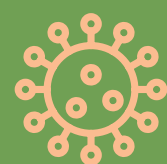




THE RETINA TIMES

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COVID-19 SOCIAL DISTANCING

We are happy to welcome our established patients back into the clinic. As our patient volume increases we will continue following the CDC guidelines and precautions to minimize the spread of the virus. Our goal is to provide a maximally safe experience for our patients, staff and physicians.

You may see several differences as you enter. Depending on location, we may ask you to wait in your car until you are needed in the clinic, and we are restricting the office to patients only. If you need assistance getting to or through the office, please let us know beforehand so we can make arrangements.

Everyone will be wearing a mask, so please bring yours to your visit. We also have a screening station for checking your temperature, red tape for encouraging safe distance between you and the next patient, and shields on exam equipment between you and your examining physician.

We appreciate your continued patience as we follow these safeguards. We will get through this together!

CONGRATULATIONS!



The Physicians and Staff at Retina Associates of Kentucky would like to CONGRATULATE the first graduating class from the UPIKE Kentucky College of Optometry! We are proud to have been a part of your path through the Externship program, Case Study evenings and Preceptorships.

We have thoroughly enjoyed our interactions with each of you and look forward to collaborating with you as part of Kentucky's eye care community. Here's to The Class of 2020!

CASE STUDY: Patient Care During COVID-19

The COVID-19 (or SARS-CoV-2) pandemic has had a tremendous impact on each of our lives. We have been required to make adjustments to our daily activities: limiting travel, wearing masks, practicing social distancing. All of these measures have been intended to slow the spread of COVID-19 and reduce the risk of overwhelming our health care system, causing greater loss of life. Despite this virus, however, life does go on and that includes other, more common diseases. We at Retina Associates of Kentucky have remained open throughout the pandemic because so many of our patients require treatment to save and preserve their vision.

One such patient was a 55 year old woman with type 2 diabetes who presented to our office with progressive blurring of vision in both eyes and new floaters in the left. Her vision measured at 20/50 in both eyes. While she does have cataracts, it was apparent that diabetic retinopathy was playing a major role in her vision. Clinical photos of her eyes can be seen in Figure 1. The right eye has numerous microaneurysms and blot hemorrhages, as well as scattered lipid exudate in the macula. The macula of the left eye is similar, though it lacks the lipid exudate. Both eyes have extensive blot hemorrhages in the periphery (left) of the right eye are areas of ischemia or blood vessels without adequate blood flow. Areas of neovascularization or new blood vessel growth are seen in both eyes, including on the optic nerves. The neovascularization on the optic nerve of the left eye has resulted in a small vitreous hemorrhage which is the reason for her new floaters. Optical coherence tomography (OCT) scans of her retinas (Figure 2) demonstrate macular edema and subretinal fluid in the right eye, as well as a tractional membrane from the neovascular tissue on the optic nerve. The left eye has similar, though less severe findings.

This patient was diagnosed with proliferative diabetic retinopathy (PDR) and diabetic macular edema (DME) in both eyes, along with an associated vitreous hemorrhage (VH) in the left eye. PDR occurs when enough of the blood flow to the retina

is damaged that the retina tries to grow new blood vessels in order to compensate. This is predominantly in response to a chemical that is released called vascular endothelial growth factor (VEGF). Unfortunately, the new vessels grow in the wrong place, do not mature properly, and are prone to breaking open, causing VH. These vessels can result in tractional membrane formation, as seen in this patient. If the tractional membranes become severe enough, they can even detach the retina. DME can also be the result of extensive damage to blood flow. The same VEGF that causes neovascularization can cause the macula to swell. In addition, damaged blood vessels can leak fluid directly into the macula as the vessel walls become weakened.

Due to the presence of both PDR and DME, the decision was made to use a combination approach to treatment. An injection of a VEGF blocking medicine called Avastin was given to both eyes. This provided rapid control of the main factor involved in the neovascularization and edema. To provide more durable control of the disease over the long term, panretinal photocoagulation (PRP) was applied to the peripheral retina of both eyes in alternating sessions over 4 weeks. PRP drives down release of VEGF in the areas where the retinal blood flow is most damaged. Because the laser spots are small and spaced apart from each other in the peripheral retina, the patient rarely notices anything has been done.

These treatments were ongoing throughout the peak of the pandemic and have hopefully put this patient on the road to visual recovery and stabilization. The importance of blood sugar control, however, cannot be underestimated. We can successfully treat many aspects of diabetic retinopathy, but if the blood sugar remains uncontrolled, it is only a matter of time before permanent vision loss occurs. Diabetic retinopathy is the leading cause of legal blindness in working age individuals in the US. If you have diabetes, make sure you work with your primary care physician or endocrinologist to maximize your blood sugar control and be sure to have an eye exam at least once per year.

