

Knowledge and Awareness of Glaucoma in Final year Medical Students

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Abstract

Background: Glaucoma is the leading cause of untreatable blindness throughout the world. Being a multi factorial optic neuropathy, early diagnosis and prompt treatment is the only vision saving strategy. This requires referral for glaucoma screening by a family physician or any doctor with a high index of suspicion, based on basic knowledge of Glaucoma, a prerequisite for all the medical practitioners. Glaucoma is routinely taught as a part of Ophthalmology curriculum during first phase of Clinical curriculum in the final year of MBBS. The aim of this study is to determine the knowledge of the future primary health care givers. A questionnaire about glaucoma in administered to final year MBBS students of Sri Siddhartha Medical College of Tumkur, Karnataka: the students who have completed Ophthalmology curriculum. The students are expected to be aware of the basic facts of this potentially blinding disease Glaucoma. *Material and Methods:* A total of 50 student volunteers studying in final year MBBS took the survey questionnaire, without revealing their identity. *Results:* The students were found to be aware with a fair knowledge about the disease entity.

Keywords: Awareness; Knowledge; Glaucoma; Medical College.

Introduction

Glaucoma is the second cause of blindness worldwide and the leading cause of irreversible blindness [1]. The most effective strategy to bring down the prevalence is early detection of Primary open angle glaucoma & thereby prevent blindness.

Awareness among primary care physicians and among public, about this almost silent disease plays a pivotal role in bringing the high risk patients to the ophthalmologists, and hence, limiting the visual disability. Spreading knowledge about the disease not only helps to prevent blindness but also reduces the economic burden of the disease [2].

The incidence of glaucoma ranges between 6.5 to 7.5% in different parts of the world. With such a high incidence of a blinding disease, early detection of glaucoma is essential to prevent blindness [3,4].

Increased awareness about glaucoma will increase case detection and will thereby reduce blindness due to glaucoma.

Social perceptions of health have changed globally; there is an impetus to move towards good health by using resources for preventive measures. Governmental agencies and several non-governmental organizations are looking to reduce the risk factors for ocular diseases, educate the public to understand the need to improve their health status, and are teaching individuals how to increase their own ability to maintain well being [5].

Published evidence indicates that late diagnosis

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of Primary open angle glaucoma is an important risk factor for subsequent blindness and is associated with poor knowledge about the condition [6].

The referral source is an important contributing factor for early diagnosis. Patients referred from optometrists with a diagnosis of glaucoma are more likely to be in the early stages of the disease [7].

Referral patterns in India are quite different from the West. One third of those who become blind due to glaucoma had become visually impaired even before they had sought medical attention for their eyes [8,9,10].

Blindness due to glaucoma can be curbed to a certain extent by educating the masses about the condition, and thereby influencing at risk individuals to participate in regular ophthalmic care [11]. Glaucoma is taught as an integral part of ophthalmology curriculum for undergraduates. Medical graduates are expected to be equipped with basic knowledge of Glaucoma and contribute to the preventive strategy by advising glaucoma screening. This survey is conducted to know their awareness of Glaucoma. It is an important indicator of the awareness among future healthcare providers.

Materials and Methods

A Survey was conducted by Department of Ophthalmology Sri Siddhartha Medical College, Tumkur. Survey composed of 50 student volunteers studying in final year MBBS who answered a structured, validated questionnaire. The survey was blinded: the identity of the volunteer was kept anonymous. The awareness was categorised on the basis of depth of knowledge they had about the Glaucoma.

Respondents answered questions pertaining to risk factors for glaucoma, description of symptoms and treatment aspects. The first few questions comprised of basic awareness about the disease. Categories of questions varied from open ended questions to objective questions with multiple correct answers, to come to a more accurate assessment about the knowledge of the disease entity.

Students were asked to describe Glaucoma in brief by an open ended question. Open ended question was also used to assess the knowledge of basic information of Glaucoma like the types of Glaucoma. Most of the questions were multiple response types : for example, where the volunteers were asked to select important risk factors and treatment options from the given choices.

The following questions were on its manifestation and type of visual field damage. The risk factor options were presented in the questionnaire namely, increased intraocular pressure (IOP), obesity, steroid use, family history and diabetes.

Glaucoma knowledge was assessed by questions that comprised of details of familial predisposition, and type of vision loss. It was compared with cataract so as to know if students had clear idea and comparison between both the disease entities. All the answer sheets were assessed individually. Multiple answers were taken into consideration and the idea about awareness and knowledge was made.

Defining knowledge levels of glaucoma: A student volunteer was considered to have good knowledge, if he/she was able to identify the risk factors for glaucoma such as increased IOP, family history, and steroid use and was further able to meaningfully describe the condition and identify therapies for glaucoma such as medical or surgical.

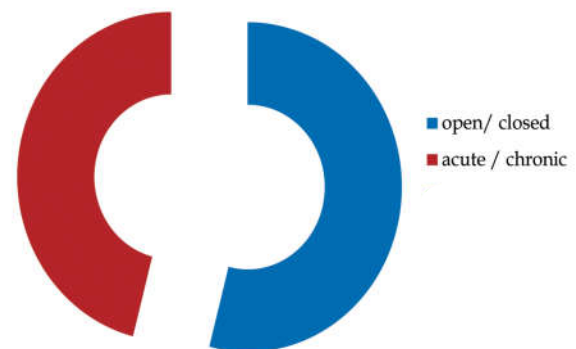
Fair knowledge was qualified if at least two of the risk factors were identified and a description on at least one treatment option was correctly provided.

Student volunteers were considered to have poor knowledge, if they were unable to identify even a single risk factor or treatment option for glaucoma.

