Awareness of diabetes among South Indian population
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ABSTRACT

Introduction: In India, nearly 35 million people are affected by diabetes. This could cause large number of devastating problem. The common risk factors are obesity, family history, insulin resistance, hypertension, and hyperlipidemia. Health education is considered as an important method to improve knowledge and bring about change. Materials and Methods: The study was conducted at Saveetha Dental College in Kancheepuram District, Tamil Nadu. An 18-item questionnaire was self-prepared and circulated among 100 participants. The data were tabulated and the results were obtained using the SPSS software. Results: Patient’s age range from 30 to 50 was highly affected by diabetes. About 64% of the participants are affected with diabetes and 36% are not affected. About 40% of them are not aware of the preventive measures. Conclusion: Diabetes mellitus poses a major health challenge both epidemiologically and economically. However, awareness of this condition among population is medium.

KEY WORDS: Diabetes, Insulin, Lifestyle changes

INTRODUCTION

Diabetes is a chronic disease caused by deficiency in the production of insulin by the pancreas, which results in increased concentration of glucose in blood. There are two types of diabetes: Type I which is insulin dependent and Type II which is insulin independent. It is one of the most common diseases, whose incidence is increasing every year 415 million affected in 2015; the number is expected to reach up to 552 million in 2030.[1] In India, nearly 35 million people are affected by diabetes. This could cause large number of devastating problem in the economic sector.[2] Studies reported that in a low-income family, affected person spends around 25% of income in diabetes care. It is believed that patient’s knowledge of self-care is the key to achieving therapeutic goals in ambulatory care.[3]

Awareness of risk factors is a prerequisite to prevent diabetes among general population and also in high-risk groups such as impaired fasting glucose and impaired glucose tolerance. The common risk factors are obesity, family history, insulin resistance, hypertension, and hyperlipidemia. Health education is considered as an important method to improve knowledge and bring about change. There are evidence which concluded that people affected have inadequate knowledge about the nature of diabetes, its risk factors, and associated complications. If uncontrolled, it can cause damage to eyes, leading to blindness, damage to kidney, leading to renal failure, and foot disