e-ISSN: 0976-822X, p-ISSN:2961-6042

Available online on http://www.ijcpr.com/

International Journal of Current Pharmaceutical Review and Research 2024; 16(3); 329-334

Original Research Article

A Descriptive Assessment of the Knowledge of Glaucoma among Patients Visiting Tertiary Care Facility

Ragini[1], Shalini Sheoraj[2]

[1]Consultant, Department of Community Medicine, Narayan Hospital and Research Centre, Sampatchak, Sohagi more, Patna, Bihar, India

[2]Tutor, Department of Community Medicine, Anugrah Narayan Magadh Medical College and Hospital, Gaya, Bihar, India

Received: 12-01-2024 / Revised: 18-02-2024 / Accepted: 24-03-2024
Corresponding Author: Dr. Shalini Sheoraj
Conflict of interest: Nil

Abstract

Aim: The aim of the present study was to assess the knowledge of glaucoma among patients of selected health facilities in Bihar state.

Methods: The study was carried out in two selected health facilities in Bihar State and 200 participants were included in the study.

Results: A total of 200 subjects responded correctly to the questionnaire of which 120 (60%) were females and majority of them were aged 21-30 years (20%) followed by 51-60 years (16%). Above half 187 (51%) of them had tertiary education while only 10 (5%) were illiterate. Greater than half of the participants 120 (60%) were married, 64 (32%) yet to marry. Interestingly, a good number of the participants 76 (38%) were self-employed and public servants comprise of 40 (20%). Majority lived in urban area 130 (65%). The common symptoms of glaucoma known were painless vision loss (25%), sudden vision loss (25%) while a substantial number 92 (46%) could not identify any symptoms. About the risk for glaucoma, the major predisposing factor was hereditary (20%) followed by cataract 16 (8%) while steroid (0.5%) was the least. Although, more than half (52.5%) do not know the risk factors of glaucoma. The most common treatment option identified by the respondents was surgery 50 (25%) followed by eye drop 36 (18%). The use of eye drops and surgery combine was 8 (4%) while laser and spectacles were the least treatment option (1.5%).

Conclusion: In conclusion, the level of knowledge of glaucoma was fairly low and one of the most important and effective actions for early detection of glaucoma and its management may be raising public awareness and knowledge levels regarding the disease. These findings suggest that there is a need for health education in Ondo state population to increase their level of awareness and knowledge of glaucoma. Inadequate knowledge in the general population may be an important cause for failure to detect glaucoma early and may result in blindness from the disease.

Keywords: Glaucoma, Health facilities, Knowledge, patients

Introduction

Glaucoma is the second leading cause of blindness after cataract and the leading cause of irreversible blindness in the world. [1] Diagnosis is often made at the late stage of the condition when much damage to the eye has already occurred. Raising the public level of awareness through public education for periodic eye checks is one of the effective measures for its early detection and management. The World Health Organization (WHO) estimated the incidence of Primary Open Angle Glaucoma (POAG) at 2.4 million people per year. It is the most prevalent of all the glaucomas affecting the general population over the age of forty years and increases with age. Blindness prevalence for all types of glaucoma was estimated at 5.2 million people with 3 million cases caused by POAG. POAG represents a significant public health problem. POAG is an important cause of blindness and the most frequent cause of irreversible blindness in blacks. [2]

The highest prevalence for POAG so far reported is in the black populations of the Caribbean. [3,4] The likelihood of developing POAG increases 4.5 times after 40 years of age. [5] A positive family history is a major risk factor for the development of POAG.). POAG can occur at all levels of intraocular pressure (IOP). The higher the IOP, the more likely advanced POAG is to occur, the more severe it is and the more likely it is to worsen progressively. [6] In Ghana, the prevalence of blindness in people over 40 years is

between 7.6% and 8.5%. [6,7] This is consistent with what has been found in Barbados in individuals 40 years and above 7 % [8], and in St Lucia in those 30 years and above 8.8%. [3] In this study, glaucoma was the leading cause of blindness affecting 21 of the 102 bilaterally blind individuals (20.6%). Reports from Togo [9] and Cameroun [10] are similar. In both, glaucoma was the second leading cause of blindness.

Ghana has been identified as one of the countries on the African continent most affected by glaucoma. In Ghana an estimated 600, 000 people are said to be suffering from glaucoma. Out of the number, 30, 000 are likely to become blind if the disease is left untreated. The prevalence rate of the disease among people above forty years is 8.5% and those above 30years being 7.7%. [11] Up to 50% of glaucoma patients are already blind in one eye at first presentation in Africa. [12]
The aim of the present study was to assess the knowledge of glaucoma among patients of selected health facilities in Bihar state.

