

A Revolution

A revolution is taking place in ophthalmology that will transform our treatment of one of the most important and visually challenging diseases that we address on a daily basis. You are now considering a variety of surgical maladies, probably starting with cataract extraction and possibly pointing to the newest treatment option: laser cataract surgery. They are not what I am describing. Cataract surgery is extraordinarily important, and in the future, the advent of laser cataract surgery may be identified as a landmark event in ophthalmology. We only perform a little more than 3 million cataract extractions a year, however, here in the United States. Rather, I am talking about a disease we see daily, one that afflicts upwards of 55 million Americans. It affects their quality of life, surgical outcomes, and general health. I am referring to ocular surface disease. The revolution is in the diagnosis and management of meibomian gland dysfunction (MGD).

I believe we are experiencing an epidemic of dry eye disease and MGD. Both are more common in older individuals, and baby boomers are now hitting Medicare age. As we all know, when baby boomers have a problem, they are not quiet about it. They demand relief. The use of topical cyclosporine for the treatment of dry eye disease has improved the quality of life for tens of thousands of our patients. Practitioners that provide expert care to patients with chronic ocular surface disease will be rewarded. The etiology of this epidemic is not only age related, however, but also nutritional. Major changes in the US population's consumption of omega-3 fatty acids have occurred during the past 50 years, largely due to the governmental subsidization of corn.¹ Farmers now use corn to feed everything from beef to fish, which has altered the nutritional properties of animals with diets that previously consisted of grass and algae. There is little doubt that changes in the population's diet are contributing to the prevalence and severity of ocular surface disease.



The momentous report of the International Workshop on Meibomian Gland Dysfunction, sponsored by the Tear Film and Ocular Surface Society, was published in *Investigational Ophthalmology and Visual Science* in March. The report took 2 years to write, and it provides consensus guidelines from more than 50 experts on the etiology, management, and treatment of MGD. The report, which is actually a series of articles, states that “[MGD] is a common, chronic, disabling disorder that influences the health and well-being of millions of people worldwide, there has been no global consensus on its definition, classification, diagnosis or therapy.” The authors go on to state that MGD is probably “the leading cause of dry eye disease throughout the world,” with an enormous impact on patients’ quality of life and vision.

The report divides MGD into four levels of disease and provides guidelines for treatment based on severity. The first line of treatment for subclinical disease noted on physical examination includes oral nutritional supplements and dietary changes. I believe it is important for all of us to provide nutritional guidance to patients to reverse the epidemic of MGD. In my opinion, the most important therapeutic guideline recommended by the panel is the initiation of long-term therapy with topical azithromycin as first-line treatment for all patients with symptomatic disease. Vision, ocular comfort, and quality of life all start with the ocular surface and tear film. We should all read this report and thereby improve our diagnosis and treatment of this important disease. ■

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1. Pollan M. *The Omnivore's Dilemma: a Natural History of Four Meals*. London, England: Penguin Books; 2006.