

## Original Article

# Survey of Awareness about Glaucoma Among Medical Doctors of A Medical College and Tertiary Care Hospital in South India

Premnath G\*, Manoj Vasudevan\*\*, Pandurangan R\*\*\*, Swathi\*\*\*\*

\*Asst. Professor, \*\*Associate Professor, \*\*\*Professor, \*\*\*\*Post Graduate student, Dept. of Ophthalmology, Chettinad Hospital & Research Institute, Chennai, India.



Dr (Maj) G. Premnath graduated from Govt. MK Medical College, Salem. After a short stint in Indian Armed forces, he did his post graduation in Ophthalmology from Command Hospital (Air force) and Clinical Fellowship in Glaucoma from Narayana Nethralaya, Bangalore. His fields of interest are Cataract, Glaucoma, Medical retina and Ophthalmic research.

Corresponding author - Dr (Maj) G. Premnath (drpremn18@yahoo.co.in)

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### Abstract

**Purpose:** Glaucoma is one of the leading causes of blindness. Various studies have highlighted the lack of awareness among general population which leads to non-diagnosis or late diagnosis of glaucoma. Very few studies have been done among medical professionals. The present study was conducted to evaluate the level of awareness and knowledge about glaucoma among the doctors in a medical college and tertiary care hospital. **Methods:** A structured questionnaire-based survey was conducted among 350 doctors of a tertiary health care institution to evaluate the level of awareness and knowledge about glaucoma. **Results:** Of the 350 doctors enrolled for the survey, responses from 319 (91.14%) participants were evaluated. 110 (34.48%) were specialists and 209 (65.52%) were non-specialists. 18% of the participants think that glaucoma is always symptomatic and 12.7 % think it is painful always. Surprisingly 23.1% (n=70) of medical doctors think that central vision is affected first. 20.7% think that lost vision can be restored by treatment. 35.1% think that glaucoma is directly related to blood pressure and 18.4 % think that diabetes is not a risk factor. **Conclusion:** Knowledge about glaucoma among doctors is poor. Doctors of a medical college are instrumental in propagating the information of the irreversible blindness that could arise from delay in glaucoma diagnosis and treatment. Hence there is a dire need to update their knowledge on glaucoma.

**Key Words:** Glaucoma, Awareness, Medical doctors

### Introduction

The general public believe that doctors are aware about all diseases and rely on them for medical related issues. Most often non-ophthalmic doctors are the first point of contact for many patients with eye related issues. Hence it is imperative that all doctors are made aware about certain ocular diseases particularly those which are asymptomatic in early stages, like glaucoma. Glaucoma is a progressive optic neuropathy characterized by optic nerve head damage and visual field damage with or without increased intra ocular pressure (IOP). The disease with prevalence varying from 2.6%<sup>1</sup> to 4.1%<sup>2</sup> invariably results in blindness if left untreated. Glaucoma related blindness is preventable only with early detection and regular treatment. This study is conducted to evaluate the level of awareness and knowledge about glaucoma among doctors of a medical college and tertiary care hospital in South India. No studies have been reported so far from this part of the country.

### Materials and Methods

This study was conducted in Chettinad Hospital and Research Institute and Chettinad super specialty hospital which is a tertiary care medical college hospital located in South India. This cross sectional study included 350 medical doctors including interns from various specialties. Study was conducted after obtaining the approval from the institutional ethics

committee. After obtaining an informed consent, all participants were given a structured questionnaire and asked to complete the presence of one of the investigators. As all the participants were educated, the questionnaire was printed in English. We initially validated first 10 questionnaires to look for any potential changes and proceeded with other participants. 350 doctors filled the questionnaire out of which 319 responses were valid. Incomplete questionnaires were excluded from evaluation. All the data were entered and analyzed with SPSS. Categorical variables were analyzed with the independent t-test and Pearson's chi-square test. A P value of less than 0.05 was considered statistically significant.

**Inclusion criteria:** All doctors including the interns of Chettinad Hospital and Research Institute and Chettinad Super Specialty Hospital who are volunteered for the survey.

**Exclusion criteria:** Ophthalmologists, Residents and interns working in the Dept of Ophthalmology, CHRI.

### Results

Responses from 319 participants were analyzed. The mean age of participants was 38.24± 8.54. 110 (34.48%) were specialists and 209 (65.52%) were non-specialists.

**Table: 1 Have you heard about glaucoma?**

Yes	No	Total
316	3	319

It was surprising that 03 participants had not heard about glaucoma (Table 1). Most of the doctors were aware that glaucoma is associated with increase in intra-ocular pressure that damages optic nerve head. 4.7 % of doctors thought otherwise (Table 2).

