

Assessing and Creating Awareness of Primary Glaucomas in Central India

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Abstract

Objective: The study was aimed at assessing & creating awareness of those attending eye department of our tertiary care hospital to save the precious sight and take a step forward in preventing this avoidable blindness. *Methods:* All the participants aged 40 yrs. or older, attending the eye department of this hospital of central India, included in this cross-sectional survey conducted from March 2013 to February 2014, were subjected to a pre-structured questionnaires. Data on demographics, and awareness collected and analyzed. Simultaneously a constant effort was made to create awareness among the selected group. *Result:* Randomly selected 924 patients attending the out-patient eye department, participated in this study. The mean age of participants was 52±24.yrs. No significant difference in male/female participation. All patients belonged to urban and semi-urban areas with almost similar ethnicity. Among the total participants, only 12.98% had heard of glaucoma and was found to have directly related to the level of literacy. Besides these, other disease groups like diabetes and hypertension also included in the study to find out the awareness of glaucoma in these high risk groups. *Conclusions:* Awareness of glaucoma in this part of country is very poor, more so the knowledge of the disease. Creating awareness through mass-media and community health education programmes will be very effective step in preventing this irreversible blindness.

Keywords: Awareness; Knowledge; Primary Glaucoma; Literacy.

Introduction

Glaucoma is a sneak thief of sight & is the 2nd leading cause of blindness in the world [1]. Glaucoma is a group of conditions defined by progressive optic neuropathy accompanied by visual field changes. Although raised intra ocular pressure is one of the most consistent risk factor but the concept that statistically raised IOP is a defining characteristic for glaucoma has been almost universally discarded. Besides, it has been found that some of those presented with glaucoma have IOP within the normal range [2].

Awareness regarding this potentially blinding disease has been found variable from poor in

different population or clinic based studies ranging from 13.5% in population based studies in urban cohort in Chennai (India) [3] and 0.32% in rural Andhra Pradesh (India) [4] to high awareness of 60.6% in a clinic based population with high literacy rate at Eastern Nepal [5], it stands mandatory to assess the awareness level regarding glaucoma and screen the general outdoor patients specially from poorly educated background for early detection of the disease.

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Material and Methods

A cross-sectional study to assess awareness for glaucoma in the hospital attending population along with creating awareness for the disease was conducted for period of one year, from March 2013 to February 2014, as second week of March is designated as Glaucoma awareness week and is observed worldwide. All the patients aged 40 yrs. or older, attending eye O.P.D. with various complaints; were subjected to a prestructured questionnaire after taking written consent. Socio-demographic details including age, gender, literacy level, previous history of eye check-up, any family history of glaucoma, any previous eye surgery or treatment, availability of

mass-media and access to health related information were noted. The patients were subjected to an extensive comprehensive eye check-up. Besides, inquiring about their knowledge about the disease and simultaneously creating awareness was also carried out. All the participants belonged to similar ethnicity. Special care was taken to include the patients having Diabetes, hypertension or both besides those having high myopia as these patients are labeled as high risk group for glaucoma. Those who had heard of the disease were considered aware and those who had some information regarding the cause or consequence of the disease were considered to have knowledge of the disease. All along the study, special attention was given to creating awareness by

Table 1: Age wise Distribution

S. No.	Age Group	No. Male	Percentage	No. Female	Percentage	Total No.	Percentage
01	<40	11	2.19	13	3.08%	24	2.59
02	40-50	277	54.27	273	64.68%	550	59.52
04	51-60	132	26.29	108	25.59%	240	25.92
05	61-70	63	12.54	26	6.10%	89	9.63
06	>70	19	3.78	2	0.47%	21	2.27
TOTAL-- (924)		502	55.3	422	45.61%	924	

Table 2: Disease wise distribution

S. No	Category	No. of Patients	Percentage
01	General	602	65.15
02	Hypertensive	190	20.56
03	Diabetic	50	5.41
04	Combined (H+D)	76	8.22
05	Myopic	6	0.64
Total		924	

Table 3: Literacy vs awareness

S. No	Literacy	No. of Patients	Awareness (+VE)	Percentage
01	Illiterate	246	0	0
02	Primary	112	14	12.5
03	Secondary	302	39	12.91
04	Graduate	228	53	23.24
05	Post Graduate	36	16	44.44
Total		924	120	12.98

Table 4:

S. No.	State of Literacy	Literacy Vs Awareness- General		H.T.		(Disease Wise Distribution)				Myopic	
		ve(+)	ve (-)	ve(+)	ve (-)	Diabetic		Combined		ve(+)	ve (-)
1.	Illiterate	0	163	1	60	0	8	0	13	0	1
2.	Primary	5	65	0	20	2	2	6	10	1	1
3.	Secondary	25	182	6	51	3	11	5	17	0	2
4.	Graduate	31	108	10	35	4	17	8	14	0	1
5.	Post Graduate	8	15	2	5	3	0	0	3	0	0
Total<<<<<<		69.00	533.00	19.00	171.00	12.00	38.00	19.00	57.00	1.00	5.00
Percentage		11.46%	88.53%	10%	90%	24%	76%	25%	75%	16.60%	83.33%

making the patient to understand the cause of the disease in lay man's language and its consequence if not treated early in the process that it may lead to irreversible blindness. Leaflets and C.Ds were also distributed to help them for better understanding of the disease.

