AEVR Education
Speakers Urge More Dry Eye Disease Research at Capitol Hill Briefing

On July 11, AEVR and the Tear Film & Ocular Surface Society (TFOS) joined with the vision community and coalition partners in recognizing July 2018 as Dry Eye Awareness Month—the second year of this re-formalized and expanded event that included a Congressional Briefing and “Test Your Tears” Dry Eye Screening, along with Congressional delegation visits managed by NAEVR. The Briefing focused on the TFOS Dry Eye Workshop II™ Report (TFOS DEWS II™), published in The Ocular Surface journal in July 2017, and how it has impacted clinical practice and research. TFOS DEWS II™ was the first re-examination of the topic since the initial TFOS DEWS™ report issued in 2007, updating the definition, classification, and diagnosis of dry eye; critically evaluating the epidemiology, pathophysiology, mechanism, and impact of the disease; addressing its management and therapy; and developing recommendations for the design of clinical trials to assess pharmaceutical interventions.

About Dry Eye
Moderator and TFOS Founder David A. Sullivan, MS, PhD, FARVO (Senior Scientist, Schepens Eye Research Institute, and Associate Professor, Department of Ophthalmology, Harvard Medical School) noted that Dry Eye Disease (DED) is one of the most frequent causes of patient visits to eye care providers and has a significant impact on healthcare policy as it affects more than 30 million Americans and costs the United States healthcare system $3.8 billion annually, with a $35.4 billion annual cost to society from diminished productivity. There is no cure for DED—at best, eye care professionals manage the disease.

A panel of four experts, several of whom were among the 150 experts from 23 countries who participated in the development of TFOS DEWS III™, spoke about various aspects of DED.

DED and Comorbidities
Since dry eye is an important area of vision research funded by the NIH/NEI, Janine Austin-Clayton, MD (NIH Associate Director for Research on Women’s Health and Director, Office of Research on Women’s Health, NIH) addressed more fully the causes and comorbidities of DED—including autoimmune diseases, thyroid disease (especially Graves’ disease), diabetes, Graft versus Host disease (after a bone marrow transplant), viral infections (such as Human Immunodeficiency Virus and Epstein-Barr virus) and blepharitis (eyelid inflammation). She emphasized that two-thirds of those with DED are women, in part due to the greater incidence of autoimmune diseases.

DED and Cosmetics Use
Leslie O’Dell, OD, FAAO (Wheatlyn Eye Care, York, Pennsylvania) spoke about the use of cosmetics and the incidence of OSD and DED. She reported that the average woman exposes herself to 167 different chemicals on her body and face during her daily regimen. There are ingredients in commonly used eye makeup and beauty products that can exacerbate dry eye symptoms by affecting how the meibomian glands function and lubricate the tear film, increasing the inflammation-inducing evaporative load of patients with OSD. She also recognized that cosmetics include carcinogens, endocrine disruptors, neurotoxins, and reproductive toxins—many of which are banned in the European Union but not in the United States. This has resulted in Congressional proposals to update the Federal Food, Drug, and Cosmetic Act to require manufacturers to register ingredients of personal care products and any adverse reactions with the Food and Drug Administration (FDA).

DED and Contact Lenses
Clinician-scientist Penny Asbell, MD (Professor of Ophthalmology/Icahn School of Medicine at Mt. Sinai) reported that, while contact lens wearers are more likely to have symptoms of DED, research is needed as to whether contact lenses cause dry eyes or does underlying DED lead to contact lens discomfort. Regarding the latter, she described the potential role that meibomian gland dysfunction (MGD) may play. These exocrine glands at the rim of the eyelids supply meibum, the oily substance that prevents evaporation of the eye’s tear film, and when not functioning properly may result in alteration of the tear film, symptoms of eye irritation, inflammation, and ocular surface disease (OSD).

DED and Digital Device Use
Scott Schachter, OD (Vision Source, Pismo Beach, California and Adjunct Clinical Professor, Marshall B. Ketchum University) spoke about the increasingly common relationship between digital eye strain and DED. He presented numerous statistics about digital device use—including that 83 percent of Americans use digital devices for more than two hours per day and that 60 percent report experiencing symptoms of digital eye strain. He noted that the quality of blinks and their frequency diminishes when viewing a digital device versus hard copy, which promotes DED. He concluded by reporting that, by three years of age, 68 percent of children regularly use a digital device, resulting in an amplified population of younger patients affected by dry eye.

TearLab Conducts “Test Your Tears” Dry Eye Screening
Prior to/after the Briefing, TearLab’s Chief Scientific Officer Benjamin D. Sullivan, PhD conducted the “Test Your Tears” screening using the TearLab Osmolarity System, which measures osmolarity of human tears to aid in the diagnosis of DED, in conjunction with other methods of clinical evaluation. Osmolarity is an important biomarker of ocular surface health.

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