

GLAUCOMA AWARENESS AMONG MEDICAL STUDENTS OF A MEDICAL COLLEGE IN NORTH INDIA

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ABSTRACT

BACKGROUND

In many parts of India Glaucoma patients present for Ophthalmology check-up when their disease is in advanced stage and at that point of time majority of their vision is already lost. There are many studies addressing awareness about Glaucoma in general population but there is a paucity of literature on awareness in medical students. Keeping this in mind we planned this study to judge knowledge about Glaucoma in medical students of ESIC Medical College & Hospital, Faridabad. As these medical students will have huge responsibility of Glaucoma awareness in society and early referral of Glaucoma patients to Ophthalmologist will be possible only if these future doctors are sensitized.

Aim and Objectives of the study is to know level of awareness about Glaucoma in medical students (I to V semester) at ESIC Medical College & Hospital, Faridabad.

MATERIALS AND METHODS

Study was carried out at ESIC Medical College & Hospital, Faridabad from Nov 2017 to Jan 2018. 232 students from I, III and V semester participated in study after complete explanation of study procedure. This study was carried out when Glaucoma teaching was yet to begin for these students. Their Glaucoma knowledge was tested using questionnaire with 20 questions on different aspects of Glaucoma.

RESULTS

All the students knew Glaucoma as an eye disease. 71.55% students knew that compliance of medication is very important in Glaucoma treatment. 53.45% students did not know that Glaucoma causes peripheral vision loss in early course of disease. 41.38% students did not know that vision loss because of Glaucoma is irreversible. 54.71% students did not know that open angle Glaucoma is often asymptomatic. 45.69% did not know that Glaucoma medications needs to be continued even after intra ocular pressures are controlled. 55.17% students did not know that high myopia is a risk factor for Glaucoma.

CONCLUSION

Although 100% of medical students heard about Glaucoma, their knowledge regarding basic pathophysiology, treatment principals of Glaucoma were deficient. Many of them did not know common risk factors for Glaucoma. We need to focus on these deficient areas so that in future, society will get better medical professionals who will help in early suspicion and diagnosis of Glaucoma.

KEYWORDS

Glaucoma, Medical Students, Awareness, Vision Loss, Knowledge, Risk Factor, Early Diagnosis.

HOW TO CITE THIS ARTICLE: Ramavat PKR, Vashisht S, Ramavat M, et al. Glaucoma awareness among medical students of a medical college in North India. J. Evid. Based Med. Healthc. 2018; 5(15), 1287-1291. DOI: 10.18410/jebmh/2018/267

Financial or Other, Competing Interest: None.

Submission 16-03-2018, Peer Review 20-03-2018,

Acceptance 03-04-2018, Published 04-04-2018.

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DOI: 10.18410/jebmh/2018/267



BACKGROUND

Glaucoma also known as "sneak thief of Vision" is a blinding eye disease.¹ Damage once occurred is practically irreversible.² Early diagnosis and prevention of further visual loss is most effective way to provide better quality of vision in Glaucoma patients.³

In many parts of India Glaucoma patients present for Ophthalmology check-up when their disease is in advanced stage and at that point of time majority of their vision is already lost.⁴

This delayed presentation is due to the fact that central vision remains normal until advanced stage of Glaucoma.⁵ India needs health care professionals, who are sensitized for early diagnosis of Glaucoma. Only then early referral of Glaucoma patients to Ophthalmologist will be possible. There are many studies addressing awareness about Glaucoma in general population but there is a paucity of literature on awareness in medical students. Keeping this in mind we planned this study to judge knowledge about Glaucoma in medical students of ESIC Medical College & Hospital, Faridabad. As these medical students will have huge responsibility of Glaucoma awareness in society and early referral of Glaucoma patients will be possible only if these future doctors are sensitized. Also, with this study we planned to find out lacunae about Glaucoma knowledge in medical students so that we can take necessary steps to fill these lacunae.

MATERIALS AND METHODS

This study was carried out at ESIC Medical College and Hospital, Faridabad from Nov 2017 to Jan 2018. It was a cross-sectional descriptive type of study. Informed verbal consent was taken from I, III and V semester students after detailed explanation regarding study procedure. It was explained to the students that they should not mention their name on questionnaire. Study was conducted in accordance with declaration of Helsinki.

Inclusion Criteria

I, III and V semester MBBS students, studying at ESIC Medical College & Hospital Faridabad and giving their informed verbal consent for participation after complete explanation regarding study procedure.

Exclusion Criteria

Students NOT giving their informed verbal consent for participation after complete explanation regarding study procedure.

