



Patterns of Systemic Comorbidities in Patients Presenting With Cataract in a Tertiary Care Hospital

Avleen Kaur*

Department of Ophthalmology, GMC, Jammu, India

ABSTRACT

Introduction: Cataract is a gradually progressive disease of the eye which is defined as the clouding of the normally clear lens or its capsule. It is a significant cause of blindness around the world which requires removal of cataract by surgical means. The results of cataract surgery can be significantly impacted by the presence of a variety of preoperative systemic disorders. In India, age-related cataracts that require surgery are increasingly prevalent, and Non-Communicable Diseases (NCDs) like diabetes mellitus, hypertension, and heart problems are becoming more and more common.

Aim: To determine the pattern of systemic comorbidities and study the sociodemographic characteristics in patients presenting with cataract.

Material and methods: This prospective, hospital based, observational study was conducted in the eye OPD OF Department of Ophthalmology, Government Medical College Jammu over a period of 1 year from November 2021 to October 2022. A total of 500 patients were included in the study. Data was collected using a structured proforma and analysed using SPSS inc. v.16.

Results: The present study found that the most common affected age group to be 61 to 70 years with females (53.6%) preponderance. The majorities (62.2%) of participants were from rural area and hypertension was the most common associated systemic comorbidity in our study patients (10.6%).

Conclusion: It is essential to properly manage and evaluate systemic comorbidities prior to cataract surgery in order to prevent any pre-operative, intra operative or post-operative visual outcomes in such patients. Adequate measures should be undertaken wherever possible in order to enhance visual results.

Key words: Systemic comorbidity, Cataract, Vision, Pattern and Illness.

HOW TO CITE THIS ARTICLE: Avleen Kaur. Patterns of Systemic Comorbidities in Patients Presenting With Cataract in a Tertiary Care Hospital. J Res Med Dent Sci, 2024; 12(6):01-04.

Corresponding author: Avleen Kaur

E-mail: avch1929@gmail.com

Received: 29-May-2024, Manuscript No. jrmds-24-137563;

Editor assigned: 01-Jun-2024, Pre QC No jrmds-24-137563 (PQ);

Reviewed: 15-Jun-2024, QC No. jrmds-24-137563 (Q);

Revised: 20-Jun-2024, Manuscript No jrmds-24-137563 (R);

Published: 27-Jun -2024

INTRODUCTION

Cataract is a gradually progressive disease of the eye which is defined as the clouding of the normally clear lens or its capsule. It is a significant cause of blindness around the world which requires removal of cataract by surgical means [1]. Presence of various preoperative systemic diseases can have a significant effect on the outcomes of cataract surgery [2]. Age-

Related cataracts that require surgery are very common in India and the frequency of Non-Communicable Diseases (NCDs) such diabetes mellitus, hypertension, and heart condition is raising quickly [3]. The increasing prevalence of neurodegenerative disorders, diabetes mellitus, hypertension, cardiovascular pathologies and osteoarticular processes has a great impact on the society. In order to appropriately manage eye disorders, it is pivotal to achieve an early and accurate diagnosis of systemic diseases. This type of integrated approach is essential to prevent blindness and comorbidities [4]. The previously available data showed that diabetic patients who underwent cataract surgery resulted in increased central macular thickness

but decreased choroidal thickness due to choroidal metabolic suppression and resulting in decrease in sub foveal choroidal thickness leading to vision impairments [5]. As well as various studies have shown that the increased levels of different systemic inflammatory markers including IL-6, TNF-alpha and C-reactiveprotein in patients with hypertension, which are believed to promote formation of cataract [6].

MATERIALS AND METHODS

This prospective, hospital based, observational study was conducted in the eye OPD of Department of Ophthalmology, Government Medical College Jammu over a period of 1 year from November 2021 to October 2022 after due approval from Institutional Ethics Committee of GMC, Jammu vide letter no. IEC/GMC/2022/959.

A total of 500 patients presenting with cataract and having systemic co-morbidities were included in the study after obtaining the informed consent. A detailed history was taken and a thorough systemic and ocular examination was done for all patients which included visual acuity analysis using Snellen’s visual acuity chart, intraocular pressure measurement using non-contact tonometer, slit lamp examination to evaluate anterior segment and grade the cataract, fundus examination using a 90-D non-contact slit lamp bio microscopy, indirect ophthalmoscopy on a fully dilated pupil and a USG B-Scan in patients where fundus could not be visualized due to hazy

Media. The data was collected using a structured preform, recorded in Microsoft Excel sheet and the statistical analysis was done using SPSS inch v.16.

