A Pilot Study to Assess Diabetes Knowledge Among Diabetics

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ABSTRACT

Background: Urbanization and life style changes in developing countries lead to increase in the incidence and prevalence of diabetes. Diabetes is a chronic disease which affects both genders of all age groups. Glycemic level of diabetic patients if not maintained within the normal limits leads to micro and macro vascular complications. The effective management of glycemic level is based on the disease awareness level of the patients, as education is the best way to increase the awareness about a disease and to prevent worsening of the disease conditions. **Aim:** This descriptive study aims at assessing the diabetic knowledge among diabetic patients. **Material and Methods:** Patients aged 18-65 years of both genders diagnosed with diabetes admitted to the hospital were recruited and their knowledge about diabetes is obtained by using a questionnaire. **Results:** A total of 339 patients were recruited for the study out of which 48.08% were females and 51.91% were males. Majority of the study population (36.57%) were in the age group of 51-60 years. In our study, 64% of subjects belong to lower economic class, while 26% and 10% belongs to upper and middle class respectively. Patients with a family history of diabetes (41%) had good knowledge of diabetes when compared to patients with no family history of diabetes (58.99%). **Conclusion:** The increase in duration of diabetes also showed an increased awareness of the disease in our study groups. Imparting regular disease education to the patients will result in better awareness about the disease and encourages patients to follow better self care management and reduces the burden experienced by the patients.

Key words: Diabetes, Diabetes Knowledge, Diabetes education, Health education, International Diabetic Federation.

INTRODUCTION

Diabetes is one of the serious and growing problems in the developing countries. The World Health Organization (WHO) and International Diabetic Federation (IDF) have estimated that the global prevalence of diabetes will increase to 366 million by the year 2030, which is 214% higher than the prevalence in 2006.[1] India has been declared as the diabetes capital of the world, as the total number of people diagnosed with diabetes was 41 million in 2006 and it is expected to rise 70 million by the year 2025.[2] This alarming increase in prevalence and incidence of diabetes is attributed to the changes in lifestyle associated with urbanization and industrialization.[3] Diabetes if not monitored or controlled adequately is often associated with microvascular and macrovascular complications which causes increased mortality among diabetics.[4,5] Poor knowledge is found to be the main factor for progression of the disease and associated co morbid conditions.[4,10] Several studies have indicated that self care practices and knowledge about a disease often helps in combating the disease associated impairment in health and quality of life.[4,6,9,10] This pilot study aims to assess the background knowledge of diabetes among diabetic individuals.

MATERIALS AND METHODS

This descriptive pilot study was conducted for a period of 3 months between October 2014 and December 2014 at The GSL

General Hospital and Medical College, Rajahmundry, Andhra Pradesh. A total of 339 patients aged between 18 and 65 of both genders and diagnosed with diabetes and admitted in the hospital for various reasons were recruited for the study.

The patients were informed about the study and their oral consent was obtained. The patients' initial demographics data was collected from the medical records and from direct interview in a structured form. The socioeconomic status of the patients was obtained by using kuppuswamy classification. The questionnaire was administered to the patients (translated into Telugu and validated) to assess the knowledge of diabetes and their responses were collected, entered in excel sheet and validated using SPSS V-21.

RESULTS AND DISCUSSION

A total of 339 patients were recruited for the study of which 48.08% were females and 51.91% were males. The baseline demographic details of the study groups are given in Table 1. In our study, majority of the respondents were in the age group of 51 to 60 years (36.57%), this fashion is similar to the study conducted to assess the knowledge of diabetes,[6,11] from which it is evident that in the fourth and fifth decades of life, patients disease status worsen and requires admission to the hospital. The Socio Economic Status (SES) scale assessed by Kuppuswamy scale categorizes patients into lower, middle, and upper class.[7,8] In our descriptive study 64% of the patients belonged to lower class, while 26% and 10% of the patients belong to middle and upper class respectively. The knowledge assessment of diabetes among the study groups assessed by using questionnaire.[11] This questionnaire includes, a) Diabetic specific information, b) Knowledge regarding diabetes znd c) Self–care practice among the study population which are given in Table 2 and 3.

