

Knowledge attitude and practice of type 2 diabetic patients in a tertiary care teaching hospital in India

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Abstract

Objective: To assess the Knowledge, Attitude and Practice of type 2 diabetic patients at AIIMS Rishikesh.

Materials and methods: A cross-sectional study was done at the All India Institute of Medical Sciences (AIIMS) Rishikesh through a structured interview of 200 diabetes mellitus (Type 2) patients attending outdoor facility at the Institute. The questionnaire did not contain any questions that reveal the identity of the patients.

Results: A total of 200 outdoor patients were analyzed. Only 30% of the patients had BMI up to or below 23 kg/m². Out of 200 patients 64% were male 36% were female patients. 18% of the population did not know any complication regarding the diabetes. 78% of the population was literate. Only 50% of the population knew what diabetes is? 88% of the population still believes that bitter substances can control diabetes. 80% of the population thinks that insulin should be avoided as it is habit forming. Misconceptions were quite common among the population regarding diet, insulin and diabetes. This highlights the urgent need for better health information to the patient through large scale awareness programmes so as to change the attitude of our public regarding diabetes as India being the world capital.

Conclusions: This study showed that there was poor knowledge, attitude and practice about the diabetes which calls for immediate action and education by skilled health care providers.

Introduction

Diabetes mellitus is a metabolic disorder of multiple etiological factors characterized by chronic hyperglycemia with disturbance of carbohydrate metabolism which resulted from either insufficient insulin secretion, resistance to the action of Insulin or both [1,2]. International diabetes federation's report described that 382 million had diabetes in the year 2013 and it was estimated to reach 592 million in the year 2035. Diabetes mellitus is classified in to type I (IDDM), type 2 (NIDDM) and Gestational Diabetes Mellitus (GDM) type I being characterized by insulin deficiency which needs daily administration of insulin. Type 2 diabetes mellitus results from the body's ineffective use of insulin while gestational diabetes is hyperglycemia with onset or first recognition during pregnancy [3,4]. Participation of patients is very crucial in the management of diabetes mellitus as medications alone aren't enough to manage the disease without different non-pharmacological measures taken [5,6]. Prevalence of diabetes mellitus is increasing globally, [7] more so in developing countries like India due to rapid urbanization [8,9].

Materials and methods

Subjects and sampling: 200 Type 2 diabetic patients seen sequentially at the medicine OPD of AIIMS Rishikesh to assess the knowledge, attitude and practice of diabetes mellitus patients towards the disease.

Data collection: Data was collected through a structured interview with patients attending the outpatient door of the institute during the study period from the November 2014 to January 2015. These included the newly diagnosed Type 2 diabetes mellitus patients and medicine OPD or referred from within and outside institute for treatment of diabetes mellitus. The exclusion criteria precluded patients who were

not physically or mentally able to conduct the interview. In the present study 200 patients who fulfilled the inclusion criteria and were willing to participate in the study were interviewed. Furthermore the data collected through the interviews was kept confidential and used strictly for the purpose of the study.

Characteristics

Body mass index: As per WHO patients those have a BMI between 18.5-23 kg/m² considered normal, those having BMI between 24-27 kg/m² were considered overweight and above 27.5 kg/m² obese.

Assessment of knowledge: A questionnaire was prepared to assess the knowledge of the patients regarding the diabetes having content about Diet, Insulin and Diabetes and its complications.

Diet and Exercise practice: Diet was assessed by asking about the major food groups taken by the patient. Exercise practice was assessed by enquiring about the nature of exercise done.

Results

Characteristics of the subjects: The 64% of the patients were male and 36% of the patients were female. The mean age was 50 years and the mean duration of the disease is 9.7 years. The 62% of the patients

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had family income >50,000 in a year. The 78% of the population was illiterate. The source of information for the entire population was doctor hence there by meaning lack of awareness by other health care provider (Table 1).

Weight status: It is worrisome that only 30 % of the populations were having BMI between 18-23 which is considered to be normal for Asian population because of having thrifty phenotype. 53% of the populations were overweight having BMI between 24-30 and 17% of the populations were having BMI > 30 (Tables 2-7).