Semester	Total No. of Students	No. of Students Participated
I	100	88
III	97	79
V	95	65

Table 1. No. of Students Participated in Study

Questionnaire with 20 questions was given to each participant. Each question has options either in Yes or No.

Sr. No.	Question	Option
1.	Have you ever heard about Glaucoma	Yes/ No
2.	Glaucoma causes central vision loss in early course of disease	Yes/ No
3.	Vision loss because of Glaucoma is completely reversible with treatment	Yes/ No
4.	Glaucoma affects optic nerve fibres of Eye	Yes/ No

5.	Family members of Glaucoma patients' needs ophthalmic examination for Glaucoma	Yes/ No
6.	Long term steroid use can cause Glaucoma	Yes/ No
7.	Often symptoms are prominent in Open Angle Glaucoma	Yes/ No
8.	Glaucoma can be a cause of corneal oedema in infants	Yes/ No
9.	Glaucoma is same as raised intraocular pressure	Yes/ No
10.	Diabetes is a known risk factor for Glaucoma	Yes/ No
11.	Cataract surgery prevent Glaucoma	Yes/ No
12.	Glaucoma patients can discontinue medications once intraocular pressures are controlled	Yes/ No
13.	Visual field testing is one of the important tool to diagnose Glaucoma	Yes/ No
14.	High Myopia is a risk factor for Glaucoma	Yes/ No
15.	High blood pressure is a risk factor for Glaucoma	Yes/ No
16.	Moderate daily exercise a risk factor for Glaucoma	Yes/ No
17.	Blindness is very rare in case of untreated Glaucoma	Yes/ No
18.	Glaucoma and Cataract cannot coexist	Yes/ No
19.	Compliance of medications is very important in case of Glaucoma	Yes/ No
20.	Surgical treatments are not available for Glaucoma at present	Yes/ No

Table 2. Questionnaire

Result was computed after collection of all the responses. The data was entered and analysed using Epi-info software package version 6.04.

RESULTS

Out of 292 total students 232 students participated in study.

	Total No. of Students	No. of Students Participated in Study	Male Participants	Female Participants
Semester I	100	88	56	32
Semester III	97	79	40	39
Semester V	95	65	34	31

Table 3. Distribution of Participants

Sr. No.	Question	Expected Response
1.	Have you ever heard about Glaucoma	Yes
2.	Glaucoma causes central vision loss in early course of disease	No
3.	Vision loss because of Glaucoma is completely reversible with treatment	No
4.	Glaucoma affects optic nerve fibres of Eye	Yes

5.	Family members of Glaucoma patients' needs ophthalmic examination for Glaucoma	Yes
6.	Long term steroid use can cause Glaucoma	Yes
7.	Often symptoms are prominent in Open Angle Glaucoma	No
8.	Glaucoma can be a cause of corneal oedema in infants	Yes
9.	Glaucoma is same as raised intraocular pressure	No
10.	Diabetes is a known risk factor for Glaucoma	Yes
11.	Cataract surgery prevent Glaucoma	No
12.	Glaucoma patients can discontinue medications once intraocular pressures are controlled	No

13.	Visual field testing is one of the important tool to diagnose Glaucoma	Yes
14.	High Myopia is a risk factor for Glaucoma	Yes
15.	High blood pressure is a risk factor for Glaucoma	Yes
16.	Moderate daily exercise a risk factor for Glaucoma	No
17.	Blindness is very rare in case of untreated Glaucoma	No
18.	Glaucoma and Cataract cannot coexist	No
19.	Compliance of medications is very important in case of Glaucoma	Yes
20.	Surgical treatments are not available for Glaucoma at present	No

