

Knowledge, Attitude and Practices about Glaucoma among Glaucoma Patients at a Tertiary Care Hospital in Goa

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Abstract

Background: The global prevalence of glaucoma is about 67 million, and it is responsible for 6.6 million blind individuals in the world. It is important that the patients are fully aware of the nature of the disease and importance of adherence to therapy in order to prevent irreversible damage. We conducted this study to assess the knowledge, attitude and practices about glaucoma among patients suffering from glaucoma.

Materials and Methods: This cross-sectional, hospital-based study was conducted among 200 consecutive glaucoma patients presenting to the out-patient department at Goa Medical College and Hospital. The patients were administered a pre-tested proforma which contained 12 closed-ended questions by study investigators, in order to assess their knowledge, attitude and practices about glaucoma. The demographic and socio-economic details of the study participants were also studied.

Statistical Analysis: SPSS version 22 and expressed as simple percentages and proportions.

Results: The study showed that 79% patients were aware that they were suffering from glaucoma, 10% participants could briefly describe their disease, 66% were aware of the irreversible nature of glaucoma, 18% were aware of the familial nature of the disease, 56% felt the need for regular medications, 22% felt the need for regular visits to the ophthalmologist, 72% were using the anti-glaucoma medications regularly, and 70% were following up regularly. Only 32% had brought their family members for glaucoma screening.

Conclusion: Irreversible damage from glaucoma can be prevented with early detection and patient compliance. This is only possible by increasing the level of awareness about glaucoma and health education.

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Keywords: Knowledge, Attitude, Practices (KAP), Glaucoma, Patients

Introduction

Glaucoma, "the silent thief of sight" is the third most important cause of blindness in the world after cataract and refractive errors.¹ The global prevalence of glaucoma is about 67 million, and it is responsible for 6.6 million blind individuals in the world.² Even though the visual damage caused by glaucoma is irreversible, the damage is preventable with timely management and patient compliance. Thus it is very important that the patients are fully aware of the nature of the disease and importance of adherence to therapy. Many studies done in the past in other parts of India have assessed the knowledge, attitude and practices about glaucoma among general out-patient population^{3,4} or among healthcare personnel.^{5,6} However despite extensive literature search we could find only one study in India⁷ and another in the United Kingdom,⁸ which has assessed the same among patients who had already been diagnosed with glaucoma and were on treatment for the same. No such study nature had been published from Goa. Hence we conducted this study to assess the knowledge, attitude and practices about glaucoma among patients suffering from glaucoma.

Materials and Methods

This cross-sectional, hospital-based study was conducted among 200 consecutive glaucoma patients who presented to the out-patient department at Goa Medical College and Hospital; after Institutional Ethics Committee approval. All

these patients were diagnosed with glaucoma and were on treatment for the same. After obtaining informed consent, the patients were administered a pre-tested standard proforma which contained 12 closed-ended questions by study investigators to assess their knowledge, attitude and practices about glaucoma. The demographic and socio-economic details of the study participants were also studied. The data so collected was entered into Microsoft Excel version 2010, statistically analyzed using SPSS version 22 and expressed as simple percentages and proportions.

Results

The results are summarized in Tables 1-4.

Table 1: Socio-demographic data of the participants

Socio-demographic details	N (%)
<i>Age (years)</i>	
<40	58 (29)
40-60	76 (38)
60-80	66 (33)
>=80	0
<i>Sex</i>	
Male	94 (47)
Female	102 (51)

Contd....

Table 1 - Contd....

