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ANALYSIS COMPARATIVE OF THE ILLNESS OF EYE DRY IN SENIORS WITH DIAGNOSIS IN CATARACT AND YOUNG PEOPLE STUDENTS OF MEDICINE

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Abstract: Dry eye is a multifactorial disease of tears and surface eye that results in discomfort, visual disturbances, and film instability structured the method that is based on a study composed of two groups selected in a random way with 60 eyes of 60 patients with cataract diagnosis and 60 eyes of 60 young medical students both from Hospital da Santa Casa in Compassion in Vitória-ES. He was accomplished O quiz eyepiece surface disease Index (*OSDI)* test in Schirmer I; time in rupture of movie tear (BUT) and lissamine test in all patients. classified as dry eye if OSDI changed and one of the other exams in the study changed. Furthermore, severity was identified by the Schimer test 1. Results: It was classified as dry eye in 86.7% of patients in group A and 48.3% in group A. group B. As for the severity in group A, 60% of the participants had altered test, being 20% moderate and 40% severe. In group B 10% of the participants presented altered test, being 8% moderate and 2% severe. It is concluded that dry eye presents itself as one of the most prevalent in all world with impact substantial at quality in life. More work is needed involving clinical trials and the role of other factors of risk how much That pathology.

Keywords: Cornea. Eye dry. cataract. young. dysfunction tear.

INTRODUCTION

Dry eye disease (DSD) is a multifactorial pathology of the ocular surface characterized by the loss of tear film homeostasis and is accompanied by ocular symptoms, in which film instability and hyperosmolarity tear, The inflammation, you damage at surface eyepiece and at abnormalities sensorineural has paper etiological. The prevalence It is similar in all the world, with rates varying between 7% and 33%, and affects mainly adults above 40 years; with evidence most expressive in women (BUCKLEY, 2018).

O spectrum clinical It is quite variable. You patients they can since no to introduce symptoms up until complain in important limitations in the daily activities with worsening quality of life due to eye irritation, redness, sensation in body weird, burning eyepiece, photophobia, and turbidity visual (BERTA, 2018).

At literature, the factors of risk are characterized as modifiable and non-modifiable (BERTA, 2018). Among the modifiable ones, the use of computers, environment with low humidity, pollution, use of medications such as antihistamines and antidepressants. Gain evidence among those who do not modifiable variables, aging, female gender, Asian race and the syndrome of Sjögren (CRAIG, *et al.,* 2017).

Regarding the diagnosis of dry eye disease, the most recent guidelines published by DEWS II suggested, in addition to a complete clinical history with analysis in factors in risk, O use in questionnaires in sorting guided per symptoms, such as the Ocular Surface Disease Index (OSDI) (CRAIG, *et al.,* 2017).

If there is suspected DOS, an additional assessment must be used, with time to break in tears, determination of the osmolarity of movie tear and coloring of the surface eyepiece with fluorescein and lissamine green. The identification of a disruption in tear film homeostasis with these tests allows what be done a diagnosis in eye dry (BERTA, 2018).

Advanced age is associated with a higher rate of tear film evaporation, smaller time in break of the teardrop and thickness of the layer lipid most thin (MAISSA & GUILLON, 2010).

With the age, O development in cataract if become most prevalent. Although technological advances in cataract surgery over the last half century have had a positive impact on quality of life (QoL) of millions of individuals worldwide, there are potential complications, that in cataract surgery can be

threatening to vision (BOURNE *et al.,* 2013). One example, the mode in which harmful effects of the surgery in cataract on the ocular surface can directly cause and exacerbate pre-existing DOS NADERI, K. *et al*, 2020).

The incidence of dry eye in young people is increasing (YAZICI *et al.,* 2015). One factor could be persistence prolonged in front to the displays digital due to job smart, e-learning and recreational use, which has become a very common, especially before 60 years (COURTIN *et al,* 2016).

News shapes in displays digital, as laptops, smartphones, tablets or even e-readers have emerged, and the use of digital electronic screens is no longer restricted to desktop computers. This tremendous change in conditions of job and in life experienced in the latest decades has been accompanied by an increase in complaints related The health associated to use in displays digital (TALENS *et al.,* 2021).