Materials and methods

The study was carried out in two selected health facilities in Bihar State and 200 participants were included in the study.

Data collection

The researcher distributed the questionnaire directly to the respondent with the help of three trained research assistants. Data was collected for a period of 8 weeks during the clinic days. Subjects that were illiterate were assisted by the research assistants to select their chosen responses on the questionnaire. The questionnaires were cross-checked by the researcher within 24 hours for completeness and errors.

Data Analysis

Data obtained from the administered questionnaire were coded and analyzed using the statistical package for social sciences (SPSS) version 22. Socio-demographic characteristics were analyzed using descriptive statistics frequency tables and percentages. Level of knowledge was presented in frequency and percentage. Inferential statistical tools chi-square and correlation coefficient was used to test hypothesis and relationship between variables at 5% level of significance.

Results

Table 1: Socio-demographic characteristics of respondents

Variables	Options	Frequency	%
Gender	Male	80	40
	Female	120	60
Age (years)	11-20	30	15
	21-30	40	20
	31-40	24	12
	41-50	32	16
	51-60	32	16
	61-70	24	12
	71 and above	18	9
Education level	No formal education	10	5
	Primary education	24	12
	Secondary/technical education	64	32
	Tertiary education	102	51
	Married	120	60
	Yet to marry	64	32
Marital status	Separated	4	2
	Widowed	12	6
Occupation	public service	40	20
	self employed	76	38
	Retiree	30	15
	trainee/student	54	27
Residents	Rural	70	35
	Urban	130	65

A total of 200 subjects responded correctly to the questionnaire of which 120 (60%) were females and majority of them were aged 21-30 years (20%) followed by 51-60 years (16%). Above half 187 (51%) of them had tertiary education while only 10 (5%) were illiterate. Greater than half of the participants 120 (60%) were married, 64 (32%) yet to marry. Interestingly, a good number of the participants 76 (38%) were self-employed and public servants comprise of 40 (20%). Majority lived in urban area 130 (65%).

Table 2: Respondents knowledge of the features and treatment of glaucoma

Variables	Frequency	%
Symptoms of glaucoma		
Painless vision loss	50	25
Sudden vision loss	50	25
None of the above	8	4
I don't know	92	46
Risks factor of glaucoma		
Hereditary	40	20
Cataract	16	8
Eye infection	10	5
Multiple causes	10	5
Hypertension	8	4
Diabetes	4	2
Prolong use of glasses	3	1.5
Certain food	3	1.5
Certain drug like steroid	1	0.5
Don't know	105	52.5
Treatment of glaucoma		
Surgery	50	25
Eye drop	36	18
Eye drop and surgery	8	4
Multiple options	6	3
Pills	4	2
Laser	3	1.5
Spectacle	3	1.5
I don’t know	90	45

The common symptoms of glaucoma known were painless vision loss (25%), sudden vision loss (25%) while a substantial number 92 (46%) could not identify any symptoms. About the risk for glaucoma, the major predisposing factor was hereditary (20%) followed by cataract 16 (8%) while steroid (0.5%) was the least. Although, more than half (52.5%) do not know the risk factors of glaucoma. The most common treatment option identified by the respondents was surgery 50 (25%) followed by eye drop 36 (18%). The use of eye drops and surgery combine was 8 (4%) while laser and spectacles were the least treatment option (1.5%).

Table 3: Knowledge of the glaucoma prevention and preventive practices among respondents

Variables	Frequency	%
Blindness from glaucoma is preventable		
Yes	110	55
No	24	12
I don’t know	68	34
Regular eye check-up		
Yes	128	64
No	10	5
I don’t know	62	31
Early diagnosis		
Yes	130	65
No	8	4

I don't know	62	31
Early treatment		
Yes	130	65
No	8	4
I don't know	62	31
Compliance with medication		
Yes	120	60
No	16	8
I don't know	64	32
Belief in God		
Yes	120	60
No	20	10
I don't know	60	30
Have you had eye check-up done before?		
Yes	104	52
No	40	20
I don't know	56	28
Have you been diagnosed with glaucoma before?		
Yes	36	18
No	164	82

About two-third (65%) knew that early diagnosis could prevent glaucoma. Majority 130 (65%) knew that glaucoma can be prevented through early treatment. On knowledge of compliance to medication in combating glaucoma, reasonable number 120 (60%) agreed to the practice while 120 (60%) believed in supernatural power. On preventive practice, 190 (51.9%) have gone for eye checkup before while 40 (20%) have not. to diagnosis, only few 36 (18%) have been diagnosed of glaucoma.