Observations

Out of 50 subjects to whom the questionnaire was administered, all the students (100%) answered it. Out of 50 students, 27 students classified glaucoma as open or closed angle while 23 described it on the onset of presentation - as acute and chronic.

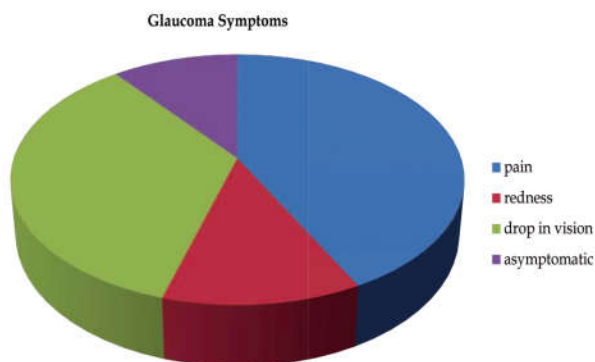
Awareness of classification of Glaucoma



On asking about manifestation of glaucoma, maximum students thought it manifests with pain and reduced vision while only 16% thought it manifests with reduced vision.

How does glaucoma manifest?

- With pain 28 (56%)
- With redness 8 (16%)
- With reduced vision 23(46%)
- Without any symptoms 7 (14%)



50% of the students thought that the visual damage due to glaucoma is irreversible while 38% thought it was reversible and 16% thought it was transient.

Glaucomatous visual damage is-

- Transient 8 (16%)
- Reversible 19(38%)
- Irreversible 25(50%)
- Recurrent 0%

50% of the students thought the end result of glaucoma is constriction of visual field, optic neuropathy and venous occlusion however 4% thought glaucoma results in none of these.

Glaucoma causes-

- Field defects 20 (40%)
- Optic neuropathy 2 (4%)
- Venous occlusion 2 (4%)
- All of the above 25 (50%)
- None of the above 2 (4%)

24 out of 50 students i.e 48% thought medical treatment is the best form of treatment while 17 (34%) thought surgical treatment was superior, however 11 students (22%) thought the treatment modality was variable.

Best treatment for glaucoma

- Medical treatment 24 (48%)
- Surgical treatment 17 (34%)
- Variable 11 (22%)
- Not available 1 (2%)

34 (68%) students had awareness of glaucoma because they were taught regarding the subject in their curriculum, 18 (36%) had gained knowledge from different books, journals and magazines while the source of knowledge of 24% was positive family history.

Mode of information-

- Medical personnel 34(68%)
- Internet 2(4%)
- Family history of glaucoma 12(24%)
- Books/journals/magazines 18(36%)

Maximum students i.e 76% thought the possible risk factor for glaucoma is increased intra-ocular pressure while 48% thought positive family history and according to 46% of them long term administration of steroid was a possibility. 16% and 2% thought diabetes and obesity as a probable risk factor.

Possible risk factors for glaucoma-

- Obesity 2 (4%)
- Increased intra ocular pressure 38 (76%)
- Steroids 23(46%)
- Chronic smoking and alcohol intake 12 (24%)
- Family history of glaucoma 24(48%)
- Diabetes 16(32%)
- None of the above 0%

For the medical management of primary open angle glaucoma, maximum 84% students thought beta blocker to be the drug of choice followed by 38% to PG analogues while 8% thought MAO inhibitor to be the effective drug in glaucoma.

Drugs used in glaucoma

- CAI 6 (12%)
- Beta blockers 42(84%)
- MAOI 4(8%)
- PG analogues 19(38%)

When questions in depth regarding glaucoma and cataract, 50% students confused thinking both come in the same disease spectrum and 20% believed glaucoma results from mature cataract and large number of them i.e 42% thought it to be a result of pressure damage to the nerve. 6% did not know the consequence of untreated glaucoma while 80% thought it would lead to slow irreversible loss of vision.

Discussion

Awareness and knowledge of a disease are important determinants of health-seeking behavior of individuals. Community health workers and doctors working at remote villages, who are in charge of the primary health care centers and health posts are largely responsible for preventive and curative health care in rural areas. Glaucoma is often asymptomatic and detected very late, at the stage of irreversible visual loss. The primary care givers need to counsel and guide for timely screening & referral. Awareness among medical graduates, who may eventually be the primary care givers or specialists play a vital role in creating awareness and in reducing the burden of blindness.

Our study showed that most of the respondents knew that glaucoma is caused by high pressure in the eyes, but nearly half of them thought that it is a painful disease. This misconception may prove costly since the painless nature of chronic open-angle glaucoma is one of the factors responsible for late presentation. Furthermore, students were found to mistake glaucoma with cataract by not appreciating that blindness from glaucoma is irreversible.

A small percentage of them were also found not to have clarity between the drugs causing Glaucoma and the ones used for treatment. The irreversibility of fields in open angle glaucoma was a matter of confusion.

Conclusion

Majority of students had fair knowledge about the disease i.e from the risk factors, manifestation, treatment and sequelae of this visually fatal disease. Awareness was high but knowledge was average, and a certain amount of confusion prevailed regarding its clinical presentation.

The clinical curricular teaching should emphasize on Primary and secondary prevention. The importance of Glaucoma screening should be emphasized repeatedly so that a specialist, be it a Physician, Diabetologist or any doctor for that matter

should be able to have basic working knowledge of Glaucoma, thereby referring for early diagnosis and prompt management by the Ophthalmologist and reducing the burden of Glaucoma blindness.

This calls for renewed efforts from teachers in medical universities to reinforce teaching methodology with greater focus on Glaucoma , focusing on screening and early detection.

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