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Glaucoma awareness in rural population – A hospital based study

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Abstract

Background: Early diagnosis and treatment of Glaucoma reduces the visual disability and recovers the quality of vision and life. In country like India where 70% of population is in the rural areas awareness of glaucoma makes lot of difference in the prevention, early diagnosis and management of the disease.

Methods: This is a cross sectional hospital based study of 1200 patients aged above 20 years of age. Data was collected through face to face interview by a structured survey in the language patient better understood. Questions concerning awareness and knowledge about of glaucoma, source of knowledge and awareness were collected. The data were entered in MS excel and expressed using percentage.

Results: Among 1200 subjects, 14%(168)were aware and 86%(1032) were unaware of glaucoma. Out of 168 aware subjects, employees and students had better awareness of glaucoma i.e. 50% and 25%, respectively. 35.7% subjects who were aware of glaucoma belonged to higher Socioeconomic Status. Media was the major source of knowledge among aware group (52.3%). 34.5% of subjects believed regular follow up was necessary in glaucoma. 73.8% of subjects were unaware of blindness as end result of untreated glaucoma.

Conclusion: Awareness of glaucoma among elderly and illiterates is poor, proper health education spreading the awareness of glaucoma in rural area is the need of the hour.

Keywords: Glaucoma, Socio economic status, Health education

Introduction

Glaucoma is one of the second leading cause of blindness worldwide.[(1)] Generally, majority of glaucoma patients are already blind in one eye at the time of presentation. The scale of global blindness is 45 million, out of which 9 million blind people are from India (1/5th of the total blind people in the world).[(2)] With reference to national survey on blindness (1999-2001) and Government of India Report 2002,[(3)] glaucoma is responsible for 5.8% cases of blindness in the 50+ population and however the RAAB report of 2006-07 (Rapid Assessment of Avoidable Blindness) showed a corresponding figure of 4.4%.[(4)] Lack of awareness on this state is a very vital changeable factor that might help in decreasing the morbidity due to this disease.

Eye health education that influences people to take part in regular ophthalmologic care might be a significant step in early diagnosis of glaucoma. Subgroups of the population who are at maximum risk for both developing the disease and having inadequate knowledge about it need to be recognized and targeted in order to use the resources most efficiently for public education.

The Department of Ophthalmology at Kamineni Institute of Medical Sciences, Nalgonda provides outreach ophthalmic activities in addition to usual services at its tertiary eye unit providing the largest share of eye care services in the district of Nalgonda. A broad range of individuals from diverse socioeconomic and educational background come for eye evaluation to our institute.

Amidst the era of sophisticated technologies in treatment of glaucoma, health education might play a central role in early diagnosis & better treatment results, thus creating it the need of the hour. Hence, this study was performed to know the awareness of glaucoma in rural population of Nalgonda District with an effort to provide education and preventive eye care to decrease morbidity & economic load of the disease. So this study aimed to measure the awareness of glaucoma among people attending ophthalmology OPD at Kamineni Institute of Medical Sciences, Nalgonda.

Materials and Methods

This was a cross sectional, Hospital based study conducted during March 2014 – October 2015. 1200 patients were involved in this study.

Inclusion criteria: People aged 20 years or older who presented for eye evaluation to ophthalmology OPD at our hospital. The model of the APEDS was used.[(5)] The Ethical Committee of the Institute approved the study design which followed the tenets of the Declaration of Helsinki. Data on demographics and awareness of glaucoma was collected by 2 post graduates of Department of ophthalmology at KIMS, as interviewers in discussion with Department of Community medicine. Face to face interview was performed using a prepared questionnaire. The survey was originally prepared in English to be brief and easily understandable and then translated to the locally used languages – Telugu and Hindi. The meeting was conducted in the language each participant understood best. Most of the questions were close-ended.

Participants were not prompted to possible responses. Interview procedures were refined during the course of the pilot study.

Questions regarding awareness of glaucoma were enquired after collecting demographic information. Participants were enquired if they had listen to Glaucoma. Additional questions were asked only if the subject responded completely. Awareness in this study is stated as "having heard of glaucoma". *Knowledge* is defined as "participant having some thoughtfulness of glaucoma "for example, "it is a high pressure in the eye", "it is a disease where nerve of the eye turn out to be weak", "it is injure to the nerve of the eye because of high-pressure". The data were entered in MS excel and expressed using percentage (%)

