

ANALYSIS OF THE EPIDEMIOLOGICAL PROFILE OF PATIENTS DIAGNOSED WITH CATARACTS ATTENDED AT A PHILANTHROPIC HOSPITAL IN ESPÍRITO SANTO

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Abstract: Objective: To know the prevalence of patients diagnosed with cataracts in the ophthalmology outpatient clinic and identify their profile. **Method:** A cross-sectional, descriptive and retrospective study was carried out by analyzing the records of the ophthalmology outpatient clinic at Hospital Santa Casa de Misericórdia de Vitória (HSCMV). The total sample corresponds to 214 patients treated and who were diagnosed with cataracts and whether or not they were indicated for surgery between January 2021 and 2022. After analyzing the medical records, those who were diagnosed with cataracts were selected and the following variables were separated: age, gender, race, origin, smoking, comorbidities (systemic arterial hypertension, diabetes mellitus) and medications in use. **Results and conclusion:** The study obtained an average age of 68 years, with a prevalence of females, with 65.2% of cases. Furthermore, 72% of participants were located in the metropolitan region. Regarding comorbidities, there is a greater relationship between the disease and hypertension. A greater number of cases of bilateral cataracts were observed, representing 89.4% of the patients analyzed. In the smoking variable, 49.4% have had some contact with cigarettes. The study was important in helping to recognize the profile of patients with cataracts, with results similar to those reported in the literature.

Keywords: Cataract; Prevalence; Health Profile; Ophthalmology

INTRODUCTION

The term cataract corresponds to any type of loss of transparency of the lens, whether congenital or acquired, whether or not it causes damage to vision. Thus, a cataract is an opacity of the crystalline lens, which causes total or partial loss of vision, resulting in a series of signs and symptoms, such

as: sensation of blurred vision, continuous change in refraction, greater sensitivity to light and scattering of reflections. around the lights. Furthermore, cataracts are generally associated with a worsening of myopia with reduced vision in low contrast and low light, especially at distance, in relation to near vision. (Brazilian Association of Cataract and Refractive Surgery, 2021)

According to the World Health Organization, the annual incidence of cataracts is estimated at 0.3% per year, which represents, in Brazil, around 550 thousand new cases of cataracts per year. (OLIVEIRA, L. 2011). To highlight the importance of the topic, it is worth noting that cataracts are the largest cause of reversible blindness throughout the world, with the exception of developed countries, accounting for around 47.5% of global cases of blindness, affecting more than 20 million people. (DOMINGUES, VO. 2016)

From this perspective, it is important to highlight the risk factors that lead to cataracts and how to prevent such agents. Cataracts are directly related to aging, especially over 65 years of age. However, other factors can also interfere in the genesis of the disease, such as systemic diseases (systemic arterial hypertension, diabetes mellitus), trauma, alcohol use and smoking, uveitis, chronic exposure to ultraviolet light, systemic drugs (corticosteroids, statins), malnutrition and family history.

It is known that there is no way to avoid genetic predisposition or the aging of the lens. However, some preventive measures can be taken to reduce some risk factors. Among them, stopping smoking, having regular ophthalmological consultations, protecting yourself against ultraviolet radiation, reducing the risk of trauma, controlling diabetes mellitus and avoiding the use of corticosteroids, are precautions that can be crucial in preventing

cataracts.

Given this scenario, the objective of the study was to analyze the prevalence of patients diagnosed with cataracts in the ophthalmology outpatient clinic and identify the epidemiological profile of these patients. This analysis is necessary to understand the social impact of blindness, showing that this disease must be taken into account in the formulation of public policies to improve public health in the state.

METHOD

A cross-sectional, descriptive and retrospective study was carried out using data collected from the medical records of the ophthalmology outpatient clinic at Hospital Santa Casa de Misericórdia de Vitória (HSCMV), in Espírito Santo. The total sample consisted of 214 patients treated at the ophthalmology outpatient clinic and who were diagnosed with cataracts, whether or not the surgical procedure was indicated, from January 2021 to January 2022. After analyzing the medical records, all those diagnosed with cataract and separated the following variables: age, gender, race, origin, smoking, comorbidities (systemic arterial hypertension, diabetes mellitus) and medications in use. Data collection only occurred after approval of the research project by the Research Ethics Committee of the Escola Superior de Ciências da Santa Casa de Misericórdia de Vitória (EMESCAM), with approval opinion number from CAAE: 47769321.5.0000.5065. The data obtained were organized using Excel spreadsheets and analyzed based on the variables of interest, for this purpose a descriptive analysis was carried out and the SPSS version 27 program was used. The results were presented in the form of tables (Appendix 1) and discussed based on in the researched literature.