Socio-demographic details	N (%)
<i>Residence</i>	
Urban	76 (38)
Rural	124 (62)
<i>Occupational status</i>	
Unskilled	23 (11.5)
Semi-skilled	10 (5)
Skilled	28(14)
Professional	42 (21)
Housewife	37 (18.5)
Unemployed (retired)	60 (30)
<i>Educational status *</i>	
Uneducated	88 (44)
Primary education	20 (10)
Upper primary (6-8)	10 (5)
Secondary (9-10)	12 (6)
Senior secondary (11-12)	10 (5)
Graduate	60 (30)
<i>Socio-Economic Status**</i>	
Class I	66 (33)
Class II	60 (30)
Class III	43 (21.5)
Class IV	23 (11.5)
Class V	8 (4)

*Human Resource. Indian Standard Classification of Education: InSCED MINISTRY OF HUMAN RESOURCE DEVELOPMENT 2014

**Pandey VK, Aggarwal P, Kakkar R. Modified BG Prasad's Socio economic Classification-2018: The need of an update in the present scenario. Indian Journal of Community Health 2018; 30:82-84.

Table 2: Distribution of participants based on their knowledge about glaucoma

Study variable	No. (%)
<i>Aware regarding their diagnosis of glaucoma</i>	
Yes	158 (79)
No	42 (21)
<i>Aware about brief description of their disease</i>	
Yes	20 (10)
No	180 (90)
<i>Aware about the irreversible nature of glaucoma</i>	
Yes	132 (66)
No	68 (34)
<i>Aware about the familial nature of glaucoma</i>	
Yes	36 (18)
No	164 (82)

Table 3: Distribution of participants based on their attitudes towards glaucoma

Study variable	No. (%)
<i>Felt the need for regular doses of medications</i>	
Yes	112 (56)
No	88 (44)
<i>Felt the need for regular visits to an Ophthalmologist even if the intraocular pressures were controlled</i>	
Yes	44 (22)
No	156 (78)

Table 4: Distribution of participants based on their practices towards glaucoma

Study Variable	No. (%)
<i>Compliance with usage of anti-glaucoma medications</i>	
Yes	144 (72)
No	56 (28)
<i>Compliance towards timing of instillation of anti-glaucoma eye drops</i>	
Yes	132 (66)
No	68 (34)
<i>Compliance towards regular follow up visits for glaucoma control</i>	
Yes	140 (70)
No	136 (68)
<i>Patients who ensured of screened their family members for glaucoma</i>	
Yes	64 (32)
No	136 (68)

Discussion

Glaucoma is a condition which leads to irreversible loss of visual fields and visual acuity.⁹ However, this damage can be prevented with timely intervention. This requires a combined effort by the treating Ophthalmologist as well as the patient. If the patient is not compliant to therapy, does not instill the anti-glaucoma medications regularly and does not follow up regularly, the disease will only progress and give rise to irreversible optic nerve head damage.¹⁰ Hence it is of utmost importance that individuals who have been diagnosed with glaucoma and are on treatment for the same are fully aware of their condition. This is possible with a good level of doctor-patient interaction, where the doctor takes that extra step to educate their patients about their disease i.e. glaucoma.

Level of knowledge about glaucoma among glaucoma patients

In our study we found that most i.e. 158 (79%) patients were aware that they were suffering from glaucoma, while it was disturbing to note that 42 (21%) patients were not aware of the same, even though they were using anti-glaucoma medications for a long time. This indicates a failure on the part of the treating health care professionals, and indicates that treatment has been started without explaining to the patient the disease and need for the treatment. This also indicates ignorance on the part of the patients who have not tried to enquire about the need for the medications.

Only 20 (10%) participants could briefly describe their disease in terms of its symptoms, the type of treatment required, warning signs of complications and diagnostic tests for glaucoma. Most of the patients relied on Intra-ocular pressure as a measure of glaucoma control and majority were not aware that intra-ocular pressure is only a modifiable risk factor for glaucoma and that there are other tests (such as optic nerve head evaluation and visual fields) that are more important to assess the progression of glaucoma.

About two-thirds of the patients i.e. 132 (66%) were aware of the irreversible nature of the disease and that the loss of visual field and acuity that has already developed will not revert back with the medications, and that the anti-glaucoma medications should be instilled so as to prevent further

progression of disease. Whereas, a significant 34% were not aware of the same.

A small number of 36 (18%) patients were aware of the familial nature of the disease, while majority i.e. 164 (82%) were not aware of the same.