Table 4. Expected Response

Sl. No.	Question	Total No. of correct/ Expected Response	Total No. of wrong/Not Expected Response	No Response	% of Correct/ Expected Response
1.	Have you ever heard about Glaucoma	232	0	0	100%
2.	Glaucoma causes central vision loss in early course of disease	108	118	6	46.55%
3.	Vision loss because of Glaucoma is completely reversible with treatment	136	88	8	58.62%
4.	Glaucoma affects optic nerve fibres of Eye	151	79	2	65.09%
5.	Family members of Glaucoma patients' needs ophthalmic examination for Glaucoma	110	120	2	47.41%
6.	Long term steroid use can cause Glaucoma	149	81	2	64.22%
7.	Often symptoms are prominent in Open Angle Glaucoma	105	123	4	45.29%
8.	Glaucoma can be a cause of corneal oedema in infants	142	79	11	61.21%
9.	Glaucoma is same as raised intraocular pressure	134	98	0	57.76%
10.	Diabetes is a known risk factor for Glaucoma	129	99	4	55.60%
11.	Cataract surgery prevent Glaucoma	171	58	3	73.71%
12.	Glaucoma patients can discontinue medications once intraocular pressures are controlled	126	106	0	54.31%
13.	Visual field testing is one of the important tool to diagnose Glaucoma	111	118	3	47.84%
14.	High Myopia is a risk factor for Glaucoma	104	122	6	44.83%
15.	High blood pressure is a risk factor for Glaucoma	155	74	3	66.81%
16.	Moderate daily exercise a risk factor for Glaucoma	188	44	0	81.03%
17.	Blindness is very rare in case of untreated Glaucoma	140	89	3	60.34%
18.	Glaucoma and Cataract cannot coexist	161	71	0	69.40%
19.	Compliance of medications is very important in case of Glaucoma	166	64	2	71.55%
20.	Surgical treatments are not available for Glaucoma at present	174	58	0	75%

All the students had heard about Glaucoma. 64.22% students knew that long term steroids can cause Glaucoma. 61.21% students knew that corneal oedema can be one of

the presentations of developmental Glaucoma. 73.71% students knew that cataract surgery cannot prevent

Glaucoma. 71.55% students knew that compliance of medication is very important in Glaucoma treatment.

Major lacunae in knowledge were present in knowledge that Glaucoma causes peripheral vision loss in early course of disease, 53.45% students responded incorrectly. 41.38% students did not know that vision loss because of Glaucoma is irreversible. 42.24% students did not know that Glaucoma and ocular hypertension are different entities. 54.71% students did not know that open angle Glaucoma is often asymptomatic. 45.69% did not know that Glaucoma medications needs to be continued even after intra ocular pressures are controlled. 55.17% students did not know that high myopia is a risk factor for Glaucoma.

DISCUSSION

There are studies from India which were carried out with the aim of assessing awareness of Glaucoma in general population. But less no of studies are available on awareness

of Glaucoma in medical students. Medical students will be going to society as future doctors. They will have huge responsibility of Glaucoma awareness and early diagnosis/referral of patients in future.

We have carried out this study in I, III, V semester students when their Ophthalmology teaching on Glaucoma had not begun. This had an added advantage of finding lacunae in their knowledge and then rectifying it with specific approach.

On thorough literature search we found only few studies particularly about awareness of Glaucoma in medical students in India. There are many studies about awareness in general population with simple details of Glaucoma. But only few studies were carried out on medical students with specific details about disease. We compared our study results with some other similar studies we found.

	Our Study	N. Nageeb et al ⁶ (Clinicians)	Ichhpujani P et al ⁷ (Health care Professionals)	Komolafe O.O. et al ⁸ (Clinical Directorate)
Have you ever heard about Glaucoma	100%	100%	100%	100%
Visual field testing is one of the important tool to diagnose Glaucoma	47.84%	5.5%	-----	-----
Vision loss because of Glaucoma is irreversible	58.62%	72.3%	60.5%	76.7%
Long term steroid use can cause Glaucoma	64.22%	83.3%	-----	-----
High blood pressure is a risk factor for Glaucoma	66.81%	77.7%	-----	-----
Diabetes is a known risk factor for Glaucoma	55.60%	77.7%	-----	-----
Family members of Glaucoma patients' needs ophthalmic examination for Glaucoma	47.41%	94.4%	76%	31.7%
Compliance of medications is very important in case of Glaucoma	71.55%	-----	77.3	-----
Blindness is very common in case of untreated Glaucoma	60.34%	-----	-----	90%
Glaucoma causes peripheral vision loss in early course of disease and not central vision loss	46.55%	-----	-----	76.7%
Often symptoms are not prominent in Open Angle Glaucoma	45.29%	-----	-----	61.7%
Table 6. Comparison with other Similar Studies				

Variation in Glaucoma knowledge to certain extent was expected as our study was carried out in medical students before their Glaucoma teaching was started whereas medical experience in participants of other compared study was different. Nageeb et al carried out their study in clinicians in India. As per Ichhpujani P et al they carried out their study in healthcare professionals in India. Whereas Komolafe O.O. et al mentioned that they carried out their study in clinical directorate in Nigeria.

CONCLUSION

Although 100% of medical students had heard about Glaucoma, their knowledge regarding basic pathophysiology, treatment principals of Glaucoma was deficient. Many of them did not know common risk factors for Glaucoma. We need to focus on these deficient areas so that in future, society will get better medical professionals who will help in early suspicion and diagnosis of Glaucoma.

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