



THE RETINA TIMES

Summer 2018 • Issue #9

CASE STUDY

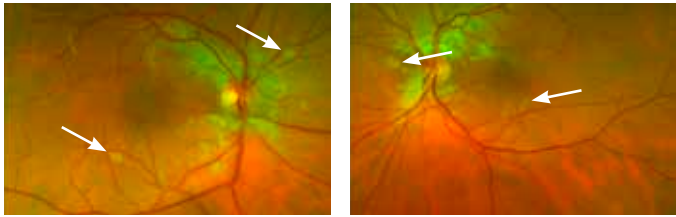


Figure 1. Initial fundus appearance. Arrows showing polygonal areas of inner whitening with halo.



Figure 2a. Initial OCT, right eye

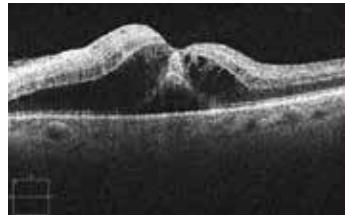


Figure 2b. Initial OCT, left eye

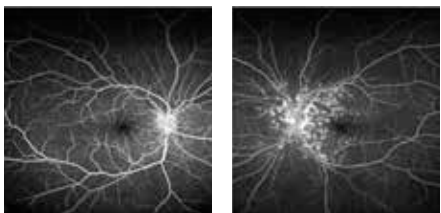


Figure 3. Initial early phase widefield fluorescein angiogram

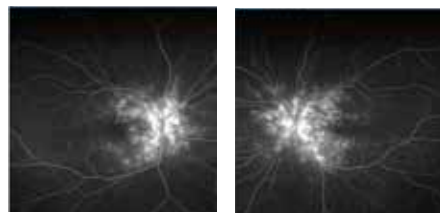


Figure 4. Initial late phase widefield fluorescein angiogram

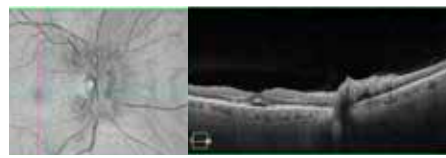


Figure 5. Horizontal Swept Source OCT of the fovea and inferior nerve, right eye. 2 days after initial images.

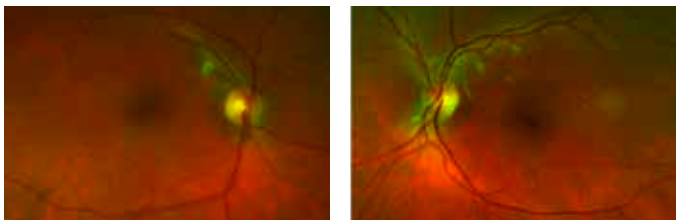


Figure 6. Fundus appearance at 7 weeks



Figure 7a. 7 week OCT, right eye

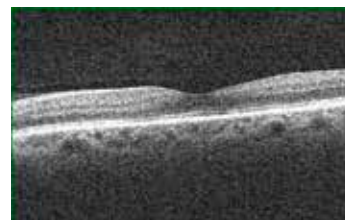


Figure 7b. 7 week OCT, left eye

A 57 year old Caucasian female was referred for evaluation of white lesions in the macula and peripapillary areas of both eyes. The patient noted sudden loss of vision upon awakening that morning. She had started Augmentin the previous day for a sinus infection.

BCVA was 20/100 OD and 20/200 OS. Peripheral visual fields were intact to confrontation. IOP, anterior segment, and vitreous exam were normal.

The fundus exam (Figure 1) showed areas of retinal whitening bilaterally with cotton wool spots, cystoid macular edema and peripapillary edema. There was a yellow spot in the fovea 200 microns in diameter. There were no intraretinal hemorrhages, no visible retinal vascular occlusions. The retina located outside the posterior pole was normal.

OCTs (Figure 2) showed cystoid macular edema with a small serous retinal detachment and peripapillary retinal edema.

Fluorescein angiography in the early phase (Figure 3) showed pinpoint hyperfluorescent spots within the retinal arterioles associated with small patches of distal capillary closure in the macula and peripapillary areas. These spots gradually leaked. In the late phase (Figure 4) there was moderate leakage of fluorescein in the macula and from the optic nerve.

Differential Diagnosis

The findings of this patient are consistent with an occlusive retinal vascular process. Possible etiologies include diabetic retinopathy, hypertensive retinopathy, systemic lupus erythematosus (or other connective tissue disorders), Purtscher retinopathy,

and infectious etiologies such as syphilis, HIV or other viral infections.

