

EYE-Q

by R. Thomas Barowsky, MD

Treating Diabetic Eye Disease

During National Diabetes Awareness Month I will be 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 column 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, poor control of your blood pressure has a bad effect on the blood vessels already weakened by the diabetes. The increased blood pressure increases the amount of leakage from the blood vessels and can cause breaks in the vessel wall at weaknesses called micro-aneurysms.

It has only been in the last 25 years or so that eye specialists have been able to begin to control the changes that lead to blindness from diabetes. Laser surgery to the retina has become the standard for controlling diabetic change in the eye. Early CO₂ and argon lasers were used to treat the retina afflicted with diabetes. Today the argon laser is used almost exclusively because it is a more precise and controllable therapy.

The lasers used to treat diabetes in the retina are referred to as hot lasers because they treat by applying a set amount of heat to the tissue. In diabetes, the tissues are damaged by poor blood flow. By decreasing the amount of tissue needing blood, we can slow down or halt the amount of tissue damaged by the disease. Lasers selectively destroy the retinal tissue that is damaged by the diabetes. In this way the healthier tissue gets a better blood supply and has a better chance of remaining healthy. It may take several treatments with the laser to get good control of the changes caused by the diabetes because we only want to do the minimum amount of treatment necessary to get the most control.

Because diabetes is an ongoing process re-treatments with the laser may be required over time. Its important to remember that diabetic eye disease does not stop with the first treatment. Because the disease is not curable, the complications of the disease do not go away either. As always, proper diet, exercise and rest are essential to controlling diabetes and therefore controlling its effects on your eyes. In addition, good control of your blood pressure will also help control the damage that occurs to the blood vessels in the eyes and elsewhere in your body.

Next week I will discuss newer therapies that are having a powerful effect on controlling some of the serious complications of severe diabetic eye disease.

On this Veteran's Day weekend don't forget to thank a vet for all the freedoms and liberties you enjoy today.

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.