

## **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 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. Today I will go over some of the newer technologies being employed to fight diabetic retinopathy.

Because diabetes causes the growth of new blood vessels in the retina, it is not unlike certain types of macular degeneration. It would seem logical that the treatments of these two different diseases might be similar. In fact, there is new research to show this to be true.

Several drugs have been developed to treat new vessel growth in the retina. Each new drug has been more effective than the one previous to it. The first drugs were given by IV with laser being used to activate the drug and cause the vessels to close up. The downside of this treatment is that it resulted in permanent scarring. The next step was a drug that when injected directly into the eye caused the vessels to melt away but had to be repeated every six weeks or so to control the new vessel growth. It is also a very expensive treatment.

The most revolutionary new treatment uses a drug called Avastin. This drug was originally developed for treating various stages of lung and breast cancer. Recent studies have shown that this drug is very effective at reversing the new vessel growth that occurs in the most severe forms of diabetic retinopathy. This past week while attending the American Academy of Ophthalmology's annual meeting, I heard a report by researchers on the effectiveness of these types of medications. They were also able to show that this treatment alone is more effective at controlling diabetic macular edema than laser alone or laser in combination with the drug.

The treatment requires the drug to be injected directly into the back of the eye to be effective. This can be done in the doctor's office so that the cost of hospitalization is avoided. In most cases two or three treatments spread out over several months are all that is required. In addition, the cost of the drug is about 1/10 the cost of other treatments. The downside of using Avastin is that currently it is not FDA approved for treating severe diabetic eye disease in spite of its superior effectiveness.

Next week I'll talk about the consequences of diabetic eye disease if treatment is delayed or ineffective.

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