DOS promotes an impact on the quality of life of patients. Thus, the knowledge generated through the questionnaires and eye tests applied by this research provides a better understanding of the incidence and severity of dry eye in the population studied and thus intervene to improvement of the quality in life of patient.

METHOD

Cross-sectional study composed of two groups selected at random recruited in between January and December in 2019, the group A has population of 60 patients being followed up at the ophthalmology service of the Hospital Santa Casa de Misericórdia in Vitória with a diagnosis of cataract. The group B has population of 60 eyes of 60 young people without comorbidities and students of course in medicine of the School Higher in Sciences of the Santa Casa in compassion in Vitória city.

For group A, patients over 60 years of age were used as inclusion criteria. in age, registered at the outpatient in Ophthalmology of the Santa Casa in Vitória-ES, patients with cataract. For group B, it was used as a criterion for inclusion students in medicine of the School Higher in Sciences of the Santa Casa in Vitória.

Excluded of the sample all you patients with comorbidities, illness eyelid or eye not attributed to cataract, previous eye surgery, ulcers eyepieces, use in lens in contact at the time, treatment with eye drops and under 18, pregnant or breastfeeding. Furthermore, without using eye, topical, or oral medications for at least two weeks as antihistamines, antidepressants, birth control pills , decongestants, gabapentin, citrate of sildenafil, anticholinergics.

The OSDI questionnaire, the Schirmer test 1, the tear film break-up time and lissamine test on all patients of study.

The OSDI is a questionnaire that measures the severity of dry eye and its effects. on the patient's view. The OSDI is divided into 3 groups of questions. The first group in questions it is related to the occupation visual (questions in 1 up until 5), the second it is associate the symptoms of eyepieces (questions in 6 up until 9) and the third related to triggers environmental (questions 10, 11 and 12).

OSDI will be equal the sum of scores for all at questions answered multiplied per 100 Divided fur number total in questions answered multiplied by 4 ([sum of scores for all questions answered x 100] / [total number of questions answered x 4]). your value final is calculated by (sum of all scores) X 25/ number of questions answered and classified into: normal (0-12), eye dry Light (13-22), eye dry moderate (23-32), and eye dry severe (33-100) (ROUEN & WHITE, 2018).

The Schirmer test 1, performed without topical anesthesia, consists of measuring the

wetting of a special filter paper (Whatman nº 41), of 5 mm of wide by 35mm long, placed with the folded end in the temporal third of the lower eyelid margin. A test smaller than 10 mm of wetting after 5 minutes is considered abnormal. As for gravity, the Schirmer's test is classified as moderate between 5 and 10 mm and severe in minors or equal The 4 mm (SCHIFFMAN *et al*, 2000).

Fluorescein stains the corneal and conjunctival epithelium where there is damage enough for to allow the penetration of dye us fabrics. Although essential, they are subjective and influenced per Many factors, including the volume in fluorescein (CHOI *et al*, 2018).

The lissamine test consists of the instillation of lissamine green, a dye that has an affinity for dead or devitalized epithelial cells in the meniscus tear from the lower cul-de-sac and wait 2 minutes for analysis. divided it if the palpebral rim in three areas: bulbar-lateral conjunctiva, cornea and conjunctiva bulbar-nasal. Each stained area received a score of 1 point. with the sum of each of these areas, the final score was reached, which can vary from zero to three. Test of lissamine above 1 was considered changed (THULASI & DJALILIAN, 2017).

A carrier of dry eye disease was defined as one who presented altered OSDI (score ≥ 12), and at least one of the clinical diagnostic tests (test in Schirmer 1, and/or test in lissamine), being considered abnormal: Schirmer test 1 less than 10 mm of wetting after 5 minutes. Less than 10 seconds, The lissamine test above 1. In addition, the severity of the Schirmer test results was classified 1 as moderate between 5 and 10 mm and serious in minors or equal the 4 mm.

Data were analyzed descriptively. The qualitative variables were organized by frequencies and percentages. Quantitative ones, such as age and Punctuation of Quiz OSDI, were calculated measures as: average, Detour pattern and median.

The data were received in an EXCEL spreadsheet and analyzed in the IBM program SPSS Statistics (Statistical package for the Social Sciences) version 27.

