

# The Light Pipe

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The newsletter of Georgia Retina, P.C.

## Case Report

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A 9 year old caucasian boy without visual complaints presented to the clinic for routine exam. His mother had a history of a hereditary retinal condition which prompted his examination. He had no visual complaints. He had no significant past medical or ocular history. His birth history was unremarkable; he was born full-term and received all his vaccinations on schedule. He had no prior retinal exams but had passed routine eye screening exams for school enrollment. He had no history of travel outside the United States.

The visual acuity was 20/15 in both eyes and he was normotensive OU. The pupil examination was unremarkable and the anterior segment examination was within normal limits.

Color fundus photos of the right and left eyes are shown below.



**What's Your Diagnosis??**

## Retinal Vein Occlusion: Suddenly, there are options! *Continued on pg. 4*

It has been 25 years since the Branch Retinal Vein occlusion Study Group reported the benefits of grid laser for macular edema due to branch retinal vein occlusion (BRVO). Since then laser treatment has been the only approved treatment option for macular edema due to BRVO. Furthermore, there has not been a controlled clinical trial showing the benefit of any treatment for macular edema due to central retinal vein occlusion (CRVO).

For the last 10 years retinal specialists have been injecting the corticosteroid, triamcinolone intravitreally on an off-label basis for macular edema due to both CRVO and BRVO. Until recently, the utility of doing so was unproven. Recently, the results of several controlled clinical trials were released.

## The Business Angle

Every provider understands that patients breathe the lifeblood into any medical practice. Unfortunately however, a patient can on occasion become a medical or financial liability. Should this occur, it's comforting to know that patients may be discharged from your care, thereby limiting practice exposure – *provided it is handled appropriately*.

The best advice one can follow regarding patient discharge is to contact your malpractice carrier and obtain their discharge policy as well as their guidance. That said, there are typically two scenarios which may justify terminating a patient from your care – clinical noncompliance and financial noncompliance.

When patients refuse to follow your medical recommendations and/or regularly miss appointments and the critical follow-up care they may need, it oftentimes will create the potential for a poor medical outcome. As we know poor medical outcomes may lead to dissatisfied patients, which in turn, could result in malpractice claims. Likewise, a patient may fail to address their financial responsibilities pertaining to your services. This scenario may quickly drain valuable time and resources from the practice, and in many cases create unproductive time for your staff. Such patient behaviors warrant close scrutiny and consideration for discharge.

Should you decide to discharge a patient, your malpractice carrier's policy should be followed without exception. As difficult as the decision is to discharge, the last thing you want is for poor execution to lead to abandonment accusations. Typical within the medical industry, documentation of the events leading to the discharge, as well as the discharge itself, is the key. Generally, regarding the discharge itself, a patient must be notified in writing of their discharge from the practice, that you will assist in directing them to other providers if requested, and that you will continue to treat them for emergencies (related to the care of your practice) for a defined period, usually 30 days.

At best, terminating patients from the practice is an uncomfortable process. Failing to address serious patient noncompliance matters however, be they clinical or financial, may only worsen the problem. Contacting your malpractice carrier and following their guidelines will be your best defense when faced with the dilemma of patient discharge.

## Press Release

The U.S. Food and Drug Administration has recently approved Lucentis (ranibizumab, Genentech/Roche) for the treatment of macular edema following retinal vein occlusion based on the results of the BRAVO and CRUISE studies. Lucentis has been used widely for the treatment of choroidal neovascularization secondary to age-related macular degeneration. Prior to this recent development, AMD was the only FDA approved indication for Lucentis. This now provides retina doctors with a new tool in the treatment armamentarium for patient with macular edema secondary to retinal vein occlusions (BRVO and CRVO). The doctors at Georgia Retina have been working with Lucentis since its pre-approval days in the SAILOR and MARINA trials for AMD. In addition to other currently FDA approved therapies such as laser therapy and intraocular steroids (Ozurdex), Lucentis can now be added to the list. Of course, other widely used therapies, e.g., off-label intravitreal Kenalog and Avastin, are also modalities to be considered. Each case needs to be considered on an individual basis to decide which treatment option would be best/safest for the patient.