RESULTS AND OBSERVATIONS

In our study the most common affected age group was 61 to 70 years (Table 1) with female (53.6%) preponderance (Figure 1). Our study found that the most common type of cataract was nuclear sclerosis grade II (NS II) seen in 27.1% of patients (Table 2). It was found that majority (62.2%) of participants were from rural area in our study (Figure 2). Our study showed that (64%) participants reported no systemic co morbidity and hypertension was the most common systemic comorbidity reported in 10.6% of study participants (Table 3). In our study most study participants were in the age group of 61 to 70 years with female preponderance. The majority (62.2%) of participants were from rural area. These findings are consistent with previous studies [7-11]. The most common type of cataract was nuclear sclerosis grade II seen in 27.1% of patients [12]. The present study concluded that hypertension was the most common systemic

Table 1: Age distribution of patients (N=500).

AGE GROUP (YEARS)	NUMBER(N)	PERCENTAGE (%)
Up to 50 years	11	2.2
51-60 years	116	23.2
61-70 years	195	39
71-80 years	133	26.6
81-90 years	44	8.8
>90 years	1	0.2

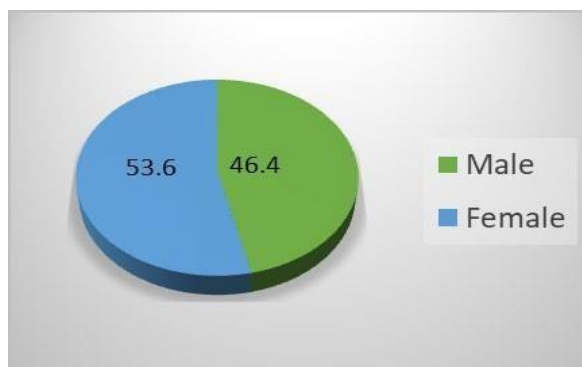


Figure 1: Gender distribution of patients.

Table 2: Grade of cataract patients.

Ocular comorbidities	Right eye		Left eye	
	No.	%	No.	%
NS grade I	22	4.4	21	4.2
NS grade II	149	29.8	122	24.4
NS grade III	59	11.8	79	15.8
NS grade IV	1	0.2	6	1.2
CC	30	6	33	6.6
PSC	40	8	57	11.4
MSC	115	23	107	21.4
PPC	10	2	7	1.4
ASC	1	0.2	68	13.6
None	73	14.6	21	4.2

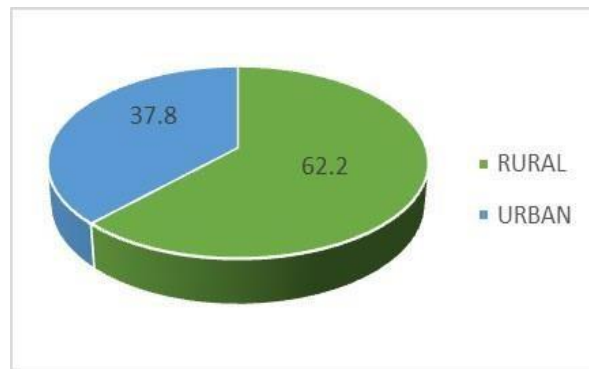


Figure 2: Area of living of patients.

Table 3: Associated Systemic Comorbidities in cataract patients.

SYSTEMIC CO MORBIDITY	NUMBER	%
None	320	64
Hypertension	53	10.6
Multiple comorbidities	51	10.2
Type 2 DM	46	9.2
Heart Disease	8	1.6
Rheumatoid Arthritis	7	1.4
Bronchial Asthma	4	0.8
Thyroid disorder	10	2
Chronic Kidney disease	1	0.2

Comorbidity reported among cataract patients in accordance [13]. This study has limitations as it included only the patients attending Eye OPD. We need more such studies on a bigger scale with varied population and sample size to determine the pattern of systemic comorbidities in patients presenting with cataract.

CONCLUSION

This study concludes that it is essential to properly manage and evaluate systemic comorbidities prior to cataract surgery in order to prevent any pre-operative, intra operative or post-operative visual outcomes in such patients. Adequate measures should be undertaken wherever possible in order to enhance visual results.

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