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Knowledge of Diabetes, its Treatment and Complications in Diabetic Patients

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ABSTRACT
Background: *At present India is considered as the diabetic capital of the world. Studies have shown that patients' knowledge about the treatment and complications of diabetes is limited especially with regard to preventive aspects.*
Objectives: *To assess the knowledge about Diabetes Mellitus, its treatment and complications in diabetic patients.*
Methodology: *This was a cross sectional study using a structured questionnaire, conducted in diabetic patients attending a secondary care hospital. The patients were chosen by convenient sampling.*
Results: *100 patients were interviewed to collect data. Of the 100 patients, 49% thought diabetes can be prevented. Forty patients told that they can stop medicines once the blood sugar becomes normal. Though 90% of patients told that diabetes affects the eyes, only 69% patients told that they should have regular eye check up done.*
Conclusions: *Patients' knowledge about diabetes mellitus is limited. There is a definite need to empower patients with the knowledge required to help them obtain the maximum benefit from their treatment of diabetes mellitus.*
Keywords: *Diabetes Mellitus, knowledge, treatment.*

Introduction

At present India is considered as the diabetic capital of the world. There are approximately 3.5 crore diabetics in India, and this figure is expected to increase up to 5.2 crore by 2025. Every fifth patient visiting a consulting physician is a diabetic and every seventh patient visiting a family physician is a diabetic.(1) Keeping in view the alarming increase in the incidence and prevalence of diabetes in India, the World Health Organization (WHO) has declared India as the "Diabetic Capital" of the world.

Studies have shown that increasing patient knowledge regarding disease and its complications has significant benefits with regard to patient compliance to treatment and to decreasing complications associated with the disease.(2)

A study done by Malathy R et al in Erode among diabetic patients showed that diabetic patients

develop complications due to poor awareness regarding the disease and inadequate glycemic control. Patient education is the most effective way to lessen the complications of diabetes and its management. Pharmacist counselling might be an important element in diabetes management programs.[3]

Another study done by Stephen D et al showed that knowledgeable patients were more likely to perform self-management activities but not to receive recommended ambulatory care or reach metabolic outcome goals. Providing patient education about diabetes care processes should be tested as a means of increasing ambulatory care to prevent diabetic complications.[4]

A study done in Punjab by Gulabani M et al showed that patient knowledge about the treatment and complications of diabetes is limited especially with regard to preventive aspects.[5]

With this background, we conducted this study to assess the knowledge of Diabetes Mellitus in diabetic patients attending a secondary care hospital in Kerala.

Objectives

To assess the knowledge about Diabetes Mellitus, its treatment and complications in diabetic patients.

Methodology

This was a cross sectional study using a structured questionnaire, after getting the informed consent of the patients. The questionnaire was structured by compiling pre validated Diabetes Knowledge Questionnaires (DKQ) which had 30 questions. The study subjects were chosen by convenient sampling. The study was conducted from September 2011 to July 2012.

Inclusion criteria: Diabetic patients attending MOSC Medical Mission Hospital, Kunnamkulam, Kerala were included in the study. This included patients both from the out-patients and in-patients department.

Sample size: Assuming that 50% diabetics had reasonable knowledge about various factors associated with the disease and that we require a precision of 10%, the sample is calculated as

$N = 4pq/d2 = (4x\ 0.5x0.5)/0.1x0.1= 100$

Where p is the proportion of the estimated population and q = (1-p), d representing the absolute precision.

Statistical Analysis

Data was entered in Microsoft office Excel. Percentages were calculated for descriptive statistics.

Results

A total of 100 patients were interviewed. Of them 63 were males and 37 were females. Among them 42% patients thought that diabetes is incurable, while 49% thought diabetes can be prevented. Only 30% patients knew that there are 2 main types of diabetes (type I & type II).

Off the 100 patients interviewed, 83% told that the actual cause of diabetes is lack of effective insulin in the body. Only 68% of patients knew that obesity was a risk factor for diabetes. Forty patients told that they can stop medicines once the blood sugar becomes normal.

Majority of the patients (57%) thought that the best way to check their diabetes was by testing the urine. Majority (62%) of the patient could tell their target fasting blood sugar, while only 50% of them knew their target post prandial blood sugar.

Only 40% patients knew the symptoms of hypoglycaemia but 74% told that they knew sweets should be consumed when there is a hypoglycaemic episode. Majority (58%) told that frequent urination & thirst are signs of hyperglycaemia.

While assessing the knowledge about complications of diabetes mellitus, 90% of the patients told that their eyes will be affected by diabetes. Majority of the patients (92%) told that diabetes has a deleterious effect on heart. Only 80% of the patients knew that their kidneys will be affected and 85% of the patients told that diabetes will cause loss of sensation of hands and feet.

Though 90% of patients told that diabetes affects the eyes, only 69% patients told that they should have regular eye check up done. Only 67% of them knew that they should examine and clean their feet regularly. Majority (82%) of patients knew that cuts and abrasions in diabetics heal more slowly.

Table 1. Identification of organs that could be damaged by Diabetes Mellitus

Organ damaged by Diabetes Mellitus	Percentage of patients
Eyes	90
Heart	92
Kidney	80
Feet	85

Discussion

Patients' knowledge regarding the treatment and complications of diabetes showed serious deficiencies even though most had been diabetic for years. The fact that only 49% of the patients thought that diabetes can be prevented, means that imparting knowledge regarding prevention should be a major thrust in the future

In our study only 40% of patients knew the actual symptoms of hypoglycaemia. However 74% of them knew that they should consume sweets if they had an episode of hypoglycaemia. So it shows that knowledge of diabetes in patients is only partial and most of them may not be able to take appropriate corrective measures sufficiently early and may seek medical help only at very late stages.

Though 90% of patients told that diabetes affects the eyes, only 69% patients told that they should have regular eye check up done. Diabetes mellitus is the most common cause of non-traumatic lower limb amputations.[5] But only 67% of patients knew that they should examine and clean their feet regularly. These reflect the lack of awareness among patients regarding the prevention of complications of diabetes.

Conclusion

Patients' knowledge about diabetes mellitus is limited. There is a definite need to empower patients with the knowledge required to help them obtain the maximum benefit from their treatment of diabetes mellitus and to prevent further complications due to diabetes.

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