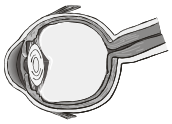


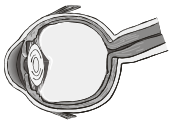
Introduction

Recent population-based surveys indicate that dry eye disease, affects millions of people worldwide. Moreover, as many as 25% of patients visiting ophthalmic clinics report dry eye symptoms, making dry eye disease one of the most common complaints seen by ophthalmic specialists.[1]

An increased understanding of the pathogenesis of dry eye disease has opened paths to new therapeutic options for its management. The rudimentary view that dry eye is simply a deficiency of tear fluid has evolved into an appreciation of dry eye as a disturbance in a complex interaction of the tear film, ocular surface, and lacrimal glands that is conditioned by hormonal support.[2]

This multifactorial nature of dry eye conditions has produced the term 'tear film and ocular surface disorders' as an alternative to the term dry eye.[3]

The diagnosis of dry eye is difficult since it has no single characteristic sign or symptom and no single diagnostic measure. The National Eye Institute/Industry Workshop on Clinical Trials of Dry Eye has recommended a revision of the classification of dry eye, given its multifactorial nature. The major dry eye categories proposed are tear deficient dry eye and evaporative dry eye. In the tear deficient category are Sjogren's syndrome and non-Sjogren's syndrome forms of aqueous tear deficiency. Evaporative forms of dry eye are oil deficient (meibomian



gland anomalies), lid surfacing and blinking anomalies, chronic allergy/toxicity, contact lens related anomalies and cicatricial ocular surface disease. [4]

Patients with dry eye disease typically complain of symptoms of ocular discomfort, including a dry, gritty feeling often accompanied by foreign body sensation. Depending on the duration and severity of disease, damage to the ocular surface may also be present. Patients with chronic, uncontrolled dry eye have an increased risk of ocular infections and are more likely to have ocular infections that progress to endophthalmitis.[5]

A growing evidence suggests that chronic dry eye disease is the result of an underlying cytokine and receptor-mediated inflammatory process that affects the lacrimal gland acini and ducts, leading to abnormalities in the tear film and ultimately disrupting the balance of the ocular surface. [6]

Most conventional treatments for dry eye disease focus on tear replacement or tear preservation and are incapable of affecting these processes. However, topical treatment with the immunomodulatory agent cyclosporin-A has been shown to reduce cell-mediated inflammatory responses associated with inflammatory ocular surface diseases. [7, 8]