

DRY EYE SYNDROME: A CURRENT PROBLEM IN THE WAKE OF TECHNOLOGICAL CHANGES

¹Cușnir Valeriu, ¹Procopciuc Vitalie, ²Bulat Nina

1 - State University of Medicine and Pharmacy “Nicolae Testemițanu”, Department of Ophthalmology-Optometry

2 – Polyvalent Hospital “Novamed”

Introduction

The dry eye syndrome (DES) is a pathology of the ocular surface with social impact that affects more and more people around the world. Being associated with around the globe technological, habitual and climatic changes of the last decades, this disease presents new diagnostic and therapeutic challenges.

Against the background of economic and technological developments and life changes, DES is nowadays increasingly commonplace. It is characterized by symptoms of eye discomfort, visual disturbances, tear film inconsistency and possible ocular surface alterations. This issue can greatly limit the patient’s daily activities. DES can be easily diagnosed, but it also requires increased attention from the clinician, because objective signs are not always matching subjective symptoms. The latter can often be underestimated, even when patients encounter real discomfort affecting their quality of life. The need for frequent and prolonged instillation of eye lubricants, with the limitation of social and professional activities along with the high cost of treatment, are some of the aftereffects of this major public health issue

In this paper, we presented the findings of our study, which was aimed at assessing the prevalence of DES among young, able-bodied people and the effect of this impairment on the quality of life.

Keywords

Dry eye syndrome, Schirmer test, OSDI

Purpose

To assess the prevalence of signs and symptoms of DES and to evaluate its impact on the quality of life among the young, able-bodied people.

Material and methods

A cross-sectional monocentric study, which included 402 people aged from 19 to 44 years, was performed. Quantitative (Schirmer test) and qualitative parameters of tear secretion and tear film state were recorded. Subjective assessment of symptoms was performed by completing the Ocular Surface Disease Index (OSDI) questionnaire. The results are presented in absolute values and proportions.

Table 1. Results of the Schirmer’s test in patients with lower tear secretion

Test values	No of eyes	% of eyes, with Schirmer's test values ≤ 15 mm
15-11 mm/ 5 min	83	27,1
10-6 mm/ 5 min	114	37,5
5-3 mm/ 5 min	69	22,5
≤ 2 mm/ 5 min	39	12,9

Results

The results of the Schirmer test showed a decrease in tear secretion in 37.9% (n=305) of the examined eyes (Table 1). According to OSDI, symptoms of DES were detected in 43.7% (n=176) individuals.

Table 2. Gender-based distribution of patients with DES, compared to the group of asymptomatic patients

Group of patients	Total, patients	Women	Men
Present Symptoms of DES	229	158 (68.9%)	71 (31.1%)
No Symptoms of DES	173	75 (43.3%)	98 (56.7%)

When considering the results of the Schirmer test and the OSDI score, signs and symptoms of SOU with mono- or bilateral injury were identified in 56.9% (n=229) patients. A discrepancy was also observed between the intensity of symptoms and the presence of clinical signs. Thus, of the total number of patients with DES symptoms, 24% had normal Schirmer test values. The distribution by sex showed a higher prevalence of DES among women (51.0% and 42.0%, respectively) (Table 2). Symptoms of DES were detected in 65% of the patients examined in summer time, and in 52% of the patients examined during winter, suggesting a faster evaporation process during the hot period of the year (Table 3).

Table 3. Reports of signs and symptoms depending on the examination period (summer/winter)

Examination period	Summer	Winter
Total patients	248	154
Presence of signs and/ or symptoms of dry eye	161 (65%)	80 (52%)
Dry eye symptoms (low/ average/ severe OSDI)	104 (42%)	69 (45%)
Tear hyposecretion (Schirmer’s test ≤ 15mm)	94 eyes (38%)	89 eyes (36%)

Conclusions

An increased prevalence of DES with an impact on quality of life was found in young, able-bodied people. The discrepancy between OSDI scores and clinical signs makes it more difficult to detect, assess the severity of the disease and develop an effective treatment plan.