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**Original article:**

# Retrospective study of ophthalmic patients evaluated at diagnostic camps

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**ABSTRACT**

This study aim to study the incidence of various ophthalmic diseases of the patients coming for diagnostic camps and create social awareness for same .To establish the efficacy of rural outreach program in reducing blindness caused by cataract.

Keywords- ophthalmic, patients, diagnostic, camp, cataract

## INTRODUCTION

Recent surveys in India, and elsewhere, have demonstrated that cataract blindness continues as the leading cause of blindness in developing countries [1,2]. Accordingly, blindness control programmes in India have focused primarily on cataract [1,2]. The concept of an "eye camp" represents a revolutionary approach to the massive problem of cataract-related blindness and visual disability[3]. Eye camps make an important contribution to both curative and preventive eye health care[4] In certain countries (Nepal and Africa) a team of specialized staff (ophthalmologists, nurses, optometrists and technicians) form a mobile ophthalmic unit which conducts 'eye camps' in the periphery or remote rural areas, with the assistance of several non-governmental organizations. These units are supported by the government to deliver basic eye health facilities to communities who cannot otherwise avail of them [7]. The teams provide comprehensive eye care facilities including screening for common eye diseases, refraction and prescription of glasses, cataract surgery, surgery for angle-closure glaucoma, optical iridectomies and referral of complicated cases. They also provide health education [7] . We, at Govt. Medical college and hospital ,a tertiary eye care center at department of ophthalmology also cater to many rural areas by means of outreach camps. This study conducted from June 2017 to May2018 is a compilation of various camps held in rural areas in and around central Maharashtra. Cataract is responsible for 50% of blindness in the world; the overall prevalence rate varies from 1 to 4% of the population [7]. The proportion of diabetic retinopathy in individuals with diabetes mellitus is some 30% after 10-20 years of progression [8] . At least 30% of the diabetic population has retinopathy ,and every year 1% is affected by the severe forms of the disease[8] .Diabetes is one of the main causes of blindness in industrialized countries and also of severe loss of vision in working population [8] . According to the projections of the World Health Organization (WHO) the cases of diabetes in Europe will double by 2025 in reason of the increase in such risk factors as ageing of the population ,sedentariness and unhealthy diets. Prevalence of PDR is much more in type I than type II. Diabetic retinopathy is more severe in type I than type II [8] The aim of this study is to study incidence of various ophthalmic diseases of the patients coming for diagnostic camps.

## AIMS AND OBJECTIVES

Aim is to study the incidence of various ophthalmic diseases of the patients coming for diagnostic camps and create social awareness for same .To establish the efficacy of rural outreach program in reducing blindness caused by cataract.



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**MATERIALS AND METHODS**

It is retrospective observational study .These patients were evaluated at diagnostic camps by Department of Ophthalmology, Government Medical College and Hospital, Aurangabad from June 2017 to May 2018.The total number of patients screened were 7500. The patients were categorized according to gender, age and diseases . The camps were held in rural areas surrounding central and northern Maharashtra .The patients were examined using following methods.Slit lamp Examination: anterior segment and adnexa ,Visual acuity: near & distance, Fundus examination, Schiotz tonometry, Colour vision test etc.

**RESULTS**

Out of 7500 patients screened 4198(55.97%) were females and 3302(44.02%) were males.(Table 1).The age distribution in our study ,below the age of 40 years was 1197(15.96%),between 40-60 years was 2202(29.36%),more than 60 years was 4101(54.68%)(Table 2).Out of the 7500 patients screened,

4502(60.02%) patients had cataract,

750(10%) patients had pterygium,

1880(25.08%) had refractive errors ,{paediatrics population were 530,(7.06%)} ,

368(4.9%) patients had other ocular diseases like Dacryocystitis-101(1.34%),Corneal opacity-42(0.56%),Glaucoma-62(0.82%),Diabetic retinopathy-80(1.06%) (Background diabetic retinopathy 68,0.9% and Proliferative diabetic retinopathy 12,0.16%),Hypertensive retinopathy-37(0.49%),Ptosis-12(0.16%), Squint- 34(0.45%) (Esotropia 16 ,0.21% and Exotropia 18,0.24%)(Table 3).

