



## KNOWLEDGE, ATTITUDE AND PRACTICE OF DIABETIC RETINOPATHY AMONGST THE DIABETIC PATIENTS OF TERTIARY HOSPITAL

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### ABSTRACT

**Introduction:** Diabetes Mellitus (DM) is a metabolic disorder which is characterized by elevated blood sugar levels. It is a non-communicable disease and currently, a major disease of concern in terms of public health.

**Aim:** To assess the knowledge, attitude and practice of diabetic retinopathy amongst the diabetic patients of Rajindra Hospital, Patiala

**Material and Methods:** Patients diagnosed with diabetes mellitus visiting to Ophthalmology OPD, Rajindra Hospital, Patiala were incorporated in this study. Self administered questionnaires were used to assess knowledge, attitude and practice of diabetic retinopathy amongst the diabetic patients. The data collected was entered in a pre-designed proforma and analysed using SPSS version 20.0

**Results:** This study incorporated 539 diabetic individuals out of which 318 (58%) were male patients and 221 (42%) were females. Majority of the diabetic patients (75.62%) were aware that diabetes can cause eye disorders, 73.80% of patients replied that diabetic individuals should go for regular eye check-ups and 65.10% of patients were aware that they should visit an ophthalmologist in the event of eye problem. Out of 539 diabetic 357 patients (66.3%) were aware that timely treatment can prevent or delay damage of eyes in diabetic patients and about 95% of all the participants went for regular ocular examinations.

**Conclusion:** Majority of the diabetes patients were aware that diabetes can cause eye disease and it is necessary for the diabetic individuals to consult the ophthalmologist for the prevention of the same.

**KEYWORDS :** Awareness, Approach, Diabetes, Ocular disorders

### INTRODUCTION

Diabetic Retinopathy (DR) is a priority blinding disease and is now included in the disease control strategy of 'VISION 2020' initiative. [1,2] The WHO has published guidelines for program approach to address DR. [3] In spite of rapid technological advances in screening and management of DR, primary prevention still remains to be the only feasible approach in many developing countries with competing demands. To delay the progress of eye complications, in addition to the periodic eye examination and timely interventions, it is crucial that the patients with diabetes judiciously control their hypertension, blood sugar and lipid levels. [4] To prepare effective method of health promotion about diabetes, baseline information about knowledge, attitude and practice regarding eye complication and eye care of diabetics is crucial. Such studies were conducted in India, [5] Australia [6] and Italy. [7].

Knowledge refers to the understanding of diabetic retinopathy, attitude refers to patient's perception, as well as any preconceived ideas they may have and practice refers to the methods in which patients demonstrate attitudes and practices, that is, use of services regarding eye care.

A scarcity of information is observed in the literature regarding awareness of diabetic retinopathy among the diabetic individuals.

### MATERIAL AND METHODS

In this cross-sectional study, patients diagnosed with diabetes mellitus attending the Ophthalmology OPD, Rajindra Hospital, Patiala were incorporated in this study. Prior permission was obtained from the ethical clearance committee and consent was taken from all the participants. All consenting patients attending over a period of twelve months (April 2016 to March 2017) were randomly selected.

The patients were requested to fill the self administered questionnaires. The questionnaire was prepared in English. The content validity of the questionnaire was established by submitting the tool to the experts (Specialists having 10 or more years of experience) in the field of Ophthalmology for content validation. The questionnaire contained information regarding age, gender, education qualification, economic status, duration of diabetes. Questions were also included to measure the levels of various aspects of knowledge, attitude and practice, regarding retinopathy, choice of healthcare professional, treatment

options for diabetic retinopathy. Statistical analysis was carried out using SPSS version 20.00 (SPSS Inc., Chicago, USA), by applying Chi-square and z-proportionality tests.

### RESULTS

[Table/Fig-1] shows that, out of 539 samples, 318 (58%) were males and 221 (42%) were females, 70 (12.94%) patients belonged to 20 and below age group, 114 (21.24%) patients were in 21 -39, 142 (26.40%) in 40-59 and 213 (39.42%) patients were in the age group of 60 and above years. Further, a maximum of 36.90% of samples had duration of diabetes since 6-9 years and a minimum of 13.21% of samples had duration of diabetes since 15 and above years, followed by 29.15% having diabetes since 9-14 years. A maximum of 50.34% of patients belonged to middle economic status, 28.70% were belonged to high economic status and 20.95% of patients were from low economic status. Regarding education level, 33.02 % of individuals were educated up to secondary level, 23.23% were graduated and educated above and 20.95% of patients were studied upto primary level. A statistically significant difference was observed among all these variables significant ( $p < 0.05$ ).

