Homeopathic Syntonic Light Therapy in the Treatment of Glaucoma

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Glaucoma Effective Treatment lacking
Glaucoma affects over 2,000,000 Americans and is the leading cause of blindness in developed countries. According to the National Eye Institute, glaucoma is the third leading cause of blindness in the USA behind cataracts (1) and macular degeneration (2) There are an estimated 2,218,000 patients who suffer from this disease. (approximately 1 in 136 or 0.74% or 2 million people in USA [Source statistic for calculation: "2,000,000 people are visually impaired by glaucoma in the US (Research to Prevent Blindness, NISE, NSF)"

Incidence
The overall prevalence of glaucoma in the USA population 40 years and older is estimated to be 1.86% (95% confidence interval, 1.75% -1.96%), with 1.57 million Caucasian and 398,000 African American persons affected. After applying race-, age-, and gender-specific rates to the USA population as determined in the 2000 USA census, we estimated that glaucoma affects 2.22 million USA citizens. Owing to the rapidly aging population, the number with glaucoma will increase by 50% to 3.6 million in 2020. African American subjects had almost 3 times the age-adjusted prevalence of glaucoma than white subjects. Open-angle glaucoma affects more than 2 million individuals in the United States. This number will increase to more than 3 million by 2020 according to Archives of Ophthalmology 2004; 122:532-538

Types of glaucoma
There are many types of glaucoma but the two main classifications are open angle and closed angle. Closed angle glaucoma is felt to be a structural problem of the eye resulting in an acute attack of glaucoma with a marked elevation of pressure. Surgical intervention is considered the treatment of choice for this type of glaucoma and this paper will deal only with the treatment of open angle glaucoma.

Diagnosis
It is a complex disease often difficult to diagnose in the early stages. Typically there is 3 components to make a diagnosis. According to George L. Spaeth, when the definition of glaucoma was a condition in which the intraocular pressure is above 21 mm Hg (millimeters of mercury, units in which pressure is measured), the diagnosis of glaucoma was easy. One simply measured the pressure and that determined whether or not glaucoma was present. But that method of defining glaucoma was wrong. It was seriously wrong! Ninety percent of the people diagnosed with glaucoma by that method didn't have ocular damage related to intraocular pressure, and one-third of those who had pressure-related damage were excluded because their intraocular pressure was below the magic number of 21 mm Hg.

http://www.willsglaucoma.org/edudiagnosis.htm

An elevation of intraocular pressure, changes in the optic nerve and peripheral field loss are all needed before making the diagnosis of glaucoma. Most eye specialists consider changes in the optic nerve as the hallmark of the earliest signs of glaucoma. These changes consist of loss of the nerve fiber layer and increase in size of the physiological cup of the optic nerve. The measurement of intraocular pressure is unreliable in most cases in making the diagnosis of glaucoma. Several methods of measuring the intraocular pressure are inaccurate and often many cases of glaucoma are inaccurately diagnosed. Glaucoma is a disease of the optic nerve consisting of ischemic changes in the nerve with resulting loss of optic nerve fiber and loss of peripheral vision.

Glaucma, if untreated, can lead to blindness. It is much different than macular degeneration. In macular degeneration even in the end stages of the disease complete visual loss does not occur and most cases retain functioning peripheral vision. However in glaucoma the end stages can lead to total blindness with no functioning vision. Because of this, glaucoma needs very aggressive treatment consisting of medication and surgery to preserve visual acuity.

Current Medical and Surgical Treatment consist of methods to lower the intraocular pressure. Lowering the intraocular pressure results in an increase in perfusion of the optic nerve based on basic concepts of hemodynamic flow of blood. A lower pressure permits a greater blood
flow to the nerve and an elevated pressure lowers the optic nerve profusion. Most medications target the ciliary body to decrease the aqueous production, other medications will increase the outflow of aqueous.