Discussion

As announced by the World Health Organization, glaucoma is the second key cause of visual loss worldwide. [13] It is a group of diseases in which progressive optic neuropathy leads to a characteristic loss in visual field. Glaucoma is more prevalent in aged individuals and in patients with a familial medical history of glaucoma. Glaucoma progresses silently and results in an irreversible loss of sight; hence, it interferes with the normal function in an affected individual. Blindness attributed to glaucoma is only avoidable with early detection and treatment. [14] Regular eye screening during adulthood allows timely detection, thereby more efficient treatment. However, for people to seek regular checks in eye clinics, they need to be aware of glaucoma and to have knowledge about the disease and the benefits of early detection and treatment. Since glaucoma has no specific symptoms or signs at early stages of disease, it is of great importance to raise awareness to glaucoma among the public.

A total of 200 subjects responded correctly to the questionnaire of which 120 (60%) were females and majority of them were aged 21-30 years (20%) followed by 51-60 years (16%). Above half 187 (51%) of them had tertiary education while only 10 (5%) were illiterate. Similar to this was noted in a study carried out in Ghana on awareness, knowledge and perception of risk of glaucoma among adults in a Peri- urban population. [15] Greater than half of the participants were married, a good number of the participants were self-employed and majority lives in urban area. Comparatively, related outcome was reported in Nigeria and Northwest Ethiopia. [16-18] This showed that it is very important to extend health education and advocacy to religious houses where people can get informed of this condition of glaucoma at grass root level. The rural dwellers that don't have the opportunity of coming to big hospital where eye check-up is being done should also be given opportunity of having their eye checked through planned health program.

Greater than half of the participants 120 (60%) were married, 64 (32%) yet to marry. Interestingly, a good number of the participants 76 (38%) were self-employed and public servants comprise of 40 (20%). Majority lived in urban area 130 (65%). The common symptoms of glaucoma known were painless vision loss (25%), sudden vision loss (25%) while a substantial number 92 (46%) could not identify any symptoms. About the risk for glaucoma, the major predisposing factor was hereditary (20%) followed by cataract 16 (8%) while steroid (0.5%) was the least. Although, more than half (52.5%) do not know the risk factors of glaucoma. The awareness of glaucoma is good but the knowledge about the disease is poor therefore, there is need to improve on the enlightenment of the community about glaucoma through pamphlet that talk about glaucoma, the risk and possible intervention. In Nigeria, Africa as a whole, illiterate and hopelessness arose from unscrupulous economy have made people depend on God for things that

should not. A community- based study in Anambra State of Nigeria documented that people generally perceive eye diseases and blindness as being caused by evil spirits or enemy machination. [15]

The most common treatment option identified by the respondents was surgery 50 (25%) followed by eye drop 36 (18%). The use of eye drops and surgery combine was 8 (4%) while laser and spectacles were the least treatment option (1.5%). About two-third (65%) knew that early diagnosis could prevent glaucoma. Majority 130 (65%) knew that glaucoma can be prevented through early treatment. On knowledge of compliance to medication in combating glaucoma, reasonable number 120 (60%) agreed to the practice while 120 (60%) believed in supernatural power. On preventive practice, 190 (51.9%) have gone for eye checkup before while 40 (20%) have not. to diagnosis, only few 36 (18%) have been diagnosed of glaucoma. This study revealed that many participants knew that regular eye check-up is a preventive measure for glaucoma. Similar result was reported from Osun state, Nigeria. [19] It is very likely people will perceive themselves not to be at risk of a disease like glaucoma that shows no symptoms for a long time. Awareness of these risk factors will prompt some people to seek eye care for early detection and prognosis. The perception that visual loss is a normal consequence of ageing could also be the reason for negative attitude towards the disease by some in this study population. Newman et al [20] also reported that only about a third of patients with glaucoma fully adhere to their medical plan. This indicates that more health education is needed for patients coming for eye examination which will help them to acquire some basic knowledge about the disease, possible treatment, compliance to treatment and follow up clinics should be emphasized.

