

Dry eye disease treatment with thermal systems.

Altinkaynak Bison*

Department of Ophthalmology, Midyat State Hospital, Mardin, Turkey

Abstract

The condition of having dry eyes is known as dry eye syndrome (DES), also known as karate conjunctivitis sick (KCS). Irritation, redness, discharge, and easily fatigued eyes are some of the other symptoms. Blurred vision is also a possibility. Symptoms might range from moderate and infrequent to severe and persistent. If left untreated, corneal scarring can result. When the eye does not produce enough tears or when the tears evaporate too quickly, dry eye develops. Contact lens wear, meibomian gland dysfunction, pregnancy, Jorgen syndrome, vitamin A deficiency, omega-3 fatty acid deficiency, LASIK surgery, and some drugs like antihistamines, some blood pressure medications, hormone replacement therapy, and antidepressants can all contribute to this. Chronic conjunctivitis, which can be caused by cigarette smoke exposure or infection, is also a possibility. The symptoms are used to make the diagnosis, but other tests may be utilized as well.

Keywords: Dry eye syndrome, Sjogren syndrome.

Introduction

DED is a multifactorial condition that affects millions of people around the world. DED causes ocular surface irritation, discomfort, and grittiness, and it has a significant impact on quality of life. DED that is moderate to severe can be just as debilitating as moderate to severe angina.

DED is frequently split into two etiological categories: aqueous-deficient dry eye (ADDE) and evaporative dry eye (EDE), despite the fact that it presents clinically in mixed forms (EDE) [1]. The main cause of ADDE is the lacrimal gland's inability to produce enough of the aqueous layer of the tear film. EDE is produced by a tear film lipid layer that is faulty, causing tear liquid to evaporate from the ocular surface.

EDE is the most common type, with tear film instability and a slower tear film break-up time (TBUT). EDE is caused by a malfunction of the meibomian glands (MGD) [2]. The meibomian glands, which are located in the tarsal plates of the eyelids, create the protective lipid layer's medium. Chronic glandular inflammation, thickening of the medium, obstruction of terminal ducts, and glandular atrophy are all symptoms of MGD. The composition of medium alters in response to changes in the glandular environment, and the phase-transition temperature rises.

External heat and pressure are frequently utilised to enhance meibomian gland secretion and increase medium production in the treatment of MDG-induced DED. Warm compresses,

eyelid rubbing, and eyelid cleanliness are all vital first measures in the therapeutic process [3].

Self-treatment, on the other hand, does not always result in long-term improvement, and compliance is frequently low. In-office treatments could be used as a second line of treatment for patients who do not react to these procedures [4]. The LipiFlow Thermal Pulsation Device was the first system designed specifically for MGD treatment. LipiFlow uses targeted heating of the inner surface of the eyelids and rhythmic compressions of the outer surface of the eyelids to relax and squeeze away stagnant medium. A control device and a disposable ocular element, consisting of a lid warmer and outer eye cup, make up the system. The lid warmer raises the temperature of the conjunctiva surface of the eyelids to 41°C to 43°C. The outer eyecup, which covers the cutaneous surface of the eyelids, is inflated cyclically by air pressure. A topical anaesthetic is used before to the 12-minute therapy session. Treatment of meibomian gland dysfunction can utilize heat and pressure applied to the meibomian glands, increasing medium expression, obstruction of terminal ducts, and glandular atrophy.

References

1. Alghamdi YA, Camp A, Feuer W, et al. Compliance and subjective patient responses to eyelid hygiene. *Eye Contact Lens*. 2017; 43:213-17.
2. Baumann A, Cochener B. Meibomian gland dysfunction: A comparative study of modern treatments. *J Fr Ophthalmol*. 2014; 37:303-12.

*Correspondence to: Altinkaynak Bison. Department of Ophthalmology, Midyat State Hospital, Mardin, Turkey, E-mail: Bison.alt@msh.edu

Received: 02-Mar-2022, Manuscript No. OER-22-56323; Editor assigned: 04-Mar-2022, PreQC No. OER-22-56323(PQ); Reviewed: 18-Mar-2022, QC No. OER-22-56323; Revised: 21-Mar-2022, Manuscript No. OER-22-56323(R); Published: 28-Mar-2022, DOI:10.35841/oer-6.2.109

3. Borchman A. The optimum temperature for the heat therapy for meibomian gland dysfunction. *Ocul Surf.* 2019; 17:360-64.
4. Godin MR, Stinnett SS, Gupta PK. Outcomes of thermal pulsation treatment for dry eye syndrome in patients with sjogren disease. *Cornea.* 2018;37:1155-58.