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Chemotherapy (Immunomodulatory therapy) in Noninfectious Ocular inflammation: Risks and Benefits

Arash Maleki, MD; C. Stephen Foster, MD, FACS, FACR

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Inflammatory eye diseases have caused blindness in countless individuals in both ancient and modern times. While most cases have been due to infectious inflammation, a significant number have resulted from autoimmune causes. A revolution in care of such patients occurred in 1950, with the introduction of corticosteroid therapy, both systemic and topical, for inflammatory diseases, including ocular inflammation. Within a decade, however, it became clear that the chronic use of corticosteroids for patients with chronic autoimmune eye diseases resulted in unacceptable side effects, including cataract and glaucoma. Some pioneers, such as Frank Newell, Vernon Wong, James Gills, Richard O'Connor and others They began to explore the risk–benefit ratio of nonsteroidal immunomodulatory medications in the care of these patients. Enormous progress has been made in this area since then, and Ocular immunologists and other experienced physicians are now well versed in the appropriate use of immunosuppressive chemotherapeutic agents (immunomodulatory therapy) for managing patients with immune-mediated ocular inflammatory diseases. This approach has been highly effective in preventing the blinding complications that previously occurred or would have otherwise developed in the absence of such treatment.

Regrettably, however, a substantial number of contemporary ophthalmologists remain unaware of these advances and continue to carry forward outdated perceptions regarding the adverse effects of systemic immunosuppressive chemotherapy. These physicians recall learning—during medical school and clinical training—about the risks of secondary malignancies, serious infections, bone marrow suppression, and hepatic and renal toxicity, as well as death, in patients receiving chemotherapy for cancer or multiple immunomodulatory agents following bone marrow, kidney, heart, or lung transplantation.

What they may not realize is that dermatologists and rheumatologists have been using low-dose immunomodulatory therapy in patients with severe psoriasis, blistering dermatoses, and rheumatoid arthritis for many years, with an excellent safety record. The literature is replete with reports supporting this approach, and readers of this addition to our website are referred to the references cited below. One example illustrating the growing importance of systemic immunomodulatory therapy in patients with chronic ocular inflammatory disease comes from the field of uveitis management.

Uveitis is the fourth leading cause of blindness in the working-age population in the United States. Clinicians at tertiary referral uveitis centers who manage immunosuppressive chemotherapy in patients with ocular inflammatory diseases often have an outstanding track record of both efficacy and safety in these efforts. However, all ophthalmologists come to the realization that this approach to treatment should be explored sooner rather than later in the care of patients with such diseases, the prevalence of blindness is not going to be measurably reduced beyond that which we see today.

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