## The Georgia Retina Surgery Center– Fully Operational!!

At Georgia Retina we are proud to announce the opening of our ambulatory surgery facility, the Georgia Retina Surgery Center. There is an increasing trend toward moving retinal surgery to the outpatient setting. As fewer and fewer cases are done under general anesthesia, the incisions have become smaller and operating times shortened, patients are rarely if ever admitted to stay over night in a hospital. The outpatient setting offers patients a less stressful experience, in a setting which is efficient and geared toward their comfort. The surgery center allows us to minimize the “red tape” which can occur in a hospital. For example, patients are never separated from their belongings and do not have to completely undress. A heart monitor is attached once and travels with the patients from the holding area to the OR, without having to be attached and detached from such equipment multiple times.

The ASC staff members are specialists in only retinal surgery. Therefore all of the nurses and technicians know the equipment intimately and maintain it meticulously. Because of this familiarity they can “trouble shoot” devices when needed. Because the same people are ordering and stocking supplies as the ones using the supplies, there is never an instance where items can’t be located. The vertical integration of all ASC functions amongst a small group, means that the scrub tech is likely to be the same person who cleans and sterilizes the instruments. The instruments become his/her own, and are treated as such with the utmost care.

It is inevitable that there will be variations in practice among nine retinal surgeons. Nevertheless, in order to avoid duplication of effort in training the staff on multiple methods, much compromise was needed to attempt to arrive at a relatively uniform set of procedures and instrument trays for all the doctors. The doctors’ routines are therefore very similar and are well known. This makes the nurses job much easier. We are indeed fortunate to have a group of individuals capable of such compromise.

The staff members feel personally responsible for the patients and never leave the operating room in the middle of a case (to go to lunch or change shifts) as routinely occurs in hospitals. They call the patients personally the night of the surgery to follow up, and to do satisfaction surveys, which are continually assessed.

It is well documented that the cost of the facility fee to a surgery center is about half of that to do the identical case at a hospital. For patients who have no co-insurance or who have a high insurance deductible, this can be a substantial savings.

For patients whose medical conditions are unstable or place them at high risk, it is still appropriate that they have surgery at a hospital and patients are carefully screened in advance by our anesthesiologists to determine appropriate candidates.

Of course, the development of a center such as this is a highly complex and expensive undertaking, fraught with regulatory obstacles which are the subject of another discussion.

We at the Georgia Retina Surgery Center look forward to serving your patients.



**The Georgia Retina Surgery Center Staff** (from left to right):  
Susanne MacNeill, RN, Sue Lawrence, RN, Aubrey Anderson, COA,  
Valerie St. Aude, Brenda O’Neill, RN, and Rachel Walker, COA.

## **Retinal Vein Occlusion: Suddenly, there are options!** *Continued from pg. 1*

The dexamethasone intravitreal implant (Ozurdex, Allergan) has been approved by the FDA for treatment of macular edema from both BRVO and CRVO. This slow dissolving implantable device may last up to six months according to study data. In 2009 the results of the SCORE study were published showing the benefit of injecting triamcinolone (Tivaris, Allergan) intravitreally for macular edema due to CRVO. Intravitreal triamcinolone did not appear to be significantly better than grid laser alone in the BRVO group. The CRUISE and BRAVO trials investigating the utility of Ranabizumab (Lucentis, Genentech) have shown benefit for both the CRVO and BRVO study groups. Now we have three treatment options for macular edema due to both CRVO and BRVO. Consider that Bevacizumab (Avastin, Genentech) is also being used on an off label basis and there are truly four options.

As a practicing retinal specialist it is nice to have options. The question becomes which is the best option for the patient. As with most clinical problems there is not just one acceptable answer. It is important to develop an organized approach to the treatment of vascular occlusions. For example, a patient traveling long distance for treatment of their BRVO may do well with a single focal laser treatment. A patient with open angle glaucoma or steroid induced glaucoma may be a better candidate for Lucentis rather than Ozurdex or triamcinolone. It may also be reasonable to observe patients with either mild occlusions and good vision, or vision that is unlikely to improve with treatment. In other words, try to avoid the "I have a hammer and everything looks like a nail approach".

