

## DEMOGRAPHIC PROFILE OF CATARACT PATIENTS ATTENDING TERTIARY CARE EYE HOSPITAL – A CLINICAL STUDY

ATTADA TARAKESWARA RAO\*, REDDI SANTHOSHA NIKHILA, CHALLAKONDA LALITHA MANASA

Department of Ophthalmology, Government Regional Eye Hospital, Visakhapatnam, Andhra Pradesh, India. Email: reddinikhila@gmail.com

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### ABSTRACT

**Objectives:** The aim of the study was to review demographic characteristics and comorbid systemic disorders in cataract patients attending tertiary care eye hospital.

**Methods:** A hospital-based and prospective study was conducted on 2024 cataract patients attending tertiary care eye hospital from January 2022 to August 2022. All patients were subjected to detailed history taking and ocular examination. Age, gender, and comorbid systemic diseases were recorded.

**Results:** A total of 2024 patients were included in the study. Of which 1226 (60.5%) were females while 798 (39.5%) were males. Seven hundred and forty-nine patients (37%) were found to be between 51 and 60 years of age followed by 589 patients (29.1%) were found between 61 and 70 years. Among 2024 patients with cataracts, 687 (33.9%) were found to have comorbidities. About 64.6% were females and 35.4% were males among the patients with comorbidities. Hypertension was the most common systemic comorbidity (371 patients-54%) followed by diabetes mellitus (200 patients – 29.1%).

**Conclusion:** An increasing prevalence of non-communicable diseases necessitates a thorough screening before cataract surgery to ensure fitness of the patients for cataract surgery. The presence of systemic comorbidity increase the number of investigations needed for fitness of the patient for cataract surgery, also it can cause intra operative complication and may affect surgical outcome. This suggests that debilitating comorbidities also play a role in patients not getting their cataracts operated timely as they are engrossed with more life-threatening issues. Ophthalmologist has to identify the coexisting systemic diseases and they should be adequately controlled before surgery to avoid intraoperative and post-operative complications and to achieve better quality of life for patients.

**Keywords:** Cataract, Risk factors, Comorbidities.

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### INTRODUCTION

Cataract accounts for 41.8% of blindness globally and 81% of blindness in India [1,2]. Due to the ageing population cataract will remain to be an important health issue in the future. Even race, high altitude, malnutrition, diabetes, corticosteroid use, long exposure to sunlight play role in the cataract progression, age is known to be the most important risk factor [3,4]. Systemic diseases and medication, other ocular diseases, and previous ocular/extraocular surgeries accompanies to cataract in the elderly population. Therefore, pre-operative, perioperative, and post-operative treatment plan and rehabilitation are important. It has been shown that comorbid diseases have influence on the surgical success. For instance, it is reported that patients who have unregulated arterial blood hypertension and who use anticoagulants have a higher risk of suprachoroidal hemorrhage and retinopathies of unregulated diabetic patients may worsen after the cataract surgery [5,6]. Blindness due to cataract presents an enormous problem in India not only in terms of human morbidity but also in terms of economic loss and social burden. A broad patients profiling helps eye service providers and their public health colleagues within the department of health authorities in a better way. In developing countries like India, many times patients with cataract report to the hospitals very late especially those from rural background either due to lack of facilities or lack of awareness. In view of these facts, this study was undertaken to study the demographic profile of patients of cataract attending OPD of government regional eye hospital, Visakhapatnam.

#### Aims and objectives of the study

The aim of the study was to review demographic characteristics and comorbid systemic disorders in cataract patients attending tertiary care eye hospital.

### MATERIALS AND METHODS

This is a hospital-based and prospective study conducted in Government Regional Eye Hospital, Visakhapatnam from January 2022 to August 2022. Two thousand and twenty-four patients visiting the OPD with cataract were taken into study. Patients with complicated cataract, traumatic cataract, and pediatric cataract were excluded from the study. All patients were subjected to detailed history taking and ocular examination. Age, gender, and comorbid systemic diseases were recorded.

### RESULTS

A total number of 2024 cataract patients were recruited for this study. Out of 2024 patients, 1226 (60.5%) were females and 798 (39.5%) were males (Fig. 1). Majority of the patients were in the age group of 51–60 (37%) followed by 61–70 (29.1%) and 41–50 (19.2 %). There is female dominance seen in all age groups except 81–90 where males are predominant (Table 1). Among 2024 patients with cataracts, 687 (33.9%) were found to have systemic comorbidities (Fig. 2). Among the 687 patients with comorbidities, 444 (64.6%) were females and 243 (35.4%) were males (Fig. 3). Hypertension was the most common systemic comorbidity (371 patients – 54%) followed by diabetes mellitus (200 patients – 29.1%). On the other hand epilepsy, oral carcinoma and chronic kidney disease were least common (Table 2).

### DISCUSSION

In our study, most of the patients were in the age group of 51–60 (37%) followed by 61–70 (29.1%). This is similar to the observation made by Shori *et al.*, in their study where 37% of patients fell in 50–60 age group [7].