The patient had no history of trauma, recent surgery, diabetes, hypertension, pancreatitis, or sexually transmitted diseases. Laboratory tests for several of these conditions were also negative. Despite the fact that the patient had no history of abnormal bleeding or purpura, her platelet count was 64,000 (normal 150,000 to 400,000).

Discussion

In 1910, Otmar Purtscher first described abnormal fundus findings in a man with severe cranial trauma from a tree fall. Fundus findings in Purtscher retinopathy include cotton wool spots, mild or absent intraretinal hemorrhage, optic nerve edema, and Purtscher flecken (which are pathognomonic for this disease). Purtscher flecken are polygonal areas of inner retinal whitening with a clear halo or demarcating line between the whitening and unaffected retina adjacent to retinal blood vessels (the arrows in Figure 1 point toward good examples of Purtscher flecken).

Although trauma (most commonly long bone fracture) is the most frequent causative etiology, followed by pancreatitis, immune thrombocytopenia (ITP) is present in 7% of patients with this condition. Less frequent associations include lupus, connective tissue diseases, hemolytic uremic syndrome, disorders related to pregnancy, and Valsalva.

This patient had Purtscher retinopathy as the presenting manifestation of ITP. Purtscher retinopathy is the result of occlusions of the terminal precapillary arterioles. Microemboli (approximately 50 micron size) are small enough to pass through larger branch retinal arteries

but lodge in the terminal arteriole just proximal to the capillaries. Larger emboli would cause confluent whitening of the retina in the distribution of the branch artery occlusion, but microemboli produce the whitening pattern seen in Purtscher flecken.

It is theorized Purtscher retinopathy and ITP are both caused by stimulating the complement pathway through activation of C5 to C5a. The sinus infection in this patient is postulated to have been the initiating event for this to occur. Activation of the complement cascade results in autoantibodies which aggregate platelets, causing ITP. Autoantibodies also aggregate leukocytes. Both may be responsible for the microemboli that occluded the retinal terminal arterioles in this patient.

The treatment of Purtscher retinopathy is observation with attention to systemic causative factors. In our patient, Hematology consultation confirmed ITP which is a benign self-limited disorder. Treatment was observation. Remarkably, at 48 hours after presentation this patient had improvement in fundus findings and resolution of macular edema (Figure 5) with improvement of BCVA to 20/30 OD and 20/50 OS. Serial follow up exams showed continued improvement. At 7 weeks, BCVA was 20/20 OD and 20/25 OS with rare cotton wool spots remaining (Figure 6). OCT at 7 weeks showed areas of mild retinal thinning in the outer retina (Figure 7). Although with time most cases see improvement in fundus findings and visual acuity, outcomes are often not as favorable as this case. Significant loss of photoreceptors, resulting in areas of outer retinal thinning, and permanent paracentral scotoma are common.

ON THE CUTTING EDGE OF RETINAL IMAGING

Retina Associates has always invested in patient care. Doing so not only enhances our care of your patients but also allows us to be on the cutting edge of new technology. We were one of the first practices in the US to utilize the Optos Ultra-Wide Field Fluorescein Angiography System. We have been a partner with Zeiss for the evaluation of new and evolving technology including Swept Source OCT imaging and OCT angiography. These devices keep us at the cutting edge of retinal care.

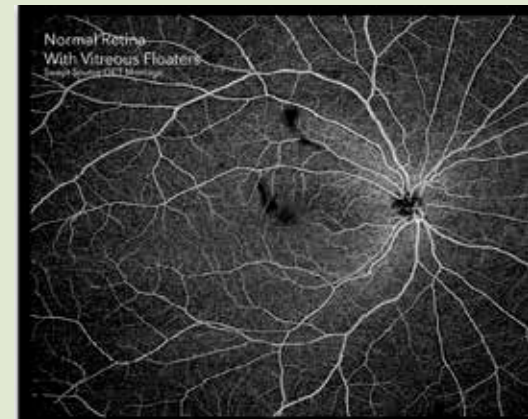


Figure A. Ultra-Wide Field Swept Source OCT angiography of a patient with normal retina and vitreous opacities.



Figure B. Optos Ultra-Wide field angiogram of severe proliferative retinopathy

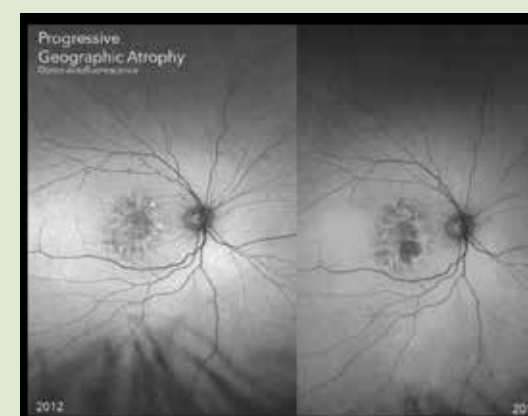


Figure C. Optos fundus autofluorescence of progressive geographic atrophy.