RESULTS

It was valid 120 (in percentage, 100%) assessments, 60 at the group from seniors (corresponding The 50% of the sample) and 60 at the group From young people (corresponding to the other 50%). And in relation to the gender frequency of research, 60 patients were female (50%) and 60 patients were female. masculine (50%).

It was classified as dry eye in 86.7% of patients in group A and 48.3% in group A. group B.

INDEX IN ILLNESS OF THE SURFACE EYE (OSDI)

The results varied, in group A, between a minimum score of 2.08 and a maximum of 100.00, with a median of 42.08, mean of 43.60 and standard deviation of 26.63. In group B, the minimum was 0.00 and the maximum was 79.91, with a median of 10.41, average in 15.21 and Detour pattern in 14.63.

| QUESTIONNAIRE OSDI			Minimum	Maximum	Median	Average	Standard deviation	N Valid
	Group	A	2,08	100,00	42,08	43,60	26,63	60
		B	0,00	72,91	10,41	15,21	14,63	60

TEST IN SCHIRMER 1

SCHIRMER TEST GROUP A
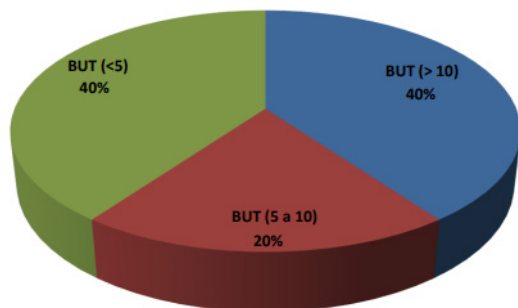
To test in Schirmer at the group, 40% presented test normal and 60% of the participants presented altered test, being 20% moderate and 40% serious. At the group B, 90% presented test normal and 10% from participants showed altered test, being 8% moderate and 2% serious.
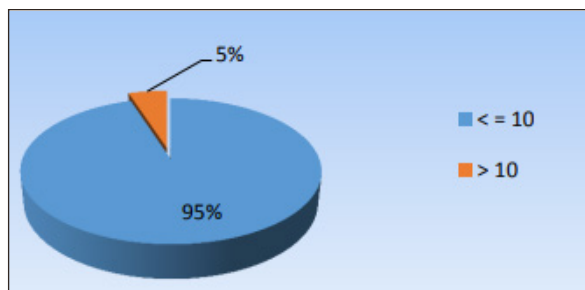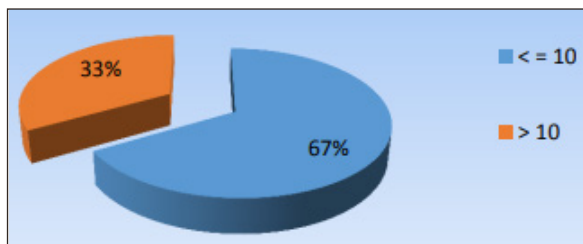
SCHIRMER TEST GROUP B
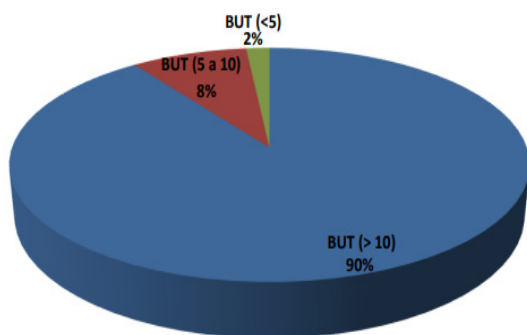
TIME TO BREAK OF THE TEARDROP WITH FLUORESCEIN (BUT)

95% from participants presented test changed. At the group B, 67% of the participants presented test changed.
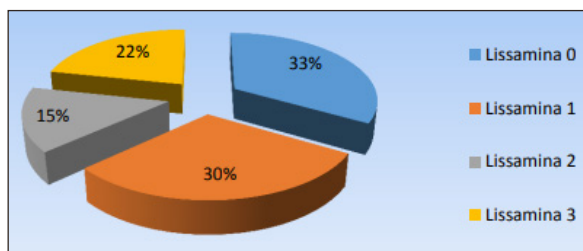
BUT GROUP A
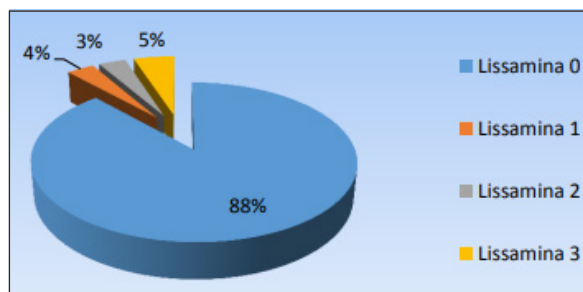