Results

A total of 924 patients participated in this study. The mean age of the participants' was 52-±24. (Youngest being 28 & oldest 76)-Males were 54.3% Females—45.61%. Maximum patients belonged to 41 to 60 yrs. age group i.e. 59.52% as evident from Table no. 1. Of the total 924 patients, 602 (65.15%) patients belonged to general category and the rest were from either systemic or ocular disease groups as mentioned for high risk groups (Table 2).

Overall awareness was found to be quite unsatisfactory; i.e. 12.98% ranging from 0% to 44.44%.in different literacy groups. Table no.3 shows the gradual increase in awareness related to the status of literacy. Among graduates/post-graduates, the awareness was found much better where as it was found 0% in illiterate group.

Disease wise distribution of literacy Vs awareness is depicted in Table 4 and was found that awareness varied in different groups, ranging from 11.46% in general category to 24% to 25% in diabetics and those suffering from combined disease respectively where as awareness was found lowest in those suffering from Hypertension alone (10.0%).

Discussion

Glaucoma is a leading cause of visual impairment and blindness worldwide [6]. Because of the insidious nature of the disease, patients often present late in the course of disease with irreversible damage. Early detection can prevent severe vision loss and socio-economic burden on society.

Awareness of glaucoma in the present study was found 12.98% which was comparable to 13.5% of population based studies in urban cohort in Chennai (India) [3], and was much higher than 0.32% in the rural cohort of population based study at Andhra Pradesh [4]. Higher awareness of 60.6% was noted in our previous hospital based study conducted at Eastern Nepal [5]. However, in another population based study conducted at rural north India, where it

was 73% who had heard of glaucoma but the awareness of disease was found to be 8.3% and 1.89% had some knowledge about glaucoma, as in this study, having heard of the disease was not regarded as awareness of disease [7]. This is in contrast with rest of studies where the knowledge was regarded simply having heard about the disease [3,4,5]. Understanding of glaucoma in south eastern Ethiopia in a population based study was found to be only 2.4 [8]. Awareness of nature of disease in patients of Chronic open angle glaucoma was found to be 41% regarding the increased risk of COAG. in the family members [9].

As per knowledge of glaucoma in the present study, it was found in 5.08% of patients i.e. less than that found in study at urban Chennai, 8.7% of which only 0.5% had good knowledge [3]. Similar results were obtained in study done at rural cohort of Andhra Pradesh which shows that of those aware of disease, 55.6% did not know if visual loss due to glaucoma was permanent or reversible [4]. The most important determinant of awareness regarding glaucoma was found to be the literacy rate as it was found to increase gradually as per the educational background as shown in Table 3. Besides these, mass-media, printed or electronic media, family members with glaucoma and those belonging to family of medical personales also contributed in creating awareness of the disease. In our study, no correlation with gender, age, ethnicity was found as in another study done at Lagos Nigeria [10] in contrast to Chennai glaucoma study [3].

A definite correlation of awareness of glaucoma was observed in disease specific group where it was found high in diabetics and those having hypertension along with diabetes compared to those suffering from hypertension alone i.e. 24-25% in contrast to 10% respectively as is obvious from Table 4. This could be attributed to the fact that diabetics and those associated with hypertension needed frequent check-ups with ophthalmologists who could have been their source of information.

In a study of open angle glaucoma treated patients, it was found that 20% of those patients didn't know that they were being managed for a disease called glaucoma. Patients with family history of glaucoma, were nearly 4 times likely to be aware of disease and was found that over 1/3rd were unaware of the fact that glaucoma is heritable [10]. These studies therefore indicate the poor awareness and knowledge regarding the disease and emphasizes the need for proper screening of patients specially in the hospital based population as the population based screening programmes have been found to be difficult and

controversial [11,12]. In the present study 8 (28.57%) patients presented with blindness and were unaware of the term glaucoma. This level of high blindness reflects the high number of undiagnosed disease, lack of awareness and asymptomatic nature of disease.

Conclusion

Awareness of glaucoma in this study was found very low in urban/semi-urban population presented to hospital. The determinant was found to be literacy rate, availability of mass-media, relatives of patients with family history of glaucoma or of medical personae and those diabetics and combined diabetics and hypertensive who needed a frequent check-up with ophthalmologists. Glaucoma being an asymptomatic condition largely, causing blindness silently, is a major cause of concern for visual health. Creating awareness among general population through community education programmes and also a constant effort to educate the patients attending hospital for routine check-up can be a valuable tool in preventing this blinding disease.

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