Distribution of cataracts-4502 cataracts ,Immature senile cataracts-1635(36%),Mature senile cataracts-1409(31%), Hypermature senile cataracts-993(22%),Complicated cataracts-304(7%)Associated with uveitis-186(4,13%),Myopia-70(1.55%),Retinitis pigmentosa-20(0.44%),Retinal detachment-28(0.62%),Lens induced glaucoma-161(4%) Phacomorphic glaucoma- (121,2.69%),Phacolytic glaucoma-(40,0.9%).Cataract with pseudoexfoliation-693(15.39%),Cataract with mid-dilating pupil-587(13.03%)(Table 4)Comparison between males and females, Males (3302)Cataract –2000(60.56%),Pterygium-263(7.96%),Refractive error-860(26.04%),Others-179(5.42%)(Table 5). Females (4198) Cataract- 2502(59.6%), Pterygium-487(11.60%), Refractive error-1020(24.29%), Others-189(4.5%) (Table 6)



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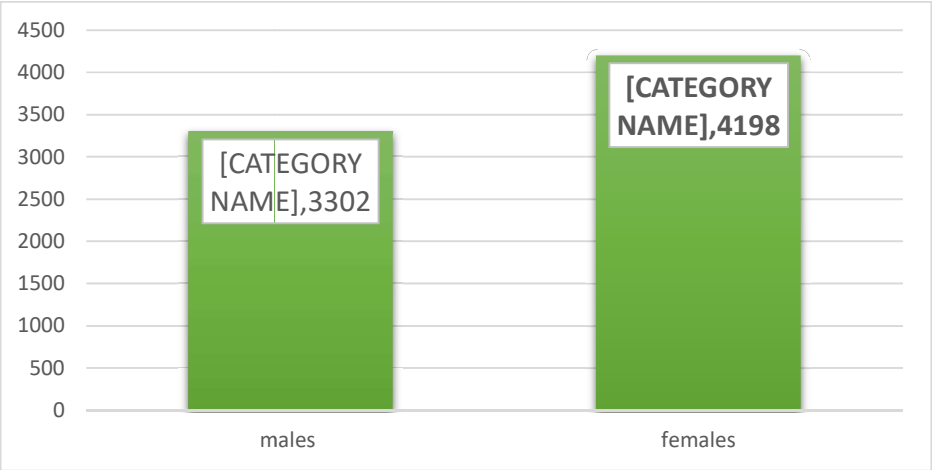


Table 1-Gender Distribution

| Age | Number | Percentage % |
|---|---|---|
| <40 years | 1197 | 15.96 |
| 40-60 years | 2202 | 29.36 |
| >60 years | 4101 | 54.68 |

Table 2- Age distribution



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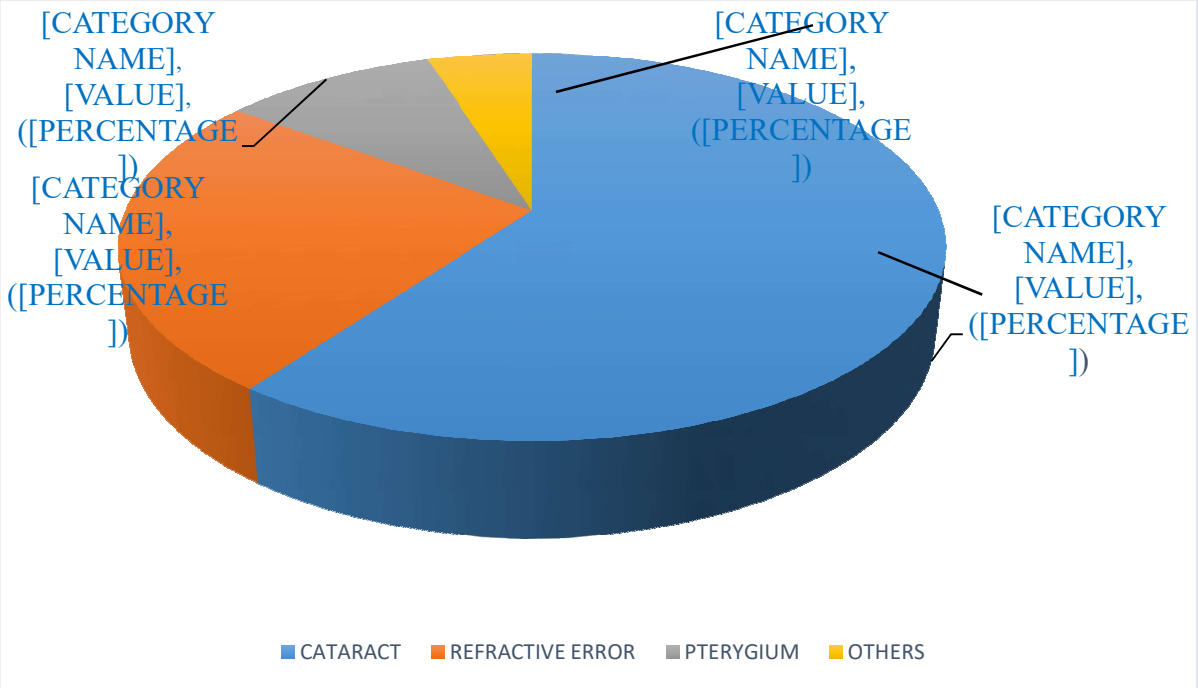


