

## CATARACT & OTHER CO MORBIDITIES – STUDY FROM NORTH INDIA.

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### Abstract

**Background:** Rural areas are away from medical facilities & these areas caters more than 3/4th of Indian populations. Thus, eye care services need to be planned & executed in these areas.

**Aim:** To determine the prevalence of other ocular and systemic co-morbidities among the camp selected cataract patients in rural areas.

**Methodology:** The present observational study was conducted at postgraduate department of Ophthalmology of GMC Jammu & involved patients from various eye camps selected for ECCE (SICS with PC-IOL implantation surgery). Total of 84 patients were participated in the study. Detailed history was taken from the patient & relevant ocular & systemic examination was done. Routine investigations were also done.

**Results:** The most frequently occurring systemic co-morbidities was hypertension i.e. 36.9% followed by back pain in 32.1% in the present study. The ocular co-morbidities other than cataract were diabetic retinopathy in 9.5%, glaucoma in 3.6% etc. Among other ocular co morbidity, optic atrophy, amblyopia, chorioretinal atrophy, macular scar etc were noted.

**Conclusion:** From present study it has been concluded that large number of patients who came to seek ocular treatment in eye camps has systemic co morbidities also. Thus, other specialities should also be part of team of eye camp so that along with eye other comorbidities should also be treated.

**Key words:** Cataract, Ocular co-morbidities, Systemic co-morbidities.

### Introduction

The most commonly treatable cause of blindness is cataract. There are wide range of strategies and approaches aimed at providing services to individuals with minimal or no access to the clinic by means of outreach program, thus these programs primarily targeted at poor, illiterate or ignorant rural population. Hence, population need to be recognized which does not seek medical aid due to various reasons.<sup>1</sup> Unrelated to a patient's principal diagnosis, co-morbidity is the total burden of illnesses.<sup>2</sup> Nevertheless, outreach camps play a significant role especially in a country like India, which is dominated by ignorance about health problems.<sup>3</sup> Therefore, to reach the unreached targets, periodic organization of well managed camps in rural areas are needed. This present study is important to find the burden of

systemic comorbidities in patients having cataract attending eye camps in rural area.

### Material and method:

The present observational study involved 84 patients who had been selected through various screening eye camps in rural area & admitted for cataract extraction surgery in Upgraded Department of Ophthalmology, Government Medical College, Jammu. The informed consent from all the patients were undertaken before inclusion in the current study. The data was recorded by independent observer.

**Inclusion Criteria:** All patients selected through screening eye camps, having cataract admitted for surgery.

**Exclusion criteria:** Those who did not gave consent.

After meeting the inclusion & exclusion criteria all patients were worked out in detail in the department of ophthalmology as under:

- (1) Detailed history pertaining to symptoms was recorded – onset, duration, any aggravating factor.
- (2) The patients were subjected to a routine general physical examination.
- (3) Every patient underwent a detailed ophthalmic examination as (a) external eye examination: includes examination of eyelids, conjunctiva, cornea, iris, pupil, lens, (b) visual acuity (both distance & near vision), (c) slit lamp examination: to visualize the anterior segment of the eye, (d) dilated fundus examination (e) Non coherence tomography (NCT) (f) gonioscopy (g) the tests were performed as CBC, blood sugar etc.
- (4) Those having systolic BP $\geq$ 140mmHg or diastolic BP $\geq$ 90mmHg considered as hypertensives. Those having fasting blood sugar $\geq$ 126mg/dl or post prandial  $\geq$ 200mg/dl were considered as diabetic.

**Statistical analysis:** The data was analysed using statistical software MS Excel / SPSS version 17.0 for windows. Data presented as number/percentage (%) as discussed appropriate for quantitative & qualitative variables.

### Observation & Results:

Presence of ocular & systemic co-morbidities are important reason for poor postoperative visual outcome. During the study following observations were made.

