

Awareness of Diabetic Retinopathy in Patients Attending Medical OPD in a Tertiary Care Hospital

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Abstract:

Aim: To evaluate awareness of diabetic retinopathy among a sample of adult type 2 diabetes mellitus patients.

Material and Methods: 50 adult type 2 diabetes mellitus patients were selected and after obtaining informed consent they were interviewed with help of Pre tested semi structured questionnaire in local language namely Tamil. The questionnaire comprised of questions regarding basic demographic data, awareness of diabetic retinopathy, diabetic control, treatment options available for retinopathy and barriers for undergoing early eye screening. Collected data were analyzed to know the overall awareness about diabetic retinopathy among adult type 2 diabetes mellitus patients.

Result: Out of the 50 patients taken for study, 56% were males and 44% were females. 56% were of more than 50 years age. Most of the patients [76%] were aware that diabetes mellitus can cause eye complications and it can be prevented by adequate control of their sugar levels.

74% of the patients had the opinion that regular eye check up should be done for diabetes mellitus patients annually or once in 6 months. Medical personnel were the source of information in 46% patients for creating awareness about diabetes mellitus induced eye complications. 20% came to know about them from friends and relatives while the remaining 17% had information from media such as television and newspaper. Most of the patients in the study were not aware of the treatment given for the eye complication especially diabetic retinopathy. 66% patients had undergone eye check up in the past and attributed it to their physician's referral. The remaining 34% had not undergone eye screening due to lack of awareness. Few of them said that they could not afford expensive eye tests.

Conclusion: Creating awareness about diabetic retinopathy plays an important role in prevention of visual impairment and blindness in diabetes mellitus patients

Keywords: Diabetes mellitus, Retinopathy, Visual disability.

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I. Introduction

Diabetes mellitus [DM] is the world's most common metabolic disorder. It causes microvasculopathies and neuropathic complications in various organs leading to diabetic retinopathy [DR], nephropathy, autonomic neuropathy and cardiovascular complications [1]. India has emerged as the global capital for diabetes mellitus with over 77 million affected people in 2019 and it may reach 134 million by 2045 [2]

Diabetic retinopathy has become a major cause of visual disability leading to irreversible blindness in adults. DR starts as neuro-retinopathy and later vascular changes occur due to breach of blood retina barrier and obliterated retinal capillaries. Uncontrolled glucose levels, age, long duration of DM, hypertension, smoking and hypercholesterolemia are some risk factors that aggravate DR [3]. World wide prevalence of DR is 35% whereas it is 12- 22% in India [4]. If not detected and treated early, over one year or later it may lead to severe permanent vision loss. Early detection and treatment of DR is important for saving the DM patients from vision loss. Creating awareness about eye screening in DM patients and increasing their knowledge about DR will help in prevention of DR.

II. Materials And Methods

This facility based cross sectional study was done over a period of four months from April 2022 to July 2022 to assess the awareness about diabetic retinopathy among diabetes mellitus type 2 patients attending Medicine OPD in our (college) hospital.

Inclusion criteria: Consenting patients above 18 years age with type 2 diabetes mellitus attending Medicine OPD at Saveetha Medical college hospital

Exclusion criteria: Patients who had underwent previous interventional surgery/laser therapy for diabetic retinopathy and non-consenting patients.

III. Methodology

After obtaining informed consent, about 50 selected patients were interviewed with help of predesigned, pretested, semi-structured questionnaire in regional language ,which comprised of questions regarding basic demographic data, awareness of diabetic retinopathy, diabetic control, treatment options available for DR and barriers for undergoing early eye screening.