Our findings can be compared with those reported in a similar study done in North India by Tripathi S et al⁷ where 73.3% patients were aware that they were suffering from glaucoma and more than half the patients were aware of the irreversible nature of the disease.

Attitudes of glaucoma patients towards glaucoma

More than half i.e. 112 (56%) patients felt the need for regular medications, and knew that if the anti-glaucoma medications are not instilled regularly and at a particular time as prescribed by the Ophthalmologist, the disease will not be controlled and the damage will continue.

Only 44 (22%) patients felt the need for regular visits to the Ophthalmologist even if the intra-ocular pressure is controlled, while 156 (78%) felt it was not important to follow-up if the pressures are controlled.

Practices of glaucoma patients towards glaucoma

Most of the patients i.e. 144 (72%) were using the anti-glaucoma medications regularly and about two-thirds 132 (66%) were following regular timings of instillation as advised by the ophthalmologist.

Majority i.e. 140 (70%) patients were following up regularly irrespective of whether their intra-ocular pressures were controlled or not.

Among the 60 (30%) patients who were not compliant to therapy, 38% said that they found it difficult to remember to regularly take their medications, 37% said they could not afford the cost of medication, while the rest said that too many eye drops were confusing or that they had no time to take their medications.

Only 64 (32%) patients had brought their family members for glaucoma screening. Majority i.e. 136 (68%) did not bring their family members for screening.

Our study findings are comparable to those found in UK by Deokule et al,⁸ where they reported that 77% participants were compliant to therapy.

Tripathi et al⁷ in their study reported that 58% were non-compliant to therapy; while in a study done in Oman by Khandekar et al¹¹, 75.2% non-compliance was reported.

The high level of compliance among the study population may be attributable to the free availability of glaucoma medications through the Health insurance scheme (Deen Dayal Swasthya Seva Yojana) of the government of Goa, which helps the patients who cannot afford the medications to get them free of cost through the government scheme. To improve the compliance among those who are unable to remember to take the medications regularly, appointment reminders by way of text messages could be implemented.

Comparison of level of awareness with socio-demographic details

We compared the socio-demographic details of the patients with their level of knowledge, their attitudes and practices

towards glaucoma. We found that patients living in urban areas, the higher educated groups and the higher socio-economic classes had better knowledge about glaucoma, they had a positive attitude towards the disease and followed proper practices such as compliance to therapy and regular follow-ups. The reason for this could be that the patients from the urban areas and those in the higher socio-economic group are better educated and have better access to sources of information such as the internet, books, television etc. They also have better health care facilities and access to health care personnel.

When these patients were asked about their sources of information, majority i.e. 62% said that they had learnt about the disease from their treating doctor, followed by 36% from friends and family members who were also patients with glaucoma, and the rest from media such as internet, television and magazines.

A similar result was found by Tripathi et al⁷ in their study in North India where the compliance to anti-glaucoma medication was significantly lower among the lower socio-economic strata and the lower educated group.

From this study we may infer that there is still need to educate the patients with glaucoma about the nature of the disease that they are suffering from, and the importance of regular therapy and follow up. This can be achieved with good doctor-patient interaction by which, once diagnosis of glaucoma is made the patient is explained in depth about the disease and how the condition is to be managed. The importance of family screening also needs to be emphasized upon each patient and the family members of the patients should be screened for glaucoma.

Norell in 1979¹², Rendell in 2000¹³ and Okeke in 2009¹⁴ reported that improving knowledge about glaucoma through patient education helped to significantly improve compliance to therapy.

Glaucoma as an important cause of preventable blindness can be tackled only if there is a high level of awareness among the masses about the disease, its symptoms; it's familial and irreversible nature. This is possible with health education and requires an integrated effort at all levels of health care. If the glaucoma suspects are identified at the primary health care level, screened and well managed at the secondary level and the complicated cases referred to the tertiary hospital, this serious condition can be effectively controlled.

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