**Table 1:** Distribution of patients on the basis of systemic co-morbidities.

Systemic co-morbidities	No. of cases	%age
Hypertension	31	36.9
Diabetic	20	23.8
Back pain	27	32.1
Arthritis	21	25
Tuberculosis	2	2.4
Other systemic disease	27	32.1

**Table 2:** Distribution of patients on the basis of ocular co-morbidities other than cataract.

ocular co-morbidities	No. of cases	%age
Glaucoma	3	3.6
Diabetic retinopathy	8	9.5
Hypertensive retinopathy	6	7.1
Other co-morbidities	8	9.5

Table no 1 shows that, the most frequently occurring systemic co-morbidities was hypertension i.e.36.9% followed by back pain in 32.1% in the present study.

Table no 2 shows that the ocular co-morbidities other than cataract were diabetic retinopathy in 9.5%, glaucoma in 3.6% etc. Among other ocular co morbidity, optic atrophy, amblyopia, chorioretinal atrophy, macular scar etc were noted.

Patients having optic atrophy, amblyopia, chorioretinal atrophy, macular scar etc were explained about visual prognosis. Glaucoma patients were explained about their disease, medical management done & patients advised regular follow up so that they shouldn't go blind. Patients having optic atrophy, macular scar were deferred for surgery after explaining them nature of disease. Two tuberculosis patients have completed treatment.

### Discussion:

Vision is the most wonderful gift provided by the most important organs in the human body i.e. eyes but importance of eye is neglected by many people by not paying proper attention toward eye care. In India prevalence of cataract is more & is one of the important cause of blindness. The most common reason of increased prevalence in developing countries that many people do not turn out to hospitals for early diagnosis and treatment.<sup>4</sup> To provide maximum benefit of health services in rural area, regular organization of eye camps along with other specialities in rural areas are necessary so that systemic comorbidities also get treated as most of the patients reported in eye camps in rural areas are females, elderly population. Thus, early detection & proper management of diseases in this population will reduce the burden of blindness.

In the present study the most frequently occurring systemic co-morbidities was hypertension i.e.36.9% followed by back pain in 32.1%. Out of 31 hypertensive patients 22 were under regular treatment, 6 on & off treatment, 3 was not taking any treatment. Among diabetic 12 were under treatment, 4 were newly diagnosed & 4 controls sugar with diet & exercise. 2 patients having Tuberculosis completed treatment. Regarding glaucoma 1 patient was under treatment & 2 diagnosed in hospital. Systemic comorbidities eg diabetes lead to blindness if not managed timely. Willerscheidt AB et al found that more than two thirds of the patients had medical co-morbidities in

their study.<sup>5</sup> Systemic co morbidities were associated with levels of visual impairment.<sup>6</sup>

In the present study the ocular co-morbidities other than cataract were diabetic retinopathy in 9.5%, glaucoma in 3.6% etc. Among other ocular co morbidity, optic atrophy, amblyopia, chorioretinal atrophy, macular scar etc were noted. Both diabetic & hypertensive retinopathy were of mild grade in present study. It is important to know other ocular co morbidities in cataract patients because these morbidities results in poor visual outcome postoperatively. Moreover, preoperative diminution of vision in these patients may be due to these ocular morbidities. Brown MM et al reported that individual who don't values their specific state of ocular health (presence of co-morbidities) are more strongly associated with visual impairment.<sup>7</sup> Yingpeng Liu et al found that presence of ocular comorbidities were significantly associated with poorer visual outcomes & these are highly prevalent among persons in rural Asian setting undergoing cataract surgery.<sup>8</sup> Willerscheidt AB et al in their study found that about one third of the eyes had ocular co morbidities.<sup>5</sup>

Therefore, in addition to treatment of cataract other ocular & systemic co-morbidities should be diagnosed & managed properly to have better visual outcome.

### Conclusion:

From present study it has been concluded that diminution of vision in cataract patients may be due to other ocular & systemic comorbidities, so in screening eye camps all these morbidities should be diagnosed & properly managed. To provide maximum benefit of health services in rural area, regular organization of eye camps along with other

specialities in rural areas are necessary so that systemic comorbidities also get treated & thus reduce the burden of both ocular & systemic disease.

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