



THE OCULAR IMMUNOLOGY  
AND UVEITIS FOUNDATION

*Dedicated to Eye Disease Cure and Education*

## **Uveitic Glaucoma**

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[Uveitis](#) is the third leading cause of preventable blindness in this country, but many people who suffer from this group of diseases lose their vision via other another mechanism – glaucoma. [Glaucoma](#) is the ‘*sneak thief*’ of vision, a blinding disease of the optic nerve, or the structure that connects your eye and brain and allows you to see. It causes irreversible vision loss which, at first, is usually completely unnoticed by the patient, asymptomatic, because it affects the ‘peripheral’ vision, but slowly progresses until significant central vision loss occurs.

Glaucoma itself is actually a much more common disease than uveitis. It comes in many different forms, is seen on examination by the uveitis specialist, and is also monitored by specialized testing of optic nerve “structure” (OCT scan) and “function” (visual field testing), looking for signs of progression of optic nerve damage.

It is estimated that *2 million people worldwide have uveitis*, and that the percentage of patients with uveitis who also have glaucoma ranges between 10 and 40%. Just as in non-uveitic glaucoma, uveitic glaucoma is more commonly seen in older patients. Some forms of uveitis are more prone to developing glaucoma, including both infectious causes, such as some types of virus associated uveitis, and non-infectious causes, like juvenile idiopathic arthritis associated uveitis. Sometimes, uveitic glaucoma occurs because of long-term dependence on steroid therapy, whether by oral medication or eye drops, vis-à-vis either poorly controlled inflammation or a distinct and significant rise in eye pressure caused by steroids themselves.

The most common reason why glaucoma causes vision loss is because of high pressure in the eye. It is primarily a problem with fluid balance in the eye which creates the pressure – “too much fluid in” or “not enough fluid out”. This imbalance is then treated by means to reduce this pressure such as eye drops or laser therapy, and less commonly surgery. Cardiovascular and metabolic diseases have also been thought to play a more prominent role in glaucoma, specifically hypertension and diabetes. But in uveitic glaucoma, several other factors may be in play, including scarring and poor blood flow due to chronic inflammation. Scarring may cause abnormalities in the “outflow” pathway of fluid from the eye, leading to higher pressure.

Abnormal blood flow and blood vessel inflammation can also damage outflow pathways, but may also pose a threat to oxygen delivery to the retina and optic nerve (ischemia), which can also cause irreversible damage. At times, active inflammation is felt to be the cause of high eye

pressure, as may happen in herpes simplex iritis – simply treating the inflammation causes the eye pressure to return to normal.

This is the reason why the treatment of uveitic glaucoma absolutely requires good control of ocular inflammation. Solid control of ocular inflammation can lessen the risk of perpetual vision loss from secondary glaucoma directly caused by or related to this inflammation – uveitic glaucoma. **And this absolutely must be achieved off of all steroid, achieving “steroid free remission” of inflammation.** The number of providers who understand this premise is thankfully growing, however there still exist providers who are overly concerned about the dangers of systemic therapy for uveitis and then continue to pour steroid drops on uveitis, keeping it “quiet”, only to let the resulting glaucoma ravage the eye. They do a great disservice to their patients. Better education of eye care providers, including uveitis and glaucoma specialists, about this blinding disease and the ramifications of improper therapy is vital to bridging the gaps in treatment that exist for many of these patients.

Engaging in discussion of the problem by patients and providers, as well as further development of educational materials, will only help to spread awareness of uveitic glaucoma, and the special approach to treatment of this disease.