QUESTIONNAIRE [IN REGIONAL LANGUAGE-TAMIL]

1. Duration of Diabetes mellitus
2. Do you know that Diabetes mellitus can cause eyecomplikations? Yes/No
3. Are you aware of the retinal komplikations causedby Diabetes mellitus? Yes/No
4. Will eye komplikations occur if your sugar level ismaintained under control? Yes/No
5. Should Diabetes mellitus patients check their eyesregularly? Yes/No
6. How frequently should Diabetes mellitus patientsunder go eye check up?
a.once in six months b. Annually c. only if visuallydisturbed d. no idea
7. How did you know that Diabetes mellitus can causeeye komplikations?
a.Medical personnel b. friends/relatives c. Media
8. What are the treatment options available for retinalkomplkations due to Diabetes mellitus?
a. laser treatment b. surgery c. no idea
9. Are you taking adequate treatment for Diabetes mellitus and maintaining your sugar levels within normal limits?
10. Have you undergone eye screening? Yes/No
11. If not, what is the reason?
12. If done, what was the reason for eye screening?

The collected data was analysed to know the overall awareness about diabetic retinopathy among adult type2 diabetes mellitus patients.

IV. Results

All the participants taken for study were previously diagnosed Diabetes mellitus type2 patients. Out of the 50 patients,28[56%] were males and 22[44%] were females. About 56% of the total patients were of more 50 years age while 44% were of less than 50years age. 11 [22%] patients were having DM for more than 10 years.

Most of the patients[38][76%] were aware that diabetes mellitus can cause eye komplikations and decreased vision.They [70%]were also aware that adequate control of their sugar levels can prevent eye komplikations.37[74%] of the patients had the opinion that regular eye check up should be done for diabetes mellitus patients. Annual or once in 6 months eye check up have to be done according to 66% of the patients.

Medical personnel were the source of information in 23[46%] patients for creating awareness about DM induced eye komplikations.20%[10]came know about them from friends and relatives while the remaining 17[34%] had information from media such as television and newspaper.

Most of the patients in the study were not aware of the treatment given for the eye komplikation especially diabetic retinopathy while 28% were aware of laser treatment for DR.

About 86%[43] were maintaining their sugar levels under control while the remaining 7 had experienced frequent spikes in their sugar levels.33 patients[66%] had undergone eye check up in the past.17 patients had not undergone eye screening due to lack of awareness.Few of them said that they could not afford expensive eye tests. 22 [44%]patients who had undergone eye screening attributed it to their physician's referral.

V. Discussion

In this study ,78% of the study participants had DM less than 10 years . The males and females were equal in number . 76% were aware that uncontrolled diabetes mellitus can lead to blindness. Our study was hospital based and participants were previously diagnosed DM patients which may have attributed to an increased awareness of DR among our study group. Lingam et al in their study from Hyderabad observed that 74% of the DM patients knew that their disease can affect their retina[5]. Males were more aware than females

about the ocular complications in our group probably due to their more interaction with outside world when compared to females. This warrants creating awareness among females through involvement of women self help groups, media like TV etc as women will further influence other family members about DM and its complications and motivate them for regular visit to Ophthalmologist for DR screening[6].

In the present study,74% told that DM patients should undergo regular eye checkup and 66% were aware that it should be done once in 6 months or annually. But 10% of the study patients had the idea that they have to go for eye check up only if they have visual disturbances.

Most of our study patients[86%] had their sugar under control and 66% of them had undergone eye check up atleast once after being diagnosed with DM. Those who had not done eye screening gave reasons such as lack of knowledge and absence of visual symptoms. 60% of the patients in this study were aware of Diabetic retinopathy but 56% of them were unaware of the treatment options available for DR. Few knew about the laser and surgical interventions done for treating DR.

44% of our study subjects had information about eye check up from treating physicians which is similar to study by Venugopal et al[7].This emphasizes the role of physician and health care workers in creating awareness about DM and its complications and therefore the need for programmes for updating and training them. Few studies like Murugesan et al [8] have reported lower awareness among paramedical staff.

VI. Conclusion

Creating awareness about DR plays an important role in prevention of visual impairment in DM patients. It is the responsibility of primary health care physicians to counsel patients regarding screening and also ensure their compliance in regular follow-up .All newly detected DM patients should be sent to ophthalmologists for fundus examination at the earliest and thereafter at least an annual fundus examination should be emphasized. Practitioners should not wait for any complaint of visual disturbances for referral. They should also educate the DM patients about role of sugar and lipid control in prevention of eye complications. Eye care facilities should be made more available and accessible to rural population.

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