It is the authors observation that the conventional treatment of lowering the pressure of glaucoma is very unphysiological and should not be primary treatment modality in the treatment of glaucoma. It is much like the analogy of a patient with hypertension taking medications to decrease the production of red blood cells to reduce the blood pressure! Or taking medications to increase the removal of blood to lower the pressure. Aqueous production and circulation in the eye has an important physiological function and decreasing its production might have an adverse affect on the functioning of the eye.

The aqueous Humor is very important since it maintains the intraocular pressure and inflates the globe of the eye. It also provides nutrition for the avascular ocular tissues, posterior cornea, trabecular meshwork, lens, and anterior vitreous. It carries away waste products from metabolism of the above avascular ocular tissues. It may also serve to transport ascorbate in the anterior segment to act as an anti-oxidant agent. The presence of immunoglobulins in the aqueous indicates a role in immune response to defend against pathogens.

Proper holistic treatment of glaucoma should be two fold. First, to improve the circulation of the optic nerve and provide a neuro-protective effect of the optic nerve. The second line of treatment should be methods of reducing intraocular pressure without an adverse affect on the aqueous production. One theory of accomplishing all of the above is to balance the autonomic nervous system.

I became interested in using light to treat glaucoma after Dr. Don Barniske, the current president of the College of Syntomics, gave me 2 articles from the American Journal of Ophthalmology which studied the effects of light on the intraocular pressure.

The first article I studied was Intraocular Pressure of Normal and Glaucomatous Eyes as Affected by Accessory Light Stimuli, by R. B. Zaretsky, MD, published in American Journal of Ophthalmology 1948 – 31-721-727.

The first part of this experiment was with white light. 35 patients, 14 normal eyes and 21 glaucomatous eyes where first adapted to dark light for one hour. The left eye was illuminated with white light from a 75 watt frosted bulb (16 foot candles) for 30 minutes (the right eye was covered) Tensions in the right eye were measured every 5 minutes and for 20 minutes after the 30 minute application of light.
Reduction of the intraocular pressure with light was measured with different intensity to see if the pressure lower affect was intensity dependent. Average intraocular pressure lowering, depending on the brightness of light, is as follows:

- 16 foot candles (712 Lux) 9 mm Hg
- 3.3 foot candles (35.5 Lux) 5mm Hg
- 0.28 foot candles (3 Lux) 2.7mm Hg
- 1 foot candle = 10.76 Lux

The experiment was repeated by using Homatropine. This medication dilates the pupil. The author wanted to study the effect of pupil reaction to light. He questioned whether it was the pupillary reaction to light or pupil size that was responsible for the drop in pressure or just the affect of light? (Homatropine paralyses the pupil into a fully dilated position.)

The results of this initial study were as follows:

- Pupil size does not have an effect on changes in intraocular pressure with application of light.
- Light has vasomotor reaction due to the effects through the pituitary body and vegetative centers. (autonomic nervous system control centers)
- There is an increase in intraocular pressures in the dark and a decrease in pressures in light.

The second part of the study was to study the experiments of S. V. Kravkov who stated that red and green light affect the vegetative system similarly as adrenalin and pilocarpine.

This study looked at 17 normal eyes and 25 glaucomatous eyes. The eyes were illuminated with a 150 watt light bulb using either a green filter – 433-586 nm or a red filter 578-720nm. The eyes were treated 30 minutes with red one day and then 30 minutes with green the following day.

The results of this study indicated that red light has a pressure raising effect and green light has a pressure lowering effect. All eyes showed a pressure lower effect after green light; the hypotonic effect with glaucomatous eyes was much stronger. The hypotonic effects of green light are greater than white light even at a higher brightness.

Conclusion of this study was that lowering of intraocular pressure by vegetative reactions due to accessory stimuli is less in normal eyes than glaucomatous eyes. Fluctuations in IOP by darkness and light are greater in glaucomatous eyes. The pupillary reflex has no affect on intraocular pressure. The reduction in IOP is dependent on the brightness of the stimulus. There is an opposite effect on IOP brought about by red and green light.

