Capitol Hill Education

Capitol Hill Education Focuses on Diabetic Retinopathy

During the week of September 12, AEVR’s Decade of Vision 2010-2020 Initiative joined with the vision community to sponsor two Congressional briefings to educate about diabetic retinopathy. On September 13, Lighthouse International hosted a Diabetes and Vision Loss briefing featuring Neil Bressler, M.D. (Wilmer Eye Institute/Johns Hopkins University), who chairs the National Eye Institute’s (NEI) Diabetic Retinopathy Clinical Research Network [DRCR.net]. On September 15, the Ad Hoc Group for Medical Research hosted a briefing entitled Advancing Discovery: The Role of NIH Research in Fighting Diabetes featuring Griffin Rodgers, M.D., Director of the NIDDK, along with a diabetes researcher and patient advocate.

Both briefings emphasized the growing public health problems of obesity and diabetes and concomitant medical conditions associated with the disease, such as diabetic retinopathy, the leading cause of vision loss in adults 20-70 years old that affects 8.5 million Americans, or 2.8 percent of the population. In patients with diabetes, going blind or experiencing other vision loss issues rank among the top four concerns about the disease. These patients are so concerned about vision loss diminishing their quality of life that those with nearly perfect vision (20/20 to 20/25) would be willing to trade 15 percent of their remaining life for “perfect vision,” while those with moderate impairment (20/30 to 20/100) would be willing to trade 22 percent of their remaining life for perfect vision. Patients who are legally blind from diabetes (20/200 to 20/400) would be willing to trade 36 percent of their remaining life to regain perfect vision.

Dr. Bressler noted that, for forty years, the NEI in conjunction with the NIDDK has sponsored clinical trials that study diabetic eye disease—in terms of dietary practices to minimize the condition (managing blood sugar, hypertension, and cholesterol), as well as the development of potential treatments and therapies. The current DRCR Network was formed in 2002 and currently engages 320 participating physicians at 109 sites in the United States, including private, community-based practices as well as university and other academic-based centers. It supports the identification, design, and implementation of multicenter clinical research initiatives focused on diabetes-induced disorders of the retina, which is the light sensitive back of the eye necessary for vision. These conditions include diabetic macular edema, in which capillaries in the retina leak and cause swelling within the center of the retina responsible for reading, driving, and recognizing faces, as well as proliferative diabetic retinopathy, in which closure of normal retina capillaries leads to the production of substances that cause new blood vessels to proliferate in the eye and potentially bleed or detach the retina off of the back wall of the eye. Both conditions can cause blindness.

As just one example of the DRCR Network’s initiatives, Dr. Bressler described the results of a randomized clinical trial, reported in 2010, comparing the effectiveness of laser treatments alone for macular edema versus laser treatments combined with a new use for the drug Lucentis (currently FDA-approved for macular degeneration), which inhibits new blood vessel leakage and growth. The new therapy was found to be more effective than laser treatment alone, which had been the only standard care for diabetic macular edema for the past 25 years. “Nearly 50 percent of patients who received this new treatment experience substantial visual improvement, and fewer than five percent experience substantial vision loss,” said Dr. Bressler. He further noted that the Network is proceeding with other treatment studies, as well as beginning to study the genetic aspects of these diabetic eye diseases and their responses to treatments.

At the September 15 briefing, Dr. Rodgers emphasized the need to research both the genetic basis and environmental conditions that lead to diabetes. He commended the DRCR Network, noting NIDDK’s long-standing collaboration with the NEI in funding research into diabetic eye disease.