

Diabetes medication associated with slower progression of retina disease

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Patients with diabetes who take the medication rosiglitazone may be less likely to develop the eye disease proliferative diabetic retinopathy or to experience reductions in visual acuity (sharpness), according to a report in the June issue of *Archives of Ophthalmology*.

Proliferative diabetic retinopathy occurs when existing blood vessels in the retina are blocked or damaged and new, tiny blood vessels form, according to background information in the article. It one of is the most common causes of severe vision loss among working-age Americans, and few effective therapies exist to delay its progression.

Lucy Q. Shen, M.D., of the Jules Stein Eye Institute, University of California–Los Angeles, and colleagues reviewed the medical records of 124 patients who were treated with rosiglitazone and who were receiving medical and ophthalmic care at the Joslin Diabetes Center in Boston between May 2002 and May 2003. They compared these patients to 158 patients who also had diabetes but were not taking rosiglitazone or a similar medication.

At the beginning of the study, 14 eyes of those in the rosiglitazone group (6.4 percent) and 24 eyes of those in the control group (9.3 percent) had severe non-proliferative diabetic retinopathy, an earlier stage of the disease in which new blood vessels have not yet developed. Among those, 7.7 percent of those in the rosiglitazone group and 29.2 percent of those in the control group progressed to proliferative diabetic retinopathy after one year. After three years, 19.2 percent in the

rosiglitazone group and 47.4 percent in the control group had progressed from non-proliferative to proliferative diabetic retinopathy—a 59.5 percent relative risk reduction in the rosiglitazone group.

In addition, fewer eyes in the rosiglitazone group than in the control group experienced a loss in visual acuity of three or more lines on the vision chart (.5 percent vs. 14.5 percent) during an average of 2.8 years of follow-up.

Rosiglitazone may delay the progression of retinopathy and preserve vision by reducing the formation of new blood vessels, a process known as angiogenesis, the authors note. "However, because this study does not rigorously prove that rosiglitazone either reduces the incidence of proliferative diabetic retinopathy or prevents loss of visual acuity, and because there may be adverse effects from therapy, rosiglitazone treatment of patients with diabetes specifically to reduce these ophthalmic complications is not advocated at this time," they write. Known adverse effects include fluid build-up, abnormal liver function test and the worsening of congestive heart failure.

Source: JAMA and Archives Journals

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