VITREORETINAL SURGERY COMING TO DANVILLE IN A BIG WAY WITH NGENUITY 3D VISUALIZATION SYSTEM

The surgeons at Retina Associates of Kentucky are proud to announce that we will begin operating in Danville, at the Central Kentucky Surgery Center with the latest surgical technology, NGENUITY 3D Visualization System. In August we will introduce our 2nd surgical site where we will operate with the NGENUITY System, a platform for Digitally Assisted Vitreoretinal Surgery. This surgical system offers a unique way for retinal surgeons to visualize their surgery in real time while performing a procedure. Replacing the traditional microscope viewing oculars with a high definition stereoscopic camera allows for enhanced visualization techniques and improved collaboration among the operating room staff.



Join us in congratulating Drs. John Kitchens and Blake Isernhagen as they are the first to bring retina surgery to Danville.

“Retina Associates of Kentucky was built on the premise of service to the people of the commonwealth. It is with that in mind that we are proud to offer the same world-class surgery closer to home for our patients.” – John Kitchens, MD

“We realize that travel is an obstacle for many of our patients in Kentucky. For that reason we are excited to bring advanced retina surgery one-step closer to home for our patients.” – Blake Isernhagen, MD

Drs. John Kitchens, Blake Isernhagen and their partners attribute this growth to your support in our Danville clinic.

OUR FRANKFORT OFFICE IS MOVING



Thank you for trusting us with your patients’ retina care over the past many years. We are pleased to announce that we will be relocating our Frankfort clinic to a brand-new office later this summer. We will continue to care for your patients at our current location until our new office is ready in September.

In the meantime, we are in the process of building our new clinic in Frankfort, at 315 Leonardwood Road, Suite 4 - not far from our current location. This one-of-a-kind space will be designed specifically for the needs of retina patients. During this transition, we will continue to deliver the exceptional retina care you’ve come to expect from RAK.

Please note that your patients’ appointment times both during and after the transition will remain the same. We will send them correspondence and directions concerning our new facility well before their next appointment. We will also provide you and your office advanced notice of our logistical information prior to opening. If you have any questions or concerns about these changes, please contact Marisa Riding at 1-800-627-2020.

LOUISVILLE CLINIC UPDATE



May 14th was a great day in our Louisville clinic, it was the 1st day back in our regular office at the Springs Medical Center (6420 Dutchmans Parkway, Suite 70)!

IN THE COMMUNITY



Retina Associates was a proud sponsor of the American Diabetes Association Tour de Cure event at Keeneland. Our speedy team braved the rain to support the cause!

Retina Associates was a proud sponsor for the Bluegrass Council of the Blind’s SEE Cruise event. Several RAK teammembers attended to enjoy the fun!



RAK is a proud supporter of the Lexington South Lions Club 5k Run for Sight. We thank our employees who participated! We even had a mascot, Stitch. GO Team RAK!

WHAT'S HAPPENING

- SEP 21 2018** Louisville Dinner & 3D IMAX Presentation following Fall KOA
- OCT 18 2018** Lexington Eye Opening Symposium Dr. Shirkey presenting
- NOV 6 2018** CE Kentucky Horse Park

RETIREMENT CELEBRATION!



Drs. William Wood, Rick Isernhagen, Tom Stone & Belinda Shirkey along with RAK staff enjoyed a reception to commend Rhonda Palmer for her 33 years of service and dedication to Retina Associates. The Doctors, Staff and Patients will miss her. We wish Rhonda all the best in this next chapter of her life.

RESEARCH

If you are interested in information regarding past clinical trials or participation criteria in our current clinical trials, please contact our research department: **Diana Holcomb** - Clinical Research Manager **PH (859) 264-2905** | dholcomb@retinaky.com

MAIN OFFICES

- Lexington**
120 N. Eagle Creek Drive, Suite 500
Lexington, KY 40509
- Louisville**
6420 Dutchmans Parkway, Suite 70
Louisville, KY 40205
- Ashland**
2841 Lexington Avenue
Ashland, KY 41101

OUR OTHER LOCATIONS

- Bardstown
- Danville
- Frankfort
- London
- Prestonsburg
- Richmond
- Shelbyville
- Somerset

OUR PHYSICIANS

- William J. Wood, MD
- Rick D. Isernhagen, MD
- Thomas W. Stone, MD
- John W. Kitchens, MD
- Todd J. Purkiss, MD, PhD
- Belinda L. Shirkey, MD
- Sheila Garcia Santana, MD
- Blake A. Isernhagen, MD