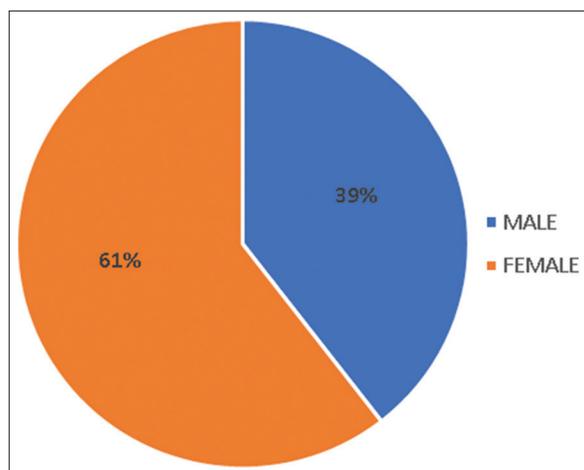


Fig. 1: Sex distribution

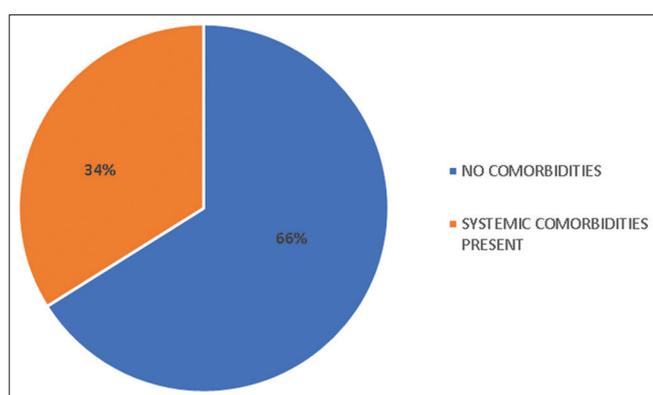


Fig. 2: Pie diagram showing presence of comorbidities

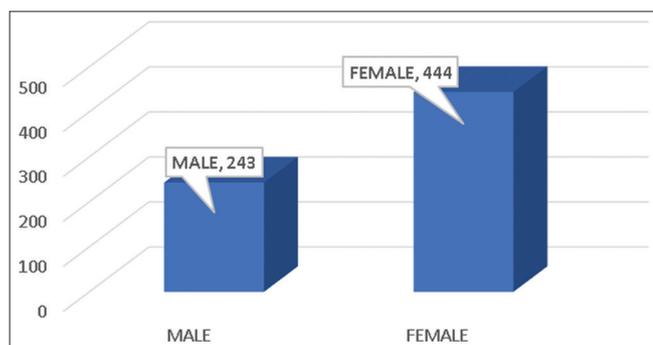


Fig. 3: Gender distribution of patients with comorbidities

The prevalence of cataract was low in males (39.5%) as compared to females (60.5%). Nirmalan *et al.* also reported lower number of cataract in males [8]. However, Seah *et al.* observed that prevalence was similar for males and females. Increased incidence of cataract in females can be attributed to multiple factors such as lower nutritional status, confinement to household chores which mostly require near vision and cultural insensitivity to a female’s health needs [9].

In our study, out of 2024 patients with cataracts, 687 (33.9%) were found to have systemic comorbidities. Willerscheidt *et al.* observed more than two-thirds of the patients had medical co morbidities [10].

In the present study, it was observed that amongst the group of 687 patients having systemic co morbidities, hypertension was found in 54% of patients while 29.1% presented with diabetes mellitus.

Table 1: Age and sex distribution

Age group	Male	Female	Total (%)
21-30	5	6	11 (0.5)
31-40	21	43	64 (3.1)
41-50	124	265	389 (19.2)
51-60	299	450	749 (37)
61-70	254	335	589 (29.1)
71-80	89	123	212 (10.4)
81-90	6	4	10 (0.5)
Total	798	1226	2024

Table 2: Distribution of comorbidities

Systemic comorbidities	Number of patients (%)
Hypertension	371 (54)
Diabetes mellitus	200 (29.1)
Bronchial asthma	38 (5.5)
Chronic kidney disease	3 (0.4)
Thyroid	26 (3.7)
Coronary artery disease	28 (4.07)
Cerebrovascular accident	16 (2.3)
Epilepsy	3 (0.6)
Oral carcinoma	2 (0.4)
Total	687

Bronchial asthma observed in 5.5% and coronary artery disease in 4.07%. On the other hand epilepsy, oral carcinoma and chronic kidney disease were least common. There were more women 64.6% than men 35.4% who had systemic comorbidities.

Sonoron *et al.* [11] study showed that diabetes mellitus was present in 41%, while hypertension was present in 45% of the patients. There were more women than men who had diabetes and hypertension. Willerscheidt *et al.* [10] observed more than two thirds of the patients had medical comorbidities, the most common being hypertension (38.3%).

CONCLUSION

Our study shows that there is need for comprehensive evaluation of systemic diseases. An increasing prevalence of non-communicable diseases necessitates a thorough screening before cataract surgery to ensure fitness of the patients for cataract surgery. The presence of systemic comorbidity increase the number of investigations needed for fitness of the patient for cataract surgery, also it can cause intraoperative complication and may affect surgical outcome. Patients with systemic comorbidities could not get operated at earlier stage as they were diabetic with poor glycemic control or hypertensives with poor blood pressure control with frequent hospitalizations. This suggests that debilitating comorbidities also play a role in patients not getting their cataracts operated timely as they are engrossed with more life-threatening issues. Ophthalmologist has to identify the coexisting systemic diseases and they should be adequately controlled before surgery to avoid intraoperative and post-operative complications and to achieve better quality of life for patients.

AUTHORS CONTRIBUTION

Attada Tarakeswara Rao, Professor and Head of the department in department of Ophthalmology in Government Regional Eye Hospital, Visakhapatnam, diagnosed and analyzed the cases of cataract.

Reddi Santhosha Nikhila, Postgraduate in department of Ophthalmology, Government Regional Eye Hospital, Visakhapatnam, aided in compiling them, thereby framing the final outcome of the study, along with the other authors.

Challakonda Lalitha Manasa, Postgraduate in department of Ophthalmology, Government Regional Eye Hospital, Visakhapatnam,

aided in collecting the cases and compiling them, thereby framing the final outcome of the study, along with the other authors.

#### CONFLICTS OF INTEREST

The authors declared no conflicts of interest.

#### AUTHORS FUNDING

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