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Original Research Article

Awareness and Knowledge about glaucoma among the cases attending Ophthalmology outpatient department in a Tertiary care center

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ABSTRACT

Background: Awareness and knowledge about glaucoma plays a major role is changing the people's health seeking behavior for regular eye checkups which in turn leads to early detection and treatment of glaucoma and other ophthalmic disorders also and thus this study was planned.
Materials and Methods: This cross sectional hospital based study was conducted in the outpatient department of Ophthalmology at Sri Muthukumaran Medical College Hospital and Research Institute, Chennai, from September 2019 to November 2019. A total of 220 patients were included in the study. Data analysis was done using SPSS version 18.
Results: Awareness about glaucoma was reported among 21.4% of participants and among them only 40.4% had knowledge that increased intraocular pressure (IOP) is the cause for glaucoma. Also 31.9%, 40.4%, 44.7%, 2.1%, 14.9% and 34% of participants reported that obesity, diabetes mellitus, hypertension, steroids, alcohol and smoking and family history of glaucoma were the risk factors of glaucoma. Degree holders and employed participants were found to be significantly associated with better awareness of glaucoma.
Conclusion: Awareness about glaucoma in this study was poor and knowledge is still worse. This shows that we are in high time to health educate the people especially the target population about glaucoma, which causes preventable blindness.

1. Introduction

Glaucoma is one of the major public health ophthalmic problem not only in India but also worldwide.[1] It is a major cause for blindness and it contributes to about 8% of global blindness.[2] Usually glaucoma progresses very slowly with few symptoms in the early stage which leads to patients to present at much later and advanced stage.[2]

The chances of developing glaucoma increase 4.5 times after the age of 40 years.[3] Apart from age, another important factor which contributes to development of glaucoma is positive family history. In India, the prevalence rate of primary open angle glaucoma has been reported between 1.3% to 3.5%, whereas that of angle closure disease as 3.7% to 10.4%.[4] Also about 93% of persons with open angle glaucoma had not been diagnosed until the time of the survey, of which 1.5% and 3.3% were already blind bilaterally and unilaterally, respectively due to glaucoma.[5]

Blindness which is caused due to glaucoma is avoidable with early detection and treatment by screening asymptomatic population.[6] Also another major parameter which needs to be assessed for reduction of burden of glaucoma is awareness and knowledge about glaucoma among the people. Awareness and knowledge about glaucoma plays a major role is changing the people's health seeking behavior for regular eye checkups which in turn leads to early detection and treatment of glaucoma and other ophthalmic disorders also.[7] It is not only beneficial in terms of vision but also cost effective.[8]

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2. Objectives

To assess the awareness and knowledge about glaucoma among the patients attending department of ophthalmology in a tertiary care hospital

3. Materials and Methods

This cross sectional hospital based study was conducted in the outpatient department of Ophthalmology at Sri Muthukumaran Medical College Hospital and Research Institute, Chennai, from September 2019 to November 2019. All patients above the age of 18 years attending the outpatient department during the study period were included in the study. Patients with known history of glaucoma were excluded from the study. A total of 220 patients were included in the study.

The principal investigator explained the purpose of the study to each participant and a written consent was obtained prior to the commencement of the study. Data collection was done using a proforma with questions related to awareness and health care utilization practice about seeking eye checkups. Among those who were aware about glaucoma, knowledge about the risk factors and treatment options were assessed. Awareness about glaucoma was defined as having heard of glaucoma[9] and Knowledge was assessed based on the correct response about the risk factors and treatment modalities of glaucoma.[9]

Data analysis was done using Statistical Packages for Social Sciences (SPSS) version 18. Chi square test was done to assess the association between different parameters and awareness about glaucoma. p value of < 0.05 was considered as significant.

4. Results

In the present study, awareness about glaucoma was reported among 21.4% of participants and 78.6% were not aware about glaucoma. (Figure 1) Among those who were aware about the glaucoma the knowledge about the risk factors and treatment options about glaucoma were assessed. Only 40.4% had knowledge that increased intraocular pressure (IOP) is the cause for glaucoma. With respect to other factors, 31.9%, 40.4%, 44.7%, 2.1%, 14.9% and 34% of participants reported that obesity, diabetes mellitus, hypertension, steroids, alcohol and smoking and family history of glaucoma were the risk factors of glaucoma. Among the treatment options, 68.1% reported that eye drops can be used for the treatment of glaucoma whereas 34% and 14.9% of cases reported surgery and laser treatment, respectively were the options of glaucoma. (Table 1)

*Multiple responses

Mean age of the study participants was 44.3±14.7 years. On assessing the association between various parameters, degree holders (educational status) and employment (occupational status) were found to be significantly associated with better awareness of glaucoma whereas the other factors like age group and gender were found to be not significantly associated with awareness of glaucoma.(Table 2)

