

Fluctuating Intraocular Pressure in a Burmese Cat
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Keywords: feline, glaucoma, open angle, episcleral venous pressure

SUMMARY:

A one year old castrated male Burmese cat is presented for vision loss.

Intraocular pressures (IOPs) are elevated bilaterally and both eyes have episcleral hyperaemia.

Inflammatory disease is not present. Pupillary light responses are reduced, suggesting optic nerve damage, although optic nerve damage is not apparent. The iridocorneal angles are open.

Medical management with topical carbonic anhydrase inhibitors, timolol, and travoprost improves IOP control but the IOPs are very variable and only approach normal when the cat is relaxed. Stress induces a marked rise in IOP.

Fluctuating episcleral venous pressure is postulated as a cause of the variable IOP and causes of delayed venous return and orbital/intracranial arteriovenous fistulas are ruled out.

An Ahmed glaucoma shunt is placed to bypass the episcleral venous network. Glaucoma control is achieved, although the IOP in the operated eye still rises above normal when the cat is stressed. Three months post surgery the IOP levels in the operated eye remain lower than in the unoperated eye.

A pilot study examining the effect of acute stress on IOP suggests that Burmese cats exhibit increased IOP after acute stress compared to cats of other breeds.

Effects of stress on IOP and possible mechanisms are discussed.