A potential approach for managing macular edema secondary to either CRVO or BRVO should follow the same thought process as any disease with multiple treatment options. Consider the individual case and the severity of the occlusion. Use caution when considering treatment of a patient with either better or worse vision than would meet study criteria for the treatment you are considering. Monitor the patient for both worsening of visual acuity and other potential complications such as anterior segment neovascularization. Remember, the use of steroids and anti-VEGF drugs may alter the natural development of neovascularization but may not eliminate it completely. Consider concomitant diseases such as glaucoma, cataract or uveitis.

As the use of these treatments becomes more common in the private setting more observations will follow. It may be that combination therapy is more effective than any one treatment alone. Nevertheless, the approval of multiple treatments for macular edema due to CRVO and BRVO is great news for patients suffering a vein occlusion.

## **Retinal Pearls Announcement**



**Please keep a look out for our  
Winter Retina Pearls Program.  
Dates to be announced!!**

**If you are new or have never been to our Retina Pearls program, please contact Leigh Ann Wilson @ (678) 405-0922 or leighannwilson@gmail.com to make sure you are on our mailing list.**

## **Differential Diagnosis:**

Pictured is a retinal angioma--the findings were bilateral. The differential diagnosis of these lesions includes von Hippel Lindau Syndrome (vHLS), sporadic capillary hemangioma, and acquired retinal hemangioma. Retinoblastoma, toxocara granuloma, and Coat's disease are less consistent with the clinical picture but should be considered in patients of this age. Acquired retinal hemangiomas can result from pars planitis, Eales' disease, hereditary hemoglobinopathies including sickle cell disease, familial exudative vitreoretinopathy, and retinopathy of prematurity.

## **Discussion:**

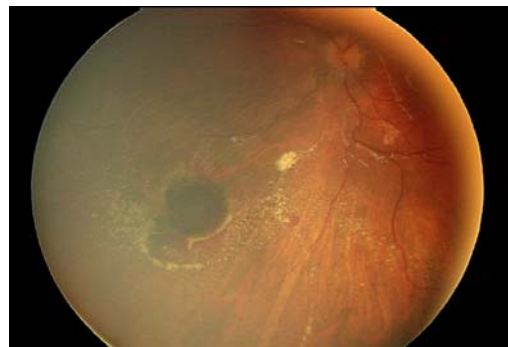
The clinical examination is most consistent with bilateral von Hippel Lindau Syndrome-associated retinal hemangiomas. This patient's mother was diagnose with vHLS several years previously. Genetic testing was performed and the boy proved positive for the vHL allele. His sister was also tested and was positive despite an absence of retinal findings. Von Hippel Lindau Syndrome is an autosomal dominant condition with a prevalence of 1:40,000 with 45-65% of patients presenting with ocular findings. The gene is found at chromosomal locus 3p25 and has incomplete penetrance with 95% of gene carriers developing some finding consistent with the syndrome by age 60. The retinal angiomas associated with vHLS are often bilateral and multifocal, with a mean number of angiomas per gene carrier of 1.85. They develop over time (the mean age of diagnosis is 17.6 years) and may enlarge and develop subretinal fluid and exudation. In severe cases, exudative retinal detachment, rubeosis iridis, neovascular glaucoma, and phthisis bulbi may develop. Spontaneous regression has been described but is exceedingly rare.

Von Hippel Lindau Syndrome has a mean life expectancy of 49 years. The major morbidity and mortality is related to nonocular findings. The disease is associated with central nervous system hemangioblastomas, most typically in the cerebellum and spinal cord. Renal cell carcinoma and pheochromocytoma is also common. Additionally, non-malignant cysts of the pancreas, kidney, liver, and other organs are described.

The diagnosis of vHLS is made by genetic testing. Those who are allele positive should be screened extensively on an annual basis. This includes physical examination, urine testing for VMAs, dilated fundoscopic examination, and renal ultrasound. In addition, abdominal and CNS CT scans should be performed every 3 years.

The treatment of vHLS retinal angiomas is tailored to the specific presentation. The location of the lesion, the size, and the amount of exudation or subretinal fluid all must be considered. Treatment options that have been utilized include observation, cryotherapy, laser photocoagulation or transpupillary thermotherapy, radioactive plaque brachytherapy, external beam radiation. Anti-VEGF medications also are under investigation. Pathologic studies have shown VEGF upregulation in the retinal lesions as well as the CNS hemangioblastomas of vHLS patients.