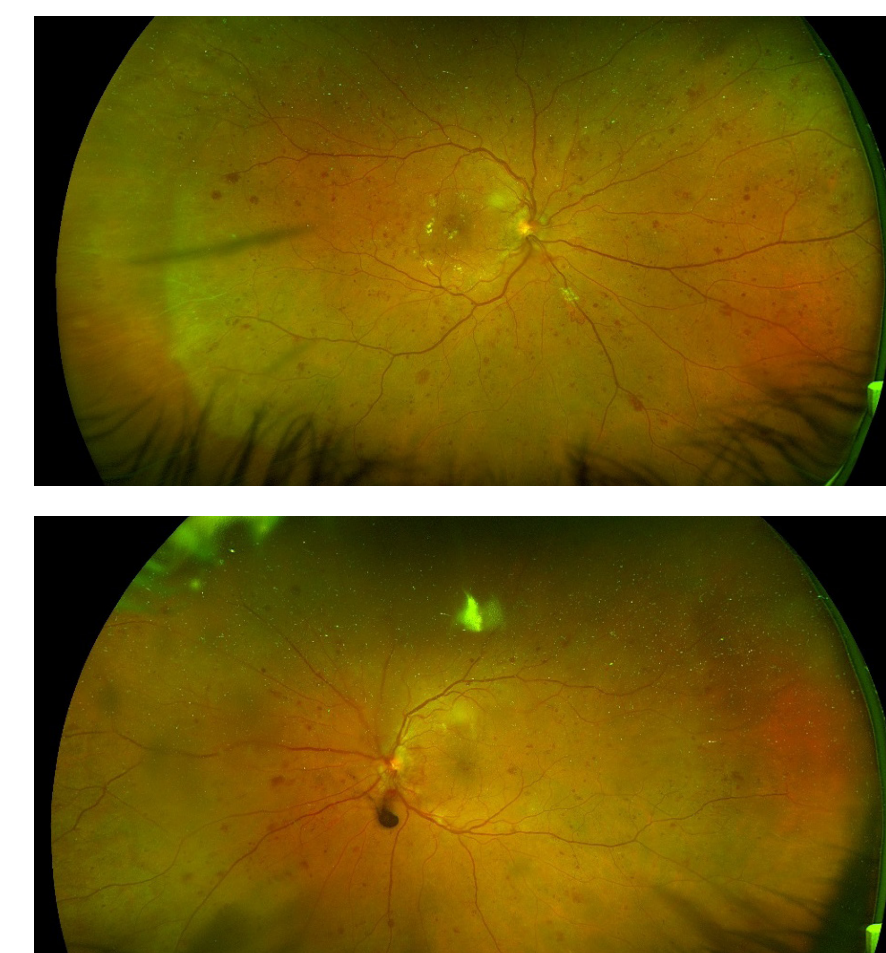


Figure 1. Photos of the right and left eyes. Note the lack of blood flow (ischemia) on the left hand side of the right eye photo. Both eyes demonstrate numerous microaneurysms (red dots) and hemorrhages (larger red spots). Lipid exudate (yellow spots) is seen in the macula of the right eye (top). Areas of new blood vessel growth (neovascularization) are seen on the optic nerve and other areas of both eyes. A small vitreous hemorrhage (VH) can be seen near the optic nerve of the left eye.

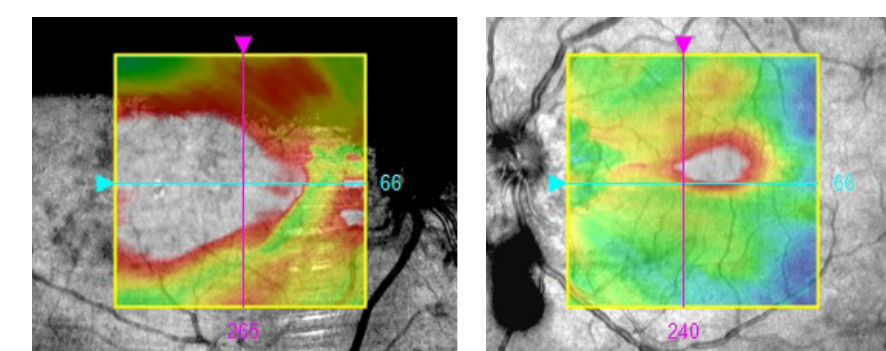


Figure 2. Optical coherence tomography (OCT) maps and cross sections of both eyes highlight the diabetic macular edema (DME). Subretinal fluid is also seen in the right eye (top cross section). Tractional membranes from the neovascularization of the optic nerves can be seen on the surface of the retina in each eye.



Submitted by
Todd J. Purkiss, MD, PhD

Safeguarding Our Office During COVID-19



RESEARCH

If you are interested in information regarding past clinical trials or participation criteria in our current clinical trials, please contact our research department:

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