Knowledge regarding the complications of diabetes: The population has poor knowledge regarding the complications of diabetes. 18% of the population didn't know any kind of complications regarding the diabetes. Only 4% of the population knows that diabetes can affect proper functioning of heart.

Assessment of knowledge: The overall assessment regarding the knowledge of diabetes was satisfactory 50% of the population knows what diabetes is and what causes diabetes? But the population had poor knowledge regarding the features of diabetes.

Table 1. Characteristics of population (N=200).

Variables	Percentage(n=200) p>0.05
Age(years) Mean \pm SD	50 \pm 9.32
Mean duration of the disease (years)	9.7
Gender Distribution	
Male	64
Female	36
Work	
Own Occupation	16
Student	3
House wife	23
Service	42
Labor	16
Annual Income	
<20,000	18
20,000-50,000	20
>50,000	62
Source of Information	
Doctor	100
Dietician	-
Media	-
Internet	-
Some other source	-
Education	
Illiterate	22
Primary	18
Secondary/Middle	24
Graduate	26
Postgraduate	10

Table 2. Body mass index of population (N=200).

BMI	Percentage
18 – 23	30
24 -30	53
>30	17

Table 3. Knowledge regarding complications of diabetes (N=200).

Complications	Percentage
Heart	4
Renal	20
Retinopathy	8
Stroke	20
Neuropathy	30
Don't Know	18

Table 4. Assessment regarding diabetes and its features (N=200).

Questions to assess knowledge	Correct answer percentage
What is diabetes?	50
What causes diabetes?	54
Can diabetes be cured?	12
How can diabetes be detected? Features of diabetes	26
Polyuria	30
Polyphagia	8
Weight Loss	6
Numbness in feet	18
Can be asymptomatic	10
Excessive Thirst	16
Don't know	30
Is diabetes hereditary?	44
Is diabetes infectious?	100

Knowledge of exercise and diet: Misconception about the diet is prevailing 88% of the population still believes in the fact that bitter substances can cure diabetes. Half the population believes that both exercise and diet modification should be to control the diabetes.-

Knowledge of drug therapy: The population had very poor

Table 5. Knowledge of exercise and diet (N=200).

Knowledge of exercise and diet	Percentage
What should be done to control DM?	
Exercise	32
Diet Modification	18
Both	50
Exercise should be done only by obese?	16
Bitter substances can cure diabetes?	88

Table 6. Knowledge regarding OHA, insulin, herbal drugs (N=200).

Knowledge of drug therapy	Percentage
Once DM is control drug should be stop?	66
Drug is more important than diet control?	36
Herbal drugs are better?	18
Insulin Should be avoided?	80
Insulin is habit forming?	90

Table 7. Attitude and practice towards diabetic care, eating practices and health care (N=200).

Respondent attitude and practice	Percentage
Who is responsible for your diabetic care?	
Yourself	48
Doctor	26
Family	6
Do you include fruits?	72
Do you include GLV's in your diet?	90
Do you have glucometer?	32
Do you check your sugar regularly?	36
Do you check your foot regularly?	44
Do you take herbal drugs?	70

knowledge about the drug therapy 80% of the population believes that insulin should be avoided and 90% believe that it is habit forming. Hence majority of the population refuse Insulin in spite of uncontrolled sugar level showing lack of knowledge and awareness regarding the disease.

Attitude and practice towards diabetes: The overall attitude and practice towards diabetes was below satisfaction. Only 26% of the population still believes that doctor is responsible for their diabetic care. Only 36% of the populations were checking their sugar regularly and 32% of the population had glucometer at their home. 70% of the populations were taking herbal medicine for one or the other purpose.

Discussion

Most studied regarding epidemiology and prevalence of diabetes were conducted from south India [10-13] and very few studies from north India [14]. There is no studies regarding KAP available for Uttarakhand and western Uttar Pradesh hence, this study is an attempt to gather the data regarding the same.

The management of DM not only requires the prescription of the appropriate nutritional and pharmacological regimen by the physician but also intensive education and counselling of the patient [15]. This finding emphasizes that the average knowledge levels are low despite of 78% literacy rate in communities with higher diabetes prevalence [16]

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