In the case of this patient, transpupillary thermotherapy was applied under general anesthesia due to the patient's young age. The lesions in both eyes regressed nicely. Post-procedural photographs are below. Note the accumulation of hard exudate that may accompany the regression process. Also note the regression of the large feeder vessels that were previously associated with each active lesion.



This patient will need lifelong screening for the retinal and systemic associations with vHLS. Early intervention is the key to reducing his future morbidity and mortality.

## Georgia Retina Update

Since our last edition of our newsletter, *The LightPipe*, the Georgia Retina team has been quite busy above and beyond the daily practice of patient care.

Beginning earlier this year, several of our doctors participated in the Georgia Society of Ophthalmology Winter Symposium. Dr. Michael Jacobson presented his results of a huge retrospective study, which he organized, of macular hole surgeries performed over the past 5 years at Georgia Retina. Dr. Jacobson conducted a chart review of over 475 cases to study the surgical outcomes of eyes that underwent surgery for idiopathic macular holes and to determine which surgical techniques influenced hole closure and lines of vision gained. This was an enormous undertaking by Dr. Jacobson and a presentation which was well received. Dr. Miller presented an interesting case report of melanoma-associated retinopathy and Dr. Vanderveldt topped it off with a case presentation of a candida lenticular abscess.

Georgia Retina was asked to participate this year with the American Diabetes Association Expo on March 27<sup>th</sup> held at the Georgia World Congress Center. American Diabetes Association EXPO attendees come to this free admission event in search of answers. Some attend to learn about their recent diagnosis (or that of a friend or family member). Others seek new strategies, new tools and new solutions to better manage their diabetes. Still others come for the comfort of community; they find inspiration and encouragement through shared stories and common circumstances. Dr. Stoltz helped to organize an informational booth on diabetic eye disease. With the tireless organizational efforts of Kali Zipperer (our Executive Assistant), Drs. Stoltz, Vanderveldt, Miller, Koh, and Sharma gave informational lectures (*vide infra*), answered questions and helped to make people aware not to ignore their eyes when living with diabetes.



On June 5<sup>th</sup>, Georgia Retina teamed up with The Macular Vision Research Foundation (MVRF) for their annual Atlanta SupportSight Group Meeting. The MVRF was founded in 1989 by Herbert and Karen Lotman. The mission of the foundation is to research the cause, prevention, treatment and ultimately find the cure for macular degeneration with the goal of saving sight and providing public education, advocacy and support to those with macular degeneration. Each year, Georgia Retina teams up with the MVRF here in Atlanta to deliver a series of lectures specifically designed for people living with macular degeneration. The lectures provide information about research, treatment and living with macular degeneration. Drs. Stephanie Vanderveldt and Robert Stoltz spoke to over 100 people with AMD on new and exciting research developments, nutrition, and common questions asked by AMD patients and their families. The meeting was a huge success.

At the GSO Summer Meeting at Reynolds Plantation, Dr. Michael Jacobsen presented two interesting cases highlighting the clinical differences and utility of spectral domain OCT versus time domain OCT. His case presentations helped demonstrate certain advantages of SD-OCT over TD-OCT, such as improved image acquisition, resolution, and more complete macular scanning which can contribute to a better understanding of the pathophysiology of retinal disease and in turn improve patient care.

The doctors of Georgia Retina pride ourselves on providing your patients with superb quality retinal care and compassion while helping to promote the spread of information to other eye care professionals and patients.



## We Participate in the Following Insurance Plans:

Aetna U.S. Healthcare  
BCBS of Georgia  
Beech Street  
Blue Choice  
CCN PPO  
Choice Care Network  
Cigna  
Coventry Healthcare  
Evolutions Healthcare System  
First Health  
Great-West  
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➤ Peach State Medicaid  
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➤ Amerigroup Medicaid

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Medicare  
Medicare Railroad  
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Novanet  
Private HealthCare Systems  
Southcare PPO  
TriCare PPO, HMO  
State Health  
United Healthcare  
USA Managed Care Organization  
WellCare Medicare HMO

*Other plans are pending; please call to*

*see if we are participating. (770) 907-9400*

## Our Physicians

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