Table 1: Awareness and knowledge about glaucoma

Variable	Yes N (%)	No N (%)
Ever heard about glaucoma (Aware)	47(21.4)	173(78.6)
Risk factors for glaucoma* (N=47)		
Increased IOP	19(40.4)	28(59.6)
Obesity	15(31.9)	32(68.1)
Diabetes mellitus	19(40.4)	28(59.6)
Hypertension	21(44.7)	26(55.3)
Steroids	1(2.1)	46(97.9)
Alcohol and smoking	7(14.9)	40(85.1)
Family history of glaucoma	16(34)	31(66)
Treatment options for glaucoma* (N=47)		
Eye drops	32(68.1)	15(31.9)
Surgery	16(34)	31(66)
Laser treatment	7(14.9)	40(85.1)

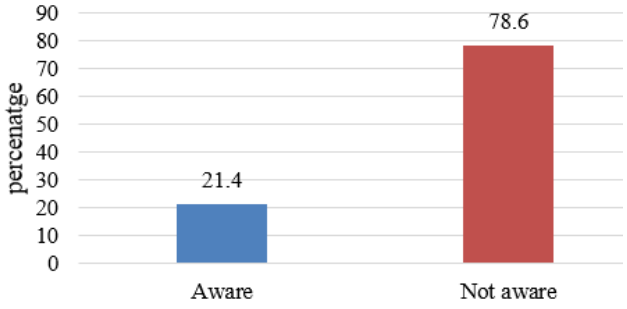

Fig. 1: Proportion of cases with awareness about glaucoma

Among the 220 study participants, only 5.9% were undergoing regular eye checkups and 12.3% of study participants undergo eye checkups rarely whereas 81.8% (majority) of participants never underwent eye checkups in their lifetime.

5. Discussion

In consistent with the findings of this study, Prafulla et al[10] performed a study and reported that mean age of participants was 43 ± 15 years with 53% and 47% men and women, respectively. They reported that only 27% of the participants were aware of glaucoma.

Sagarika et al[11] conducted a study among rural and urban population and reported 27.2% were aware about glaucoma, 39.2% were partial aware and 33.0% were not aware. Also they stated that only 0.4% had good, 17.6% had fair and 82% had poor knowledge about glaucoma.

Table 2: Association between demographic characters and awareness about glaucoma

Variables	Aware N (%)	Not aware N (%)	Total N (%)	P value
Age group				
18-30 years	10(21.3)	41(23.7)	51(23.2)	
31-40 years	15(31.9)	42(24.3)	57(25.9)	0.8141
41-50 years	11(23.4)	39(22.5)	50(22.7)	
51-60 years	7(14.9)	29(16.8)	36(16.4)	
> 60 years	4(8.5)	22(12.7)	26(11.8)	
Gender				
Male	22(46.8)	81(46.8)	103(46.8)	0.9988
Female	25(53.2)	92(53.2)	117(53.2)	
Educational status				
Illiterate	1(2.1)	18(10.4)	19(8.6)	
Primary – high school	7(14.9)	103(59.5)	110(50)	<0.0001[#]
Degree	39(83)	52(30.1)	91(41.4)	
Occupational status				
Employed	29(61.7)	52(30.1)	81(36.8)	0.0006[#]
Unemployed	18(38.3)	121(69.9)	139(63.2)	

[#]Significant

Table 3: Utilization of routine eye checkup

Utilization of routine eye checkup	Frequency	Percentage
Regular	13	5.9
Rarely (Atleast once)	27	12.3
Never	180	81.8

Sathyamangalam et al[12] conducted a study in the similar population to this study (Chennai) and reported awareness about glaucoma as 13.3% whereas Dandona et al performed a study and reported the awareness about glaucoma as 2.3% in adjacent city, Hyderabad.

Krishnaiah et al[13] performed a study in rural population and reported the awareness of glaucoma as 0.32% only and it was found to be associated with illiterate people. Alemu et al[14] reported that in their study the proportion of participants with awareness was 35.1%. Good knowledge was reported among 49.6% participants. Also they stated that better the education, the awareness about the glaucoma was also better.

Praveen et al[15] performed a study and reported that 8.3% of participants were aware about glaucoma and only 1.9% was having knowledge about glaucoma. Prabhu et al[16] conducted a study and reported that 4.8% of participants were aware about glaucoma and 3.1% had some knowledge of glaucoma. They reported significant association between higher levels of education, diabetic status and family history of glaucoma with better awareness about glaucoma.

Zeeshan et al[17] conducted a study and reported that about 10% of their participants were aware about glaucoma. Ashish et al[18] in their study reported that knowledge and awareness both were significantly higher among urban population as compared to rural population.

6. Conclusion

Awareness about glaucoma in this study was poor and knowledge is still worse. This shows that we are in high time to health educate the people especially the target population about the preventable blindness condition, glaucoma especially, in order to reduce the burden of it. Also people should be encouraged to undergo regular eye checkups periodically.

7. Acknowledgement

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8. Conclusion

Recognition of the ocular damage and treating them appropriately is crucial in the management of keratitis caused by the plant juice.

9. Conflicts of Interest

All contributing authors declare no conflicts of interest.

10. Source of Funding

None.

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