EYE-Q

by R. Thomas Barowsky, MD

Treating Diabetic Eye Disease

During National Diabetes Awareness Month I have been discussing the impact of diabetes on the eyes and the treatments available to protect our vision from this serious cause of blindness.

Diabetes is the second leading cause of permanent vision loss in this country. Studies have shown an increasing incidence of diabetes in our population, most likely due to the increased consumption of a high sugar diet, increased obesity and decreased physical activity. This means many more Americans risk the vision stealing effects of this disease.

In the previous columns I spoke about how diabetes causes a weakening of the blood vessels in the retina that leads to leakage of blood into the retinal tissues. In addition, the vessels are less efficient at bringing blood to the retina causing the retina to make new but very fragile blood vessels to increase the blood flow to the retina. Additionally I discussed the value of laser technology in controlling the vision stealing effects of diabetes and I introduced some of the newer technologies being employed to fight the more advanced forms of diabetic eye disease. Today I'll talk about the consequences of diabetic eye disease if treatment is delayed or ineffective.

The fragile new vessels in the back of the eye are prone to tear. When this happens bleeding will occur inside the back of the eye called a vitreous hemorrhage. In many cases the initial bleeding is mild and may only partially block the vision. In more serious cases the bleeding can completely fill the back of the eye severely reducing vision and giving light a reddish glow. In most cases the blood will be broken down by the eye and over time disappear. This doesn't mean everything is okay. If the vessels will bleed once they will bleed many more times if not treated. Over the course of time, as the bleeding recurs, scar tissue starts to form in the vitreous in the back of the eye. Like any scar tissue it will start to contract or shrink pulling on the retina where it is attached and causing a traction retinal detachment. Caught early enough, a surgical procedure can be performed to remove the scar and reattach the retina preserving the vision. In extreme cases this is not nearly as effective and the patient may end up not only watching their own diet but also the diet of their new dog.

The fragile vessels that can grow in the back of the eye also can grow in the front of the eye on the iris. When this occurs the vessels lay down a membrane to allow them to continue to grow from the pupil towards the drainage angle at the edge of the iris. These vessels and their membrane block the drainage angle causing the pressure in the eye to go very high. This leads to sudden blurring of vision, severe eye pain and redness. To protect whatever vision the patient has, immediate reduction of the pressure is necessary.

Finally, uncontrolled and untreated diabetes can damage the blood vessels of the optic nerve and cause blindness because the nerve doesn't get enough blood flow.

If you are a diabetic you can protect your sight by carefully monitoring your blood sugars, maintaining a healthy blood pressure and getting annual dilated eye exams to monitor changes in your eyes should they occur.

I hope you had a festive and fruitful Thanksgiving and were careful about those extra calories whether you are a diabetic or not.

If you have questions about your eye health e-mail Dr. Barowsky at doctom@tdkj.com and we'll try to answer your questions here at Eye-Q.