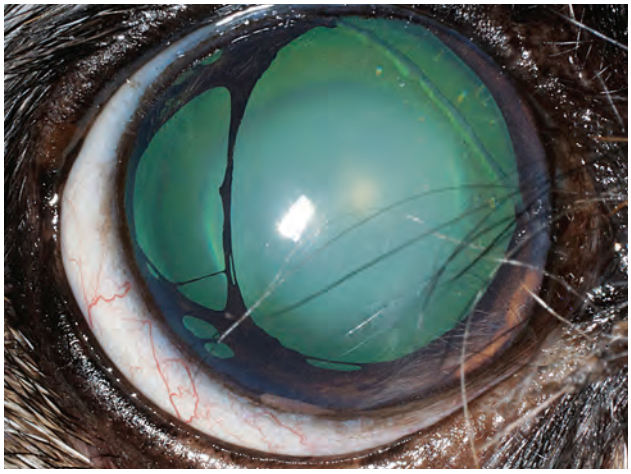
▲ **FIGURE 2** Multiple translucent uveal cysts in the right eye of a 4-year-old spayed bull mastiff. These cysts are benign but can rupture in the eye and leave pigment deposition. Because they can float freely in the anterior chamber, uveal cysts are assumed to occasionally cause vision obstruction and abnormal behavior patterns (eg, fly-biting, headshaking). In such cases, a veterinary ophthalmologist can perform transpupillary cyclophotocoagulation, a noninvasive procedure that involves general anesthesia and use of an indirect ophthalmoscopy head unit to coagulate and shrink the cyst via laser.



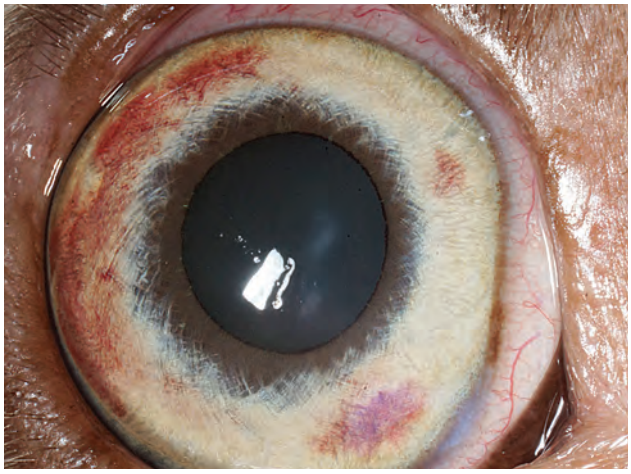
▲ **FIGURE 3** Blood clot in the anterior chamber of the right eye of a 4-year-old neutered male crossbreed dog with hyperadrenocorticism. This patient was presented with a large blood clot in the anterior chamber and subretinal hemorrhage; blood pressure at the time of examination (210 mm Hg) revealed concurrent systemic hypertension. Antihypertensive and topical anti-inflammatory drugs were administered.



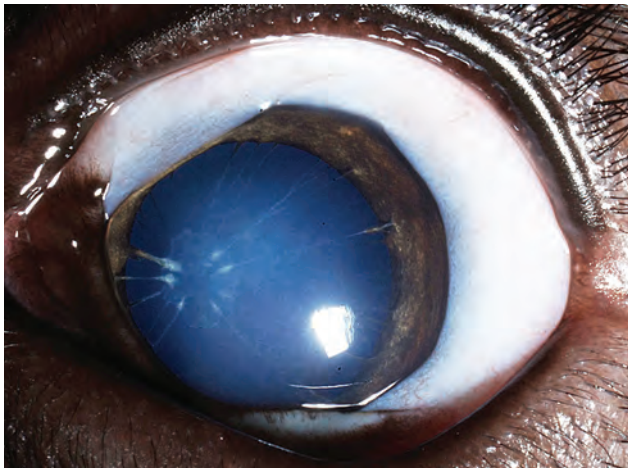
▲ **FIGURE 4** Right eye of a 9-year-old neutered male West Highland white terrier presented for hyphema and fibrin in the anterior chamber, deep corneal vascularization, episcleral injection, and secondary glaucoma. Histopathologic evaluation of the enucleated eye confirmed lymphoma. Although the patient's peripheral lymph nodes were subjectively normal, abdominal ultrasonography revealed enlarged mesenteric lymph nodes.



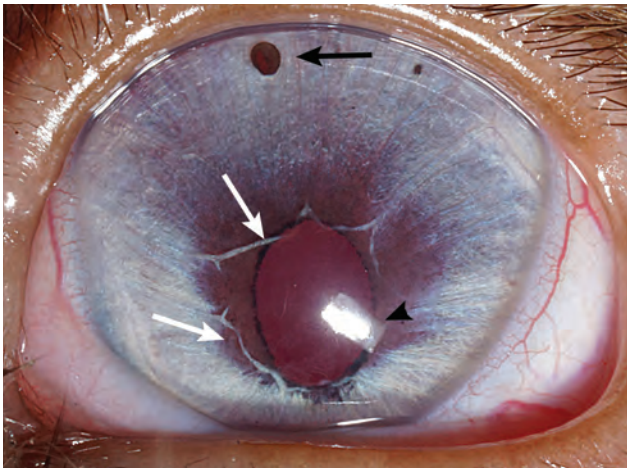
▲ **FIGURE 5** Right eye of a 12-year-old spayed Jack Russell terrier presented with an irregular iris surface with "tattered" and "torn" areas, through which irregular openings of tapetal reflection can be seen. Ophthalmologic evaluation revealed iris atrophy, a condition primarily found in older patients. Iris atrophy can result in decreased or sluggish pupillary light responses and cause squinting in bright light.



▲ **FIGURE 6** Iris stromal hemorrhage in the right eye of a 3-year-old crossbreed dog. After a thorough ophthalmologic examination, CBC showed a markedly decreased platelet count consistent with immune-mediated thrombocytopenia. Iris stromal hemorrhage resolved after the patient received therapy (ie, oral prednisone, oral azathioprine) for immune-mediated thrombocytopenia.



▲ **FIGURE 7** Persistent pupillary membranes in the left eye of an 11-year-old spayed bull mastiff presented with an abnormal iris. Ophthalmologic examination revealed persistent pupillary membranes (ie, strands of remnant fetal membranes originating from the iris collarette that supplied the lens with nutrients prior to birth) extending from the iris to the anterior lens capsule, creating fibrotic plaques on the capsule. Although not likely to resolve, persistent pupillary membranes will not result in vision loss or further abnormal changes to the eye.



▲ **FIGURE 8** Merle ocular dysgenesis in the left eye of a 14-month-old merle Australian shepherd dog presented with an abnormal eye. Clinical signs included iris-to-iris persistent pupillary membranes (***white arrows***), corectopia (ie, displacement of the pupil [ventrally in this patient]; ***arrowhead***), and iris coloboma (ie, congenital hole in the iris; ***black arrow***). Patients with merle ocular dysgenesis may also experience microphthalmia, cataracts, lens colobomas, optic nerve colobomas, and scleral colobomas.

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Suggested Reading

Gelatt KN, Gilger BC, Kern TJ, eds. *Veterinary Ophthalmology.* 5th ed. Ames, IA: John Wiley & Sons; 2013.

LOOK FOR THESE ARTICLES IN FUTURE ISSUES

- Case: Acute Pleural Effusion in a Dog
- Step-by-Step Fundic Examination
- Hemangiosarcoma Review
- Jaw Fractures