Glaucmatous eyes do not show the usual increase in IOP in response to red stimuli. (red light might become a diagnostic tool) Green light should be considered a therapy for the reduction of IOP in glaucoma.

The second article was, “Some Experiments with Green Spectacles Prescribed to Glaucmatous Patients”, by R. B. Zaretskaya, MD, which was published in the American Journal of Ophthalmology 1948 31: 985-989.

Nineteen patients were studied and pressures were determined 3 times a day. Once at 7:00 AM (still in bed), 1:00 PM and then between 7:00 and 8:00 PM. Medications were withheld for a day or two and then green spectacles were given on the second day for full time wear. The spectacles were a hue corresponding to 511 nm and a daylight transparency of 21%. In a certain number of cases, the green spectacles were combined with a greatly reduced strength of pilocarpine. One group had a combination of green glasses and adrenaline (1:1,000) which was also made to test Kravkov’s statement that the installation of adrenalin might increase the eyes sensitivity to green.

Results of this study showed that IOP showed a statistically significant decrease in patients wearing the green spectacles. The fluctuation of IOP during the day was also found to decrease in patients wearing green glasses. There was an appreciable effect when the use of green spectacles was combined with very small dosages of pilocarpine (0.5 percent). 20 out of 25 eyes had an expressed decrease in IOP as well as a decrease in fluctuations. The pressures decreased by 6.0 mm Hg in 8 cases, 10 mm Hg in 9 cases and 10 mm Hg and more in 3 cases. The results were more striking when combined with small dosages of adrenalin.

Conclusions:

- Green spectacles prescribed with a total withdrawal from Pilocarpine produces a decrease in IOP.
- The affects are most pronounced when used with the administration of small doses of adrenalin.
• Mechanism of action is proposed to be on the color receptors of the human eye.

• Green light brings about a definite arrangement in the autonomic nervous system and thus affects the neurovascular system of the eye.

**Background of the Homeopathic Syntonic light study**

My interest was to use light therapy based on homeopathic laws of healing. The basic tenants of homeopathy are that the body has a wisdom and disease is an attempt to help maintain a homeostasis. Homeopathic treatment is to support this mechanism to achieve homeostasis. This is called the “Law of Similars” A substance which produces symptoms in a healthy individual will treat these symptoms. This is much different than traditional allopathic medicine that treats disease with opposites. For example in homeopathy a patient with a fever will be given a medicine that produces a fever, in allopathic medicine a medicine will be given to cool the body.

Another important tenant of homeopathy is that of dilution. The body needs to be gently stimulated with a small amount of a medication to act as a catalyst. This approach is supported by the Arndt-Schulz law. It is the pharmacologic principle of homeopathy and more recently in light therapy. It was discovered by 19th century scientists, Hugo Schulz and Rudolf Arndt. It states that weak stimuli accelerate physiologic activity, medium stimuli inhibit physiologic activity, and strong stimuli halt physiologic activity. This law is frequently quoted as a suitable model to describe the dose dependent effects of Low Level Laser Light Therapy (LLLT). This LLLT has been used clinically for numerous ailments in Europe for over thirty years and has been the subject of many scientific papers, published worldwide.

It was decided to utilize the “Law of Similars” and the “Arndt-Schultz Law” in developing this study design. Based on the published research of Dr. Zaretkskaya who has demonstrated that red light will raise the intraocular pressure in a dose (intensity) related manner. Higher intensity will cause a greater pressure elevation.

Studies have shown and clinical observation supports the relationship between glaucoma and the sympathetic state. Spitzer, Babbitt, Dinshah and others have shown that red light has also been shown to stimulate the autonomic nervous system into the sympathetic state.