VARIABLES	n	PERCENTAGE(%)
GENDER	MALE	318
	FEMALE	221
AGE	20 & BELOW	70
	21-39	114
	40-59	142
	60 & ABOVE	213
DURATION OF DM(YEARS)	5 & BELOW	105
	6-9	209
	9-14	157
	15 & ABOVE	68
ECONOMIC STATUS	LOW	104
	MEDIUM	293
	HIGH	142
EDUCATION LEVEL	PRIMARY	107
	SECONDARY	189
	GRADUATE & HIGHER	247

The participants' knowledge was assessed based on their understanding toward diabetic retinopathy, which included the causes,

risk factors, symptoms, complications, and treatment options. Participants were considered to have answered the questions correctly if they adhered to the recommended guidelines. Most of the questions were answered correctly by the participants, indicating a relatively good overall knowledge toward the disease. However, more than half of the participants were aware of the major causes of diabetes, the effects of diabetes to their BP and the purpose/ importance of doing urine tests. Furthermore, half of the participants had knowledge regarding the components of a well-balanced diet. 76% are aware of the treatment of diabetes. In our study, 70% of the study participants reported that exercise will help in controlling the diabetes. About 36% of the respondents answered that they are doing exercise regularly and 24% explained that they are following a controlled and planned diet. 38% are aware of blood sugar levels falling below normal when they are taking the drugs. From the results of the practice questions, it was found that the participants have poor knowledge regarding the importance of frequent health check up's. Most patients reported to have checked their blood glucose levels only during their scheduled consultation with the doctor.

Response of the participants to the knowledge questions involved in assessment of KAP's of diabetic retinopathy

	No. of patients answer correctly	%
1. Can Diabetes cause eye disease?	408	75.62
2. Symptoms of Diabetic eye disease?	357	66.30
3. Should persons with diabetes go for regular eye examination?	398	73.80
4. Whom to consult in event of eye problem?	351	65.10
5. Is there need to visit ophthalmologist if sugar under control?	279	51.80
6. Timely treatment can prevent/delay damage to eyes?	357	66.30
7. Is there any treatment available for DR?	318	59
8. How do you come to know about DR?	346	64.2
9. Have you undergone dilated fundus examination for DR?	252	46.8
10. Lifestyle modification required for diabetic patient?	376	69.7
11. Can diabetes cause blindness?	445	82.6

Response of the participants to the attitude questions involved in assessment of KAP's of diabetic retinopathy

	No. of patients answer correctly	%
1. DR treatment can gain normal vision?	195	36.2
2. Diabetes are more likely to have eye disease?	352	65.37
3. Diabetes can be cured with diet control?	422	78.32
4. DR can be cured with laser treatment?	171	31.81

Response of the participants to the practice questions involved in assessment of KAP's of diabetic retinopathy

	RESPONSES	NO. OF PTN	%
1. When did you last get your sugar checked?	Monthly	178	33
	six monthly	169	31
	Yearly	224	41.5
2. How often do you go for eye examination?	Monthly	165	30.6
	six monthly	276	51.9
	Yearly	62	11.5
3. Do you exercise regularly?		194	36
4. How often do you get your dilated fundus examination?	Monthly	115	21.4
	Six monthly	252	46.8
	Yearly	192	35.77

**DISCUSSION**

It is well known that prolonged duration of disease results in various disease-associated complications mainly as a result of ignorance and poor disease control, thus contributing to the disease-related morbidity. The main objective of this study was to ascertain the awareness level and the practice patterns of the people.

Our study revealed good knowledge levels in 55.6% of the population and the fact that about 82.6% knew DM could cause blindness. According to the Chennai urban rural epidemiology study, [8] only

19.0% (4951/26,001) of the total population and only 40.6% (621/1529) of diabetics were aware that DM could produce some complications. In another KAP study by Rani et al., [9] 966 (49.9%) individuals had knowledge about DM and 718 (37.1%) about diabetic retinopathy. They attributed literacy as the reason for the better knowledge among Malayalam-speaking subjects (i.e. Keralites). We observed women in the general population to have significantly better knowledge about the disease, which is similar to the results of the study by Rani et al. [9] Although Murugesan et al. [10] had more female participants in their study group, they observed lower rates of education and lower levels of awareness among them.

In 2002, a similar KAP study in our outpatient department [11] revealed that 50.8% of patients were aware of frequent eye check-ups and only 19% knew about retinopathy.

**CONCLUSION**

We conclude that the motivation and counseling stressing the importance of lifestyle modifications and self-management is required for the patients suffering with diabetes and diabetic retinopathy. The results of the present study revealed that knowledge about eye complications and care is satisfactory among diabetic individuals. This baseline information about knowledge, attitude and practice regarding eye care among persons with diabetes ought to be considerate and concentrated intensely amid implementation of health promotion programmes.

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