The knowledge of a disease plays a crucial role in self management and to lead a better life. Although higher percentage of patients reported good knowledge about diabetes and self care practices to be followed in diabetes, a considerable size of population (80.23% and 48.67%) showed poor knowledge of maintain foot hygiene and carrying quick acting sugar respectively. In our study groups 54.86% of the subjects were on both oral hypoglycemic agents and insulin therapy which indicates that the patients were on poor glycemic control. The patients with positive family history of diabetes (41%) showed good knowledge about diabetes when compared with negative family history (58.99%). The

Table 1: Demographics of the Study Groups (n=339)	
Variables	**Percentage (%)**
Age in Years	
30 -40	19.46%
41-50	28.61%
51-60	36.57%
> 60	5.06%
Gender	
MALE	48.08%
FEMALE	51.91%
Socio Economic Status (SES)	
Lower class	64%
Upper class	26%
Middle class	10%
Duration of Illness	
1 to 5 years	34%
5 to 10 years	19%
Greater than 10 years	24%
Family History of Diabetes	
Yes	41%
No	58.99%
Smoking and Alcohol Habits	
Smoker	26.13%
Non smoker	31.25%
Alcoholic	26.70%
Non alcoholic	30.68%
Treatment	
Oral hypoglycemic agents	45.13%
Both (insulin and oral drugs)	54.86%

duration of diabetes also links with the knowledge of diabetes; this result of our study is consistent with the various studies.[9,10] A fair amount of our study population showed a good knowledge about detection technique of diabetes, hereditary and non infectious nature of diabetes, which is similar to the study conducted.[11] A substantial amount of the study population was aware of importance of exercise, diet modification, and drug compliance in order to control diabetes. These observations are consistent with several studies.[10,11] The study population had appreciable knowledge of relation between regular exercises and drug compliance with the glycemic levels.

CONCLUSION

Knowledge about a disease condition is imperative in controlling and preventing the complications associated with the disease conditions. From various studies it is clear that imparting disease education to the patients results in better self care practice and improved quality

Table 2: Respondent's Knowledge on Diabetes Mellitus

Variables	% of Correct Response	% of in Correct Response
Is diabetes hereditary?	66.66%	33.33%
Is diabetes infectious?	89.67%	10.32%
How can diabetes be detected	92.92%	6.78%
Is exercise beneficial for control?	60.47%	39.23%
Is dietary modification beneficial for control	74.92%	24.77%
Stop smoking/alcohol is beneficial?	62.24%	37.46%
Once controlled drugs should be stopped?	74.92%	24.77%
Diabetes can be cured?	63.12%	33.92%
Self Care Activities Test blood sugar regularly	90.56%	9.43%
Follow healthful eating plan	76.10%	20.35%
Participate in exercise	39.23%	22.41%
Good drug compliance	68.43%	29.2%
Maintain foot hygiene	12.68%	80.23%
Carry quick acting sugar	42.77%	48.67%
Is diabetes hereditary?	66.66%	33.33%
Is diabetes infectious?	89.67%	10.32%

Table 3: Mean ± S.D of Respondent's Knowledge on Diabetes Mellitus

Variables	Mean ± S.D Correct Response	Mean ± S.D Incorrect Response
Diabetes knowledge among study population	73.69 ± 12.12	26.32 ±12.19
Self care practices by patients	64.79 ± 25.57	35.04 ± 25.66

S.D=Standard Deviations.

of life. Hence, it is the job of clinical pharmacists to impart knowledge regarding the disease condition to the patients. Reinforcement of the knowledge and motivation are found to bring better self care practices which helps patients to control their disease and to lead a better quality of life.

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AQ-6 CONFLICT OF INTEREST

The authors declares no conflict of interest.

ABBREVIATIONS

WHO: World Health Organization
IDF: International Diabetic Federation
SES: Socio Economic Status

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