RESULTS AND DISCUSSION

After collecting data through medical records, a total sample of 214 patients was collected. Of these, 132 were included in the study, diagnosed with cataracts and undergoing surgery at the time of the study. The remaining patients were excluded due to other diagnoses, failure to undergo surgery or incomplete data in the medical records.

Regarding the study variables, a higher prevalence of cataracts was observed in females, reaching 65.2% of women (n= 86) to 34.8% of men (n= 46). This result confirms the predominance cited in the literature where the female gender is prevalent, as also observed in studies carried out in Rio Grande do Sul, Goiânia and São Paulo, with a prevalence of female involvement of 62%, 56.2% and 53.57%, respectively. (DARON, I. 2019; OLIVEIRA, LL, 2011; DE FARIA, AL, 2011). This relationship can be explained by women's greater longevity and greater self-care, seeking more medical care, with a greater number of diagnoses, as mentioned in the study carried out in Pelotas, where it was observed that women consulted more than men when examining the factors associated with eye consultations (CASTAGNO, VD, 2009).

Regarding age, an average of 68 years was seen, with a minimum age of 38 years and a maximum of 89 years. As reported in the literature, cataracts showed an increasing prevalence with increasing age. The present study showed that cataracts became more significant from the sixth decade of life onwards (average of 68 years). In this study, few cases of cataracts were demonstrated until the fourth decade of life.

According to ethnicity, there was a prevalence of browns over whites and blacks, with 64.1% (n= 84) of mixed race, 9.2% (n= 12) of blacks and 26.7% (n= 35) of white people. According to studies, cataracts are

more common in white Americans (LOPES, AB, 2021). It was observed that the result found in the present study differs from other studies carried out in Brazil, where there is a prevalence of white people, following the pattern of global prevalence, as observed in the study carried out in Rio Grande do Sul with 89.5% of affecting white people. (DARON, I. 2019) Therefore, this result may not correspond with global statistics, given that the Brazilian population is made up of cultural and ethnic miscegenation. Furthermore, this information may not be correctly filled in in the patients' electronic medical record.

Regarding place of residence, it was noted that 72% (n= 95) were residents of Greater Vitória and 28% (n= 37) residents of other regions of the state. It can be inferred that residents of the metropolitan region have easier access to health services, resulting in greater demand and number of diagnoses.

According to the smoking variable, 29.2% (n= 26) of participants declared themselves active smokers, 20.2% (n= 18) ex-smokers and 50.6% (n= 45) non-smokers. With regard to this variable, a balance was observed between active smokers or ex-smokers and those who never smoked. Despite this, in the literature there is a strong association between the habit of smoking and the presence of low visual acuity, a fact that links smoking as a predisposition to the development of cataracts and consequent visual impairment. (CAVALCANTI, BM, 2007). It is important to highlight that passive smokers were not considered in the analysis of this study, which could lead to an even greater relationship between smoking and cataracts.

With regard to comorbidities, 65.9% (n= 87) of patients reported having high blood pressure and 29.5% (n= 39) diabetics, which may be concomitant or not. Furthermore, 25% (n= 33) of patients claim to have other comorbidities, not detailed in the present study.

As mentioned in the study by Iury Daron (DARON, I. 2019), carried out in Rio Grande do Sul, there is a lack of research linking high blood pressure and cataracts. For this analysis, they use a study carried out in Campinas, where a prevalence of 51.8% of hypertensive individuals was found, which is higher than that observed in the Brazilian population of 43.9%. In our study, a prevalence of hypertensive patients of 65.9% was observed, even higher than the percentage of the Brazilian population.

The relationship between cataracts and diabetes is well evidenced by studies and diabetic patients are 2 to 5 times more likely to develop cataracts at a younger age than non-diabetic patients (SERRA, TCC, 2022). A study by the National Diabetes Care Association showed that the duration of diabetes, inadequate glycemic control, high blood pressure and retinopathy play a crucial role in the development of cataracts in diabetes mellitus. From this point of view, by improving the quality of life of people with diabetes, we will be able to further reduce the incidence of cataracts in the general population.

Regarding the use of medications, 57.9% (n= 66) reported the use of antihypertensive drugs, 24.6% (n= 28) the use of hypoglycemic drugs, 11.5% (n= 13) the use of statin, 30.1% (n= 34) use other medications not specified in the study and 69.9% (n= 79) do not use medications.

