

Patients Benefit from Life-long Ophthalmology Follow-up and Care

There was long-term maintenance of good vision in those patients enrolled in the ETDRS at the Joslin Diabetes Center.

BY LAURA SUAREZ, ASSOCIATE EDITOR

Fifteen years after the completion of the Early Treatment Diabetic Retinopathy Study (ETDRS), researchers at the Joslin Diabetes Center conducted a follow-up study examining the ocular and medical health status of patients who were enrolled in the original study.

As a result, it was determined that over half these patients experienced at least one ocular complication after the study's conclusion (Figure 1).

"New ocular complications were frequent, but nevertheless, there was a good long-term maintenance of visual acuity," said Lica Chui, MD, during a presentation at ARVO 2005: Global Networking, held in Ft Lauderdale, Fla. Approximately 42% of patients required cataract extraction in at least one eye and 22% required pars plana vitrectomy by the time of 15-year follow-up. This suggests, she said, that there is a need for life-long ophthalmic and medical care.

LARGEST ENROLLING CENTER

The ETDRS was a multicenter clinical trial that evaluated laser photocoagulation treatment in patients with diabetic retinopathy. Patients, with retinopathy

ranging from mild nonproliferative to early proliferative, were randomly assigned to early laser photocoagulation and aspirin treatment and followed for 5 to 9 years.

Of the 3,711 patients studied during the ETDRS, 7% were enrolled from the Joslin Diabetes Center, Beetham Eye Institute in Boston. This was the largest enrolling center of the study. Dr. Chui and colleagues solicited

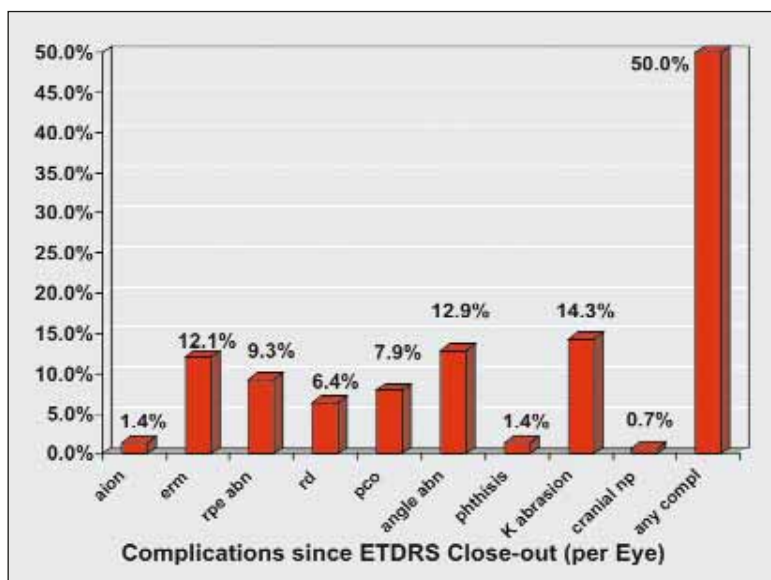


Figure 1. The rate of ocular complications in this population of patients from the ETDRS follow-up study, as it stands after ETDRS close-out.

patient responses via telephone and mail of those patients enrolled at the center and asked them to participate in the single-site follow-up.

SURVEY

A total of 235 patients were alive at the conclusion of the ETDRS. By the time of the follow-up study, 46% of these original ETDRS patients were deceased, Dr. Chui said. Patients who were alive and reachable (32%) were surveyed to determine the rate of vision loss, ocular complications and morbidity in this special population.

Patients received a comprehensive eye examination (refraction, best corrected visual acuity assessment, seven-field standard stereo fundus photography) and completed a questionnaire regarding health status, diabetes control and diabetes complications before April 2005. Patients (mean age 54 years and mean duration of diabetes 39 years) were also checked for blood pressure, HbA1c, and lipid and urine profiles. Visual acuity of patients enrolled in the follow-up study may be seen in Figure 2.

About 12% of Joslin patients surveyed experienced moderate vision loss between ETDRS close-out and this follow-up.

At follow-up, vision $\geq 20/40$, which was the driving criteria, was present in 81% of the eyes. Overall, 97% of eyes had vision $\geq 20/200$, the definition of legal blindness.

In the time between ETDRS closeout and this follow-up examination, there was a 12% increase in the number of eyes with moderate vision loss (17% at closeout vs 29% at follow-up). However, Dr. Chui said, severe vision loss did not increase to the same extent, as it only occurred in four eyes (2% at closeout vs 4% at follow-up).

SIMILAR VISUAL ACUITY

Although only 31% of ETDRS participants had type 1 diabetes, a total of 89% in the Joslin follow-up study were type 1. Dr. Chui and colleagues compared their

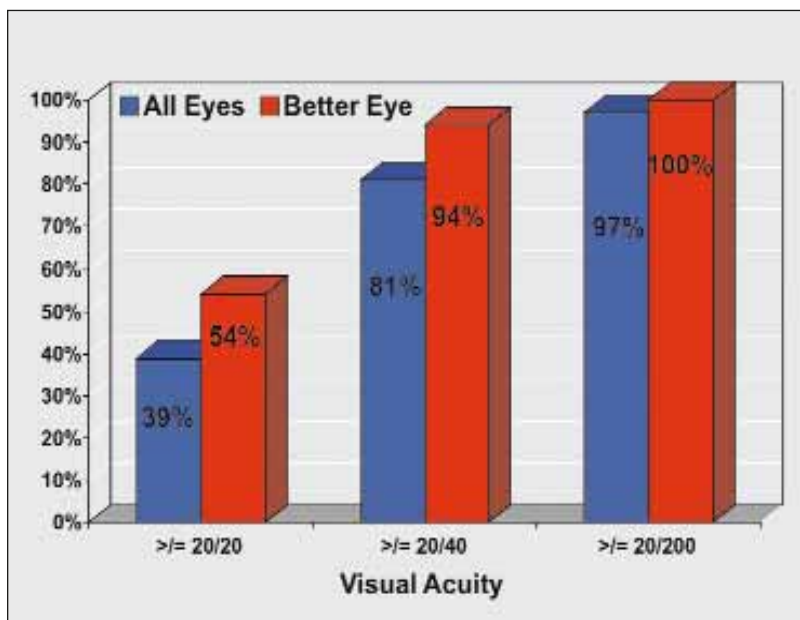


Figure 2. The visual acuity of patients from the Joslin Diabetes Center ETDRS follow-up cohort study.

study results with a previous study on predominantly type 2 diabetic patients. Visual acuity results between the two cohorts were similar, Dr. Chui said. "In this relatively small population, the predominantly type 1 [diabetes] cohort had a slight tendency for more frequent better visual acuity and less frequent reduced visual acuity," she said.

NEED FOR CARE IS UNDERSCORED

Treatment guides of diabetic retinopathy and diabetic macular edema with scattered photocoagulation and focal coagulation were formed from the original ETDRS results. In the Joslin patients, 56% of patients received either procedure after ETDRS closeout. "Thus, despite frequent and subsequent complications and interventions, the long-term visual prognosis in surviving diabetic patients is excellent, underscoring both the need and the benefit of life-long ophthalmic and medical care," Dr. Chui concluded. ■

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Chui L. 15-Year follow-up of the ocular and medical status of early treatment diabetic retinopathy study patients enrolled at the Joslin Diabetes Center. Presented at ARVO 2005: Global Networking, May 1-5, 2005. Ft Lauderdale, Fla.