**Table: 2 If yes, what is glaucoma?**

Increase in IOP that damages optic nerve head	301
Age-related problem	11
Others	4
Total	316

**Table:3**

	YES	%	NO	%	Don't know	%
Patients with glaucoma always have symptoms	57	18.0	255	80.7	4	1.3
Glaucoma is always painful	40	12.7	271	85.8	5	1.6
Glaucoma can affect vision	303	95.9	7	2.2	6	1.9
Type of vision affected in glaucoma	214	70.6	70	23.1	19	6.3
Is there any treatment for glaucoma?	306	96.8	7	2.2	3	0.9
Without treatment glaucoma will cause blindness	297	94.0	15	4.7	4	1.3
Lost vision can be restored by treatment	66	20.9	236	74.7	14	4.4
Glaucoma is directly related to blood pressure	111	35.1	193	61.1	12	3.8
Is DM a risk factor for glaucoma?	246	77.8	58	18.4	12	3.8

18% of the participants think that glaucoma is always symptomatic and 12.7 % think it is painful always. Out of 303 participants who think that glaucoma can affect vision, 23.1% think that central vision is affected first. 2.2% think that there is no treatment for the disease. 20.9% think that lost vision due to glaucoma can be restored. 35.1% think that glaucoma is directly related to blood pressure and 18.4 % think that diabetes is not a risk factor (Table 3).

55.38% of participants rightly thought that family history is the strong risk factor for glaucoma whereas 20.89 % thought it is an age-related problem. Around 12% thought refractive error is the strong risk factor (Table 4). All the values were statistically significant.

Majority (97.8%) rightly thought that regular check-up is the best measure to prevent glaucoma (Table 5).

Irregular treatment is the main culprit which would make glaucoma worse and potentially lead to blindness. Only 74.4% of the participants rightly thought so. Respectively 13.3% and 10.4% think that stress and exercise and prolonged computer viewing will worsen glaucoma which is contrary to the fact (Table 6).

## Discussion

Various studies have been conducted among patients and general public<sup>3-6</sup>, but very few among health care personnel<sup>7, 8</sup>. Probably there are no studies conducted among medical doctors in this part of the country. In a study conducted among workers in a Nigerian tertiary health care institution, awareness and knowledge were compared among clinical and administrative staff (n= 120 each). No statistically significant difference about the knowledge of the aspect of vision that is first affected by glaucoma, the painless nature of glaucoma among most Africans and the irreversible nature of glaucoma-related blindness, were found<sup>8</sup>.

**Table:4 Strong risk factors for glaucoma**

Family history	175 (55.38%)
Age	66 (20.89%)
Refractive error	36 (11.39%)
Don't know	39 (12.34%)

**Table:5 Measures for prevention of glaucoma**

Regular check-up	309 (97.8%)
Healthy nutrition	3 (0.9%)
Don't know	4 (1.3%)

**Table: 6 Which will make glaucoma worse?**

Stress and exercise	42 (13.3%)
Prolonged computer viewing	33 (10.4%)
Reading	2 (0.6%)
Irregular treatment	235 (74.4%)
Don't know	4 (1.3%)

Parul et al, had surveyed physicians and nurses of a medical college in North India (n=119). Our study has been conducted among medical staff including interns and a larger number of participants were included (n=319). The results are comparable to that study.

Surprising facts that have surfaced with regards to knowledge of doctors in this study are as follows:-

16% of the medical doctors have not undergone an eye check-up till date. Though they are working at a place with easy access to health care, there is barrier to

undergo eye examination. 18% think that glaucoma is always symptomatic. 23% think that glaucoma affects central vision first. 20% think that lost vision due to glaucoma is reversible. Respectively 20% and 16% think that age and refractive errors are the strong risk factors for developing glaucoma.

Even though the medical doctors are working in a tertiary care hospital, their knowledge about glaucoma is disheartening. These findings expose the lacuna in our medical curriculum in terms of preventive medicine. In addition to the fact that all medical doctors are expected to update their medical knowledge, the state should also organize education programmes to promote awareness and refresh knowledge about all common diseases particularly of those which are asymptomatic at earlier stages.

## Conclusion

Among medical doctors, though the awareness is good, the knowledge about glaucoma needs up-gradation. Loss of touch with the subject among specialists of non-ophthalmic specialties is known to be the major issue. Periodical Continuing medical education programmes and lectures should be conducted in health care institutions to sensitize the doctors.

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