Conclusion

In conclusion, the level of knowledge of glaucoma was fairly low and one of the most important and effective actions for early detection of glaucoma and its management may be raising public awareness and knowledge levels regarding the disease. These findings suggest that there is a need for health education in Ondo state population to increase their level of awareness and knowledge of glaucoma. Inadequate knowledge in the general population may be an important cause for failure to detect glaucoma early and may result in blindness from the disease.

References

1. Singh K. Glaucoma: A global problem Seminars in Ophthalmology. 1993;8(3):190–195.
2. Friedman DS, Wolfs RC, O'Colmain BJ. Prevalence of open-angle glaucoma among adults in the United States. Arch Opthalmol. 2004;122(4):532–538.
3. Mason PK, O Wilson M R. National survey of the prevalence and risk factors of glaucoma in St Lucia, West Indies. Ophthalmology. 1989;96:1363–1368.
4. Leske MC, Connell AM, Schachat AP. The Barbados Eye Study. Prevalence of open angle glaucoma Arch Ophthalmol. 1994;112:821–829.
5. Quigley HA, West SK, Rodriguez J, Munoz B, Snyder R. The prevalence of glaucoma in a population-based study of Hispanic subjects. Arch Ophtalmol. 2001;19:1819–1829.
6. Ntim-Amponsah CT, AW, Ofosu-Amaah S, Ewusi RK, Idirisuriya-Khair R, Nyatepe-Coo E, Adu-Darko M. Prevalence of glaucoma in an African population. Eye (Lond) 2004;18(5):491–497.
7. Guzek JP, Anyomi F K, Fiadoyor S, Nyonator F. Prevalence of blindness in people over 40 years in the Volta Region of Ghana, West Africa. Ghana Medical Journal. 2005:39.
8. Hyman L, Wa S, Connell AMS. Prevalence and causes of visual impairment in the Barbados Eye Study. Ophthalmol. 2001;108:1 751–1756.
9. Balo PK, Wabigira J, Banla M, Kuaovi RK. Specific causes of blindness and vision impairment in a rural area of Southern Togo. J Français d'Ophthalmologie. 2000;23(5):459–464.
10. Wilson MR, Mansour M, Degnan R, D. Prevalence and causes of low vision and blindness in the extreme north province of Cameroon, West Africa. Ophthalmic Epidemiology. 1996;3(1):23–33.
11. Debrah O. World Glaucoma Week launched in Accra. 2010.
12. Tenkir A, Solomon B, Deribew A. Glaucoma awareness among people attending ophthalmic services in Southwestern Ethiopia. BMC Opthalmology. 2010;10:17. 10: p. 1186/147-2415-10-17.
13. Pascolini D, Mariotti SP. Global estimates of visual impairment: 2010. Br J Ophthalmol. 2012 May;96(5):614-8.
14. Thylefors B, Négrel AD. The global impact of glaucoma. Bull World Health Organ. 1994;72 (3):323-6.
15. De-Gaulle VF, Dako-Gyeke P. Glaucoma awareness, knowledge, perception of risk and eye screening behaviour among residents of Abokobi, Ghana. BMC ophthalmology. 2016 Dec; 16:1-7.
16. Kizor-Akaraiwe NN, Monye HI, Okeke S. Awareness and knowledge about glaucoma and proportion of people with glaucoma in an urban outreach programme in Southeast Nigeria. BMJ open ophthalmology. 2017 Mar 1;1(1):e000018.

17. Ogbonnaya CE, Ogbonnaya LU, Okoye O, Kizor-Akaraiwe N. Glaucoma awareness and knowledge, and attitude to screening, in a rural community in Ebonyi State, Nigeria. Open Journal of Ophthalmology. 2016 May 4;6(2): 119-27.
18. Alemu DS, Gudeta AD, Gebreselassie KL. Awareness and knowledge of glaucoma and associated factors among adults: a cross sectional study in Gondar Town, Northwest Ethiopia. BMC ophthalmology. 2017 Dec;17: 1-2.
19. Adegbehingbe BO, Bisiriyu LA. Knowledge, attitudes, and self care practices associated with glaucoma among hispital workers in Ile-Ife, Osun State, Nigeria. Tanzania journal of health research. 2008;10(4).
20. Newman-Casey PA, Robin AL, Blachley T, Farris K, Heisler M, Resnicow K, Lee PP. The most common barriers to glaucoma medication adherence: a cross-sectional survey. Ophthalm ology. 2015 Jul 1;122(7):1308-16.