BUT GROUP B

LISSAMINE TEST

How much to test of the lissamine at the group, 33.3% From participants scored 0, 30% scored 1, 15% scored 2 and 21.7% with a score of 3. In group B, 88.3% of the participants had punctuation 0, 3.3% with punctuation 1, 3.3% with punctuation two and 5% with punctuation.

LISSAMINE GROUP A

LISSAMINE GROUP B

Lissamina = Lissamine

DISCUSSION

The overall prevalence of OSD in our study was 67.5%, which is above the worldwide reported prevalence range of 5 to 50% (CRAIG, *et al.,* 2017). This shows a great disparity in values, explained by the fact that there are different definitions of disease and diagnostic criteria, which can generate divergence in the literature.

Among the group in young people and seniors, the prevalence he was in 48.3% and 86.7%, respectively.

In mainland China, the prevalence rate of elderly people over 60 is highest, around 34.4%. It is reported that the proportion of the elderly population regional at Australia, Taiwan, Korea of South and Japan It is in 57.5%, 33.7%, 33.2% and 21.6%, respectively (ZHANG *et al.,* 2020). it is believed deprevalence values for the elderly were higher compared to other prevalence visa what each study identified as eye dry in shapes various and in that study the criterion he was OSDI>12 and from exams complementary changed increased like this sensitivity.

Among you factors what contribute for FROM they are oxidative stress and natural aging that contributes to genesis of eye dry, characterized for the decrease of volume and flow Natural of the teardrop, hyperosmolarity, instability of movie tear (BARTLETT, 2015).

There was a positive correlation considering that the study observed a prevalence increased in patients above in 60 years old compared to group in students (YAO, 2015).

It was also found in the literature in younger adults a prevalence in 25.5% and 44.3% (ASIEDU *et al*, 2018). One possibility what could justify the prevalence of dry eyes in young people is the excessive use of screens observed in that group (ASIEDU *et al*, 2017). Usually, we blink in 15 The 20 times per minute, but when we are staring at something, as at a screen, the brain regulates the number of blinks to about 2 to 3 times per minute, which causes in one sensation in sand and irritated eyes (CAVUOTO, 2018).

Many studies have also advised the relationship between the use of monitors and movie tear and abnormalities of the surface eyepiece. In separation of the fluorescein (BUT), be significantly lower among screen users and decrease with use of device (RIBELLES *et al.,* 2015).

In the sample, O number of women and men went even, despite from the occurred with higher frequency in women. This higher prevalence in females suggests the existence of some related to the hormones sexual at pathophysiology. One of hypotheses It is what at changes hormonal modify the homeostasis of the surface eyepiece and contribute for dry eye (DIAS *et al*, 2015).

The loss of Support androgenic by glands meibomian and by glands tear decreases the volume and stability of tears, with a reduction in the rate of tear, increased tear film osmolarity and prolonged time in exposure of the surface eyepiece to the debris and microorganisms (JUNIOR *et al.,* 2021).

When comparing the group of men and women, the prevalence of dry eye was higher in the female group. When analyzing only the female sex, comparing the group of students and elderly patients with cataract, it was found than the group of elderly women, the prevalence was even higher, possibly due to present hypoestrogenism in this range age (MCCARTY *et al.,* 1998).

CONCLUSION

OSD presents itself as one of the most prevalent eye diseases in everyone with impact substantial at quality of life.

The completion of the symptomatic questionnaire showed a high presence of symptomatology for eye dry us patients, mainly us in larger age. In this study he was found one prevalence general in 67.5% DED.

More work involving clinical trials is needed to determine the prevalence of objective DED in the population and the role of other risk factors. As The illness of eye dry he can to have an impact significant at health public, It is necessary to raise awareness the population studied for that problem.

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