Results

Out of 1200 subjects, 18% belonged to the age group between 30-40 years and only 8% were above 80 years. This study constituted 52% of males, whereas females were 48%. Most of the study population (30%) were illiterates followed by 18% who had college education. Farmers constituted majority of the study population (24%) followed by daily wage labourers (20%). Majority of the study population belonged to class V & least in class II. Out of 1200 subjects, 14%(168)were aware of glaucoma & 86%(1032) were unaware of glaucoma (Table 1). Out of 168 subjects who were aware of glaucoma, 42.9%(72) were females and 57.1% (96)were males. 71.4%(120) of the subjects were aged <40. Employees had better awareness of glaucoma (n=84;50%) followed by students (n=42;25%). 35.7% (60) of subjects who were aware of glaucoma belonged to higher Socioeconomic Status of class I. Media was the major source of knowledge among aware group(n=88;52.3%). 34.5%(58) subjects believed regular follow up was necessary in glaucoma. Out of 168 subjects, 124(73.8%) subjects did not have any idea of blindness as end result of untreated glaucoma. Out of 1200 subjects, 408(34%) subjects aged above 60 years were unaware of glaucoma. Among 528 literates, 156(29.5%) were aware of glaucoma. Glaucoma awareness among illiterates was nil (Table 2).

Table 1: Awareness of glaucoma in relation to sociodemographic characteristics of respondents

Gender	**Aware n=168**	**Not aware n=1032**
Male	96(57.1%)	528(51.1%)
Female	72(42.9%)	504(48.9%)
Total	168	1032
Age: (in years)	**Aware (n)=168**	**Not aware (n)=1032**
20-30	48(28.6%)	144(14%)
30-40	72(42.8%)	144(14%)
40-50	24(14.3%)	168(16.3%)
50-60	24(14.3%)	168(16.3%)
60-70	-	174(16.8%)
70-80	-	138(13.3%)
>80	-	96(9.3%)
Total	168	1032
Education:	**Aware (n)=168**	**Not aware (n)=1032**
Illiterate	-	360(34.9%)
Read & write only	12(7.2%)	156(15.1%)
1-4 grade completed	-	144(14%)
5-8 grade completed	-	168(16.2%)
9-12 grade completed	36(21.4%)	108(10.5%)
Collage education	120(71.4%)	96(9.3%)
Total	168	1032
Occupation:	**Aware (n)=168**	**Not aware (n)=1032**
Farmer	12(7.1%)	276(26.7%)
Housewife	-	192(18.6%)
Employee	84(50%)	156(15.1%)
Merchant	24(14.3%)	120(11.6%)
Daily laborer	06(3.6)	234(22.7%)
Students	42(25%)	54(5.3%)
Others	-	-
Total	168	1032
Socioeconomic status:	**Aware (n)=168**	**Not aware (n)=1032**
I	60(35.7%)	160(15.6%)

II	36(21.4%)	174(16.8%)
III	36(21.4%)	228(22%)
IV	24(14.3%)	208(20.2%)
V	12(7.2%)	262(25.4%)
Total	168	1032

Table 2: Response of subjects who were aware of glaucoma

Response	No of responses(n=168)
What is glaucoma?	
High pressure in the eye	16(9.5%)
Nerve of the eye gets weaker	28(16.7%)
Damage to nerve of eye due to high pressure	12(7.1%)
Age related disease affecting peripheral vision	8(4.7%)
Others	104(62%)
Source of knowledge about glaucoma?	
Ophthalmologists	24(14.3%)
Other Doctors	12(7.1%)
Optometrists	8(4.8%)
Eye camps	20(11.9%)
Family members/relatives/Friends suffering from it	16(9.5%)
TV/Magazines/other media	88(52.3%)
Is vision loss due to glaucoma permanent/reversible?	
Permanent	24(14.3%)
Reversible	20(11.9%)
Don't know	124(73.8%)

Discussion

The findings of our study demonstrated that only 14% of study population were aware of glaucoma. Awareness of glaucoma in rural population is very poor compared to the urban population. Though awareness of glaucoma in the urban population is not very high, those who were aware had sensible knowledge of the disease.[6] This difference between rural & urban communities is significantly poorer in India compared to the available data from other countries.[7] Though a recently published study suggested that the prevalence of glaucoma in rural India is 2.6%, which is probably higher compared to that of urban community.[8] Even among the rural people who were aware of the disease, information about glaucoma was very deprived. Incomplete access to medical and diagnostic care in the rural areas might be added to poor knowledge and awareness of glaucoma.

Our study concurred with the study done by Krishnaiah S et al., in rural population of south India with reference to greater awareness of disease among males when compared to females & improved awareness among literate & high socioeconomic groups.[7]

Education and socioeconomic position played an important role in the level of awareness of glaucoma in this rural population. Uneducated population of rural India were less aware about glaucoma, and this drift was similar to those stated from other countries like the United States and Canada.[9,10,11]

Sufficient access and appropriate use of eye care services could generate greater awareness and experience to information concerning a variety of eye diseases including glaucoma.[12]

Conclusion

We conclude that awareness of glaucoma is least among elderly subjects, illiterates and poor socioeconomic group. Social media was the major source of knowledge. Proper Health Education through target specific outreach program is necessary for early detection and better treatment outcome of glaucoma

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