According to the diagnosis of cataract and consequent impairment of visual acuity, it was noticed that in 89.4% (n= 118) of the cases it was bilateral cataract, in 6.1% (n= 8) cataract only on the right eye, and in 4.5% (n= 6) only in the left eye.

Based on the profile of the study's target audience, visual impairment from cataracts is a great indicator of the quality of the health service, since the disease is curable after performing a relatively simple and low-cost

surgery. Thus, the result of late diagnoses was notable, causing great morbidity in the quality of life of patients.

As a limitation of the study, it is important to point out that data collection was carried out through the analysis of electronic medical records, which resulted in the absence of important variables in a large part of the records, which made it impossible to obtain a larger sample of participants and reduce the accuracy of the statistics. Some variables of interest, such as time between diagnosis and surgical treatment, could not be analyzed due to lack of information.

CONCLUSIONS

Cataracts are a relevant problem for eye health, as they are one of the biggest causes of blindness worldwide with the possibility of reversal. The results found were similar to those reported in the literature. The impact on quality of life was noticed in patients at the HSCMV

service, which may be directly related to late diagnosis. It is necessary to focus on measures to anticipate diagnosis as much as possible, with the aim of preventing progression to blindness and impact on quality of life, as well as interfering early on risk factors. We know that developments in surgical techniques are demonstrating functional results every day, making complication rates more predictable and increasingly rare, which does not reduce the responsibility of the specialized doctor.

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APPENDIX - STUDY TABLES

	Average	Standard deviation	Median	Minimum	Maximum
Age	68	9	69	38	89

Table 1 – Age of patients analyzed

Source: Prepared by the authors

Gender	Frequency	Percentage
Feminine	86	65,2
Masculine	46	34,8
Total	132	100,0

Table 2 – Gender of analyzed patients

Source: Prepared by the authors

Ethnicity/Race	Frequency	Percentage	Valid percentage
White	35	26,5	26,7
Black	12	9,1	9,2
Brown	84	63,6	64,1
Total	131	99,2	100,0
No information	1	0,8	
Total	132	100,0	

Table 3 – Ethnicity of patients analyzed

Source: Prepared by the authors

Vitória city/Others	Frequency	Percentage
Vitória city	95	72,0
Others	37	28,0
Total	132	100,0

Table 4 – Origin of patients analyzed

Source: Prepared by the authors

Smoking	Frequency	Percentage	Valid percentage
Active	26	19,7	29,2
Former smoker	18	13,6	20,2
Non-smoker	45	34,1	50,6
Total	89	67,4	100,0
No information	43	32,6	
Total	132	100,0	

Table 5 – Smoking history of analyzed patients

Source: Prepared by the authors

Comorbidities		Score	%
Systemic arterial hypertension	No	45	34,1
	Yes	87	65,9
Diabetes mellitus	No	93	70,5
	Yes	39	29,5
Other comorbidities	No	99	75,0
	Yes	33	25,0

Table 6 – History of comorbidities of the patients analyzed

Source: Prepared by the authors

Antihypertensives	Frequency	Percentage	Valid percentage
No	48	36,4	42,1
Yes	66	50,0	57,9
Total	114	86,4	100,0
No information	18	13,6	
Total	132	100,0	

Table 7 – Use of antihypertensives by analyzed patients

Source: Prepared by the authors

Hypoglycemic	Frequency	Percentage	Valid percentage
No	86	65,2	75,4
Yes	28	21,2	24,6
Total patients with information	114	86,4	100,0
No information	18	13,6	
Total patients analyzed	132	100,0	

Table 8 – Use of hypoglycemic drugs by patients analyzed

Source: Prepared by the authors

Statins	Frequency	Percentage	Valid percentage
Not	100	75,8	88,5
Yes	13	9,8	11,5
Total patients with information	113	85,6	100,0
No information	19	14,4	
Total patients analyzed	132	100,0	

Table 9 – Use of statins by analyzed patients

Source: Prepared by the authors

Other medicines	Frequency	Percentage	Valid percentage
Not	79	59,8	69,9
Yes	34	25,8	30,1
Total	113	85,6	100,0
No information	19	14,4	
Total	132	100,0	

Table 10 – Use of other medications by analyzed patients

Source: Prepared by the authors

Diagnosis	Frequency	Percentage
Bilateral cataract	118	89,4
Cataract OD	8	6,1
OE Cataract	6	4,5
Total	132	100,0

Table 11 – Diagnosis of cataract by patients analyzed

Source: Prepared by the authors