



A Descriptive Study on Awareness of Diabetes Mellitus in The Urban Slum Population of South India

KEYWORDS

Awareness, Diabetes Mellitus, Urban slum

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ABSTRACT

Introduction: In view of high prevalence of impaired glucose tolerance ranging from 3.6 - 9.1%, World Health Organization had predicted potential for rise in the prevalence of Diabetes Mellitus (DM) by the end of the last century. India's prevalence of DM is expected to rise from 32 million (2000) to 79.4 million (2030). With this background the present study was carried out for understanding general awareness about DM in the urban field practice area of Urban Health center of a tertiary care hospital in South India.

Materials and Methods: The present descriptive study was carried out during health camp, organized at urban field practice area of a tertiary care hospital, located at South India. The persons with age 21 or more years, having some awareness of DM were included in the study; whereas the persons who had not heard of DM, having acute health problems and those who did not give consent were excluded.

Results: About 44.95 % of respondents mentioned family history as a risk factor for DM, whereas awareness regarding obesity, age advancement, lack of exercise, alcohol consumption was 27.98%, 32.57%, 11.25%, 16.97% and 7.80% respectively. About 14.22 % of the respondents were not aware of the symptoms of Diabetes Mellitus. Out of those who were aware of symptoms of DM, 27.98 % of the respondents felt that numbness in hands/feet was the symptom of DM. Though 29.36 % of the respondents were not aware of complications of DM; responses obtained for awareness about complications of DM included repeated infection (19.72%), eye related problem (14.22%).

Conclusion: The study found that the general awareness of DM was less with regard to symptoms, complications and management. A planned, community based health education program with regard to prevention and control of DM is very essential for the population.

Introduction

In view of high prevalence of impaired glucose tolerance ranging from 3.6 - 9.1%, World Health

Organization had predicted potential for rise in the prevalence of Diabetes Mellitus (DM) by the end of the last century¹. Subsequently in 2003 worldwide cases of Diabetes Mellitus were predicted to be double by 2015 from then existing cases of about 150 million². India's prevalence of DM is expected to rise from 32 million (2000) to 79.4 million (2030). The World Economic Forum (2010)³ has predicted premature deaths due to non-communicable diseases, diabetes being one of them. In order to reduce and prevent Disability Adjusted Life Years (DALYs) and manage the huge load of diabetic patients, it is equally important to understand issues related to awareness which would facilitate enhancement of effectiveness of the program for prevention of Diabetes Mellitus.

With this background the present study was carried out for understanding general awareness about DM in the urban field practice area of Urban Health center of a tertiary care hospital in South India. The present study was conducted with the objective to assess the awareness regarding risk factors associated with Diabetes Mellitus and to assess the awareness about Diabetes Mellitus with regard to symptoms, complications and management.

Materials and Methods

The present descriptive study was carried out during health camp, organized at urban field practice area of a tertiary care hospital, located at South India. Trained medical social workers were given orientation of the study

and recruitment was done after obtaining the consent by using the semistructured, pretested questionnaire which included awareness regarding risk factors, symptoms, complication and management of DM in addition to socio-demographic information. The persons with age 21 or more years, having some awareness of DM were

included; whereas the persons who had not heard of DM, having acute health problems and those who did not give consent were excluded. The collected data was compiled and analyzed by using statistical methods such as average, mean, percentage.

Results

Out of 241 persons, 218 (90.46 %) persons had some awareness about DM. Those who had not heard about Diabetes Mellitus 14(5.81) % and those who did not give consent 9 (3.73%) were excluded.

Most of the study subjects were in the age group of 41-50 yrs (27.98%) followed by 31-40 yrs age group (25.69%). About 53.67% study subjects were females and 46.33 % males respondents.

About 44.95 % of respondents mentioned family history as a risk factor for DM, whereas awareness regarding obesity, age advancement, lack of exercise, alcohol consumption was 27.98%, 32.57%, 11.25%, 16.97% and 7.80% respectively. However, there was no response for hormonal imbalance.

As regards awareness of symptoms of DM (Table- 1), about 14.22 % of the respondents were not aware of the symp-

toms of Diabetes Mellitus. Out of those who were aware of symptoms of DM, 27.98 % of the respondents felt that numbness in hands/feet was the symptom of DM. Regarding other symptoms namely frequent urination, changes in the weight, frequent desire to eat, joint problems and change in the vision awareness was found to be 24.77 %, 18.81 %, 7.80 %, 3.21 %, 6.88 % respectively.