The approach in this study could have been to look at light in the allopathic or the homeopathic mechanism of action. The allopathic or opposite method would be to treat intraocular pressure with green or blue light using a high intensity, the homeopathic method would be to use low levels of light that cause an elevation of pressure.

It is hypothesized based on the homeopathic Law of Similars and the Arndt-Schultz law that low levels of red light should lower intraocular pressure not increase the pressure.

The Syntonic Balance Beam illustrates wavelengths of light from the red end to the blue end of the spectrum. A requirement of this study was to chose a wavelength that represented a sympathetic stimulating property but one that only slightly stimulated the system in a homeopathic manner. Syntonic Mu delta was selected as wavelength in this study based on several reasons:

This illustration shows the relationship of mu delta to the center of the balance beam. Mu Delta is the first wavelength to the left of center mildly stimulating the sympathetic system.

Mu delta is also used to treat chronic conditions and to detox the body. Most cases of glaucoma are chronic and related to a metabolic imbalance or a toxic state.

It was determined to use an intensity of 1.4 Lux. This is the light intensity that was measured at the level of the facial and ocular plane when using the Syntonic Photosynthesizer. In the Zaretkskaya study he used measurements of 312, 35.5 and 3 Lux. We felt that to have a true homeopathic effect the light source should be 1/10 the average therapeutic range. Since this was not accurately available, a good starting intensity would be that of the Syntonic Photosynthesizer.
This study, that I am reporting, was conducted over the last year to look at the effects of homeopathic mu delta on the intraocular pressure in a series of glaucoma patients. These patients were recruited from my practice and from readers of the Healing the Eye Newsletters. Patients involved in the study were instructed to continue all glaucoma medications and were required to be in the office all day after a 10 minute exposure of green light.

Method of Study
There were 11 patients in the study. The average age 72.6. Range was between 55-84 years of age. There was only one patient not using any glaucoma medications, 7 patients were using at least one medication and 3 patients with one or more medications.

Testing
Before application of light, the intraocular pressure was measured using a Goldman tonometer. 10 minutes of light treatment with Syntonic Light of mu delta at an intensity of 1.4 lux was administered. Pressures were then measured at 30 minutes and then every hour until pressures returned to baseline.

Results
• Average pre-light pressures 19.8 (15-34)
• 30 minutes 15.5 (10-20)
• 1 hour 13.8 (8-19)
• 2 hours 16.1 (8-21)
• 3 hours 15.2 (8-23)
• 4 hours 14.9 (7-23)
• 5 hours (only 3 patients) 13.7 (8-18)
**Conclusion**
Mu Delta has a pressure lower affect in the majority of patients 9 out of 11 patients or 82%. The average lowering of pressure using mu delta was 5 mm Hg and this effect persisted for 4 hours after a brief 10 minute exposure. These results confirmed the study reported by Zaretskaya in the American Journal of Ophthalmology in 1948.

The intensity of 1.4 Lux is considered to be a homeopathic level. Typically in homeopathic pharmacology physical substances are reduced 10, 100 and 1000 fold to achieve a homeopathic therapeutic affect. The predicted decimal homeopathic range based on Zaretskaya study was 3.55 to .3 Lux (1/10 of 3.55 = 3.55, 1/0 of 3 = .3)

We chose 1.4 Lux based on the light levels measured at the facial plane of the Syntonic Photosynthesizer. It is interesting that our results using a homeopathic approach at this level of light equaled his results using an allopathic model at 35.5 Lux. Thus 4% of light in a homeopathic manner had the same effect of 100% light in an allopathic manner.

The homeopathic approach in light therapy should be considered by all practitioners. It is based on established laws of healing the acting as a catalyst for the body to heal.

Mu delta should be considered a safe alternative in the treatment of glaucoma. More research needs to done regarding varying the intensity and duration of the light to see if there is an additional effect. It is this author’s belief that greater results might be achieved by decreasing the light intensity lower than 1.4 Lux in a homeopathic manner.

**References:**


**About the Author:**

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