Table 3-Disease Distribution

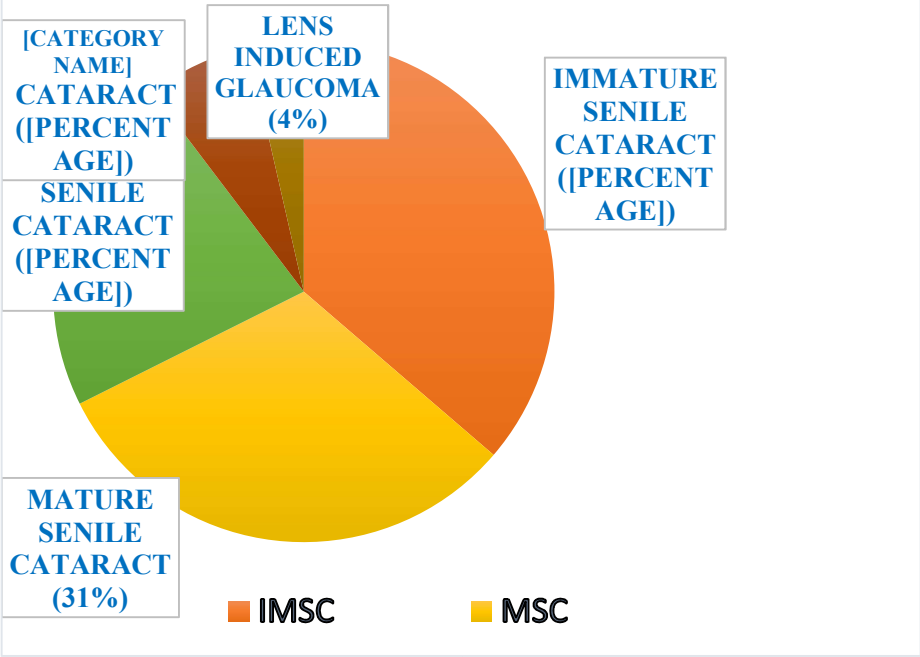


Table 4-Distribution Of Cataract

**DISCUSSION**

This was a retrospective observational study carried out at G.M.C.H Aurangabad , a tertiary care center in central Maharashtra ,from various diagnostic camps .Most common cause of blindness in our study was found to be cataract (60.02%), with female preponderance(55.97%). The diagnostic camp patients were mostly from rural area , where the basic amenities and health facilities have not reached, and hence resulted in late diagnosis of these preventable causes of blindness in our country. Although India has working programme for control of blindness, still we see such heavy burden of blind people ,majority of which are preventable if intervened at right time .An outreach camp is organized with the help of local primary and community health centers where patients are educated about the need for eye examination and cataract surgery, which can improve their quality of life[(6)] .Nayak RR et al. reported a mean of 11.05% of cataracts recognized at the outreach camps[(6)]

A study by Vijaya et al,showed a prevalence of 13.4% cataract at rural eye camps[(5)] ,while in our study it is 60.02%(This can be attributed to a venture of the state government in association with government college hospitals for cataract surgeries).Periodic organization of well managed eye camps in rural areas are needed to reach the unreached targets but the perfect solution will always be permanent access to a stationary hospital with an ophthalmologist as well as appropriate medical equipment.

**CONCLUSION**

From our present study, we conclude that majority of the patients reported in eye camps were females (55.97%) and the most common cause of treatable blindness in elderly population in rural areas was cataract .Females are still deprived faction of society and away from the basic health care facilities .Lens induced cataract ,unfortunately is also prevalent more in females. Early detection of diseases in this population will reduce the burden of blindness. Hence, conducting outreach camps forms an integral part in reducing the visual morbidity due to cataract, glaucoma, diabetic retinopathy etc in rural areas .Also strengthening the various health care facilities to accommodate the large volume of patients is the need of the hour. Diabetes is also a cause of blindness between the ages of 25-65 years. 33% of patients with diabetes have signs of diabetic retinopathy .The total number of people with diabetes is projected to rise from 285 million in 2010 to 439 million in 2030[(8).] Prevalence of PDR is much more in type I than type II. Glaucoma also called as silent killer of vision, needs special attention to save vision at the right time. Refractive errors , specially in children is a matter of concern and associated squints and other causes of paediatric blindness need to be dealt with at the right time.

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