Though 29.36 % of the respondents were not aware of complications of DM; responses obtained

for awareness about complications of DM (Table -2) included repeated infection (19.72%), eye related problem (14.22%), 12.84% for delayed wound healing, 9.63% kidney problems, 10.55% heart problems .

As regards awareness about management of DM (Table-3), 37.16 % respondents were not aware of any kind of management for DM. The responses for management of DM were 21.56% for regular exercise, 17.43% for balanced diet, 14.22% for regular blood glucose monitoring, 8.26% for regular consultation with doctor and 15.60% for regular intake of medicines.

Discussion

The present study was carried out in the South India, in the urban field practice area of a tertiary care hospital. Majority of the respondents of the study were married (83.03%), majority were females (53.67%). 90.46 % persons, had some awareness about DM. Muninarayana C et al ⁴ found that about half of the population had some awareness about Diabetes and it was poor in rural area. Awareness about DM in a community based survey by Singh A et al ⁵ was 21%.

The differences in the findings may be due to type of study design.

In the present study all of the respondents were aware of any risk factors. 14.22 % respondents were not aware of any symptoms. Numbness of hands/ feet, frequent urination , excessive thirst and change in the weight were among the most commonly observed symptoms. Risk factors namely obesity, overweight do matter in the Indian context as far as DM is concerned ^{6,7} .

About 29.36 % of the respondents were not aware of complications / long term effects of DM. This finding was comparable to other studies ^{5,7} where majority of the respondents were not aware of long term effects of DM. Wee ⁸ in Singapore observed low scores in general knowledge, risk factors for DM, but had high understanding of symptoms and complications.

37.16 % of the respondents were not aware of any kind of management of DM. Those who were aware of management of DM, maximum awareness was found for regular exercise ,balanced diet , regular intake of medicines and for regular consultation with the doctor .Awareness regarding balanced diet, low carbohydrate high fiber diet, regular exercise, regular blood sugar monitoring are very essential and important. Some studies ^{9,10} in the Indian context have highlighted urgent attention to lifestyle related issues by policy and healthcare planners for management of DM. It is worth noting that Zhang P et al ¹¹ reported approximately 40 % of total cost of diabetes in the United States being spent for inpatient care of diabetes complications. Awareness of diabetic patients about self care is also one of the major issues for prevention and management of complica-

tions of DM ¹².

In Indian context, in view of worrisome prevalence and changing scenario of DM, Government of India has launched the National Program for prevention and control of Diabetes, Cardiovascular Diseases and Stroke in 2008.

Conclusion

The study found that the general awareness of DM was less with regard to symptoms, complications and management. A planned, community based health education program with regard to prevention and control of DM is very essential for the population . It will help people to understand, check and initiate preventive measures including life style modifications for prevention & control of DM. It will also go in a long way in the context of primary, secondary and tertiary prevention of complications of DM.

Table 1: Awareness of respondents about symptoms of Diabetes Mellitus

Variable	No (%)
Excessive thirst	48(22.02%)
Changes in weight	41(18.81%)
Frequent urination	54(24.77%)
Frequent desire to eat	17(7.80%)
Numbness of hands/feet	61(27.98%)
Joint problems	7(3.21%)
Change in vision	15(6.88%)
Not aware of symptoms	31(14.22%)

Table 2: Awareness about complications of Diabetes Mellitus

Variable	No(%)
Eye related problem	31(14.22%)
Repeated infections	43(19.72%)
Kidney problem	21(9.63%)
Numbness of limbs	18(8.26%)
Heart problem	23(10.55%)
Delayed wound healing	28(12.84%)
Joint problems	17(7.80%)
Not aware	64(29.36%)

Table 3: Awareness of respondents about management of Diabetes Mellitus

Variable	No (%)
Balanced diet	38(17.43%)
Low carbohydrate diet	27(12.39%)
High fibre diet	24(11.10%)
Regular exercise	47(21.56%)
Regular intake of medicines	34(15.60%)
Regular consultation with doctor	18(8.26%)
Regular blood sugar monitoring	31(14.22%)
Not aware	81(37.16%)

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