

Rosiglitazone May Delay Progression to PDR

Previous in vitro and animal studies have identified antiangiogenic activity of this agent.

BY CONNI BERGMANN KOURY, EDITOR-IN-CHIEF

Rosiglitazone therapy may delay ocular neovascularization in diabetic patients. Results of this study support continued evaluation of the study cohort as well as more definitive future investigations, according to data presented at the Association for Research in Vision and Ophthalmology (ARVO) 2006 Annual Meeting.

Lucy Q. Shen, MD, an investigator from the surgical research unit at Harvard University Medical School and Colleagues undertook this study to see if the oral antidiabetic medication rosiglitazone delayed the development of proliferative diabetic retinopathy (PDR). The agent has been reported to have antiangiogenic properties, according to the ARVO abstract.

In 2003, a longitudinal chart-review study was initiated at the Joslin Diabetes Center (JDC). Patients who were taking rosiglitazone in May 2003 were included in the study if they received both medical and ophthalmic care at JDC and had at least one eye exam in the preceding year, according to Dr. Shen. The investigators included a nonglitazone control group, matched for baseline characteristics.

GROUPS SIMILAR AT BASELINE

A total of 124 rosiglitazone patients and 158 control patients were followed for an average of 2.8 ± 1.7 years. The two groups had similar baseline characteristics with respect to age, gender, type and duration of diabetes, HbA1c, blood pressure and visual acuity ($P > .1$). The difference in final HbA1c was not statistically significant between the two groups (7.6 rosiglitazone vs 7.8 control).

In patients with severe nonproliferative diabetic retinopathy (NPDR), progression to PDR was 14.3% or two out of 14 eyes and 45.8% or 11 out of 24 eyes in the rosiglitazone and control groups, respectively. When accounting for follow-up duration and loss, Dr. Shen reported, devel-

Within 1 year, 25% of the control group had developed PDR. Rosiglitazone-treated patients had not reached this point after 2.5 years.

opment of PDR in rosiglitazone patients occurred more slowly ($P = .0448$, Wilcoxon; $P = .0587$, Log-Rank).

CONTROVERSY OVER ROSIGLITAZONE MACULAR EDEMA LINK

Dr. Shen and colleagues found that 25% of the control group developed PDR within 1 year (95% CI, 122-518 days), while rosiglitazone-treated patients had not reached this point after 2.5 years. The average final visual acuity was 20/34 in the rosiglitazone patients and 20/46 in the control group. Among patients with moderate NPDR, 11.1% (4 of 36 eyes) and 12.5% (7 of 56 eyes) developed PDR in the rosiglitazone and control groups, respectively ($P = NS$). The rates of developing clinically significant macular edema in patients with no edema at baseline were 6.5% (12 of 184 eyes) and 4.5% (10 of 222 eyes), respectively ($P = NS$).

Dr. Shen said recent reports have suggested that rosiglitazone may cause macular edema in some patients, although this is controversial. A large study involving >3,000 patients failed to show any greater likelihood of developing macular edema with rosiglitazone. ■

Lucy Q. Shen, MD, is an investigator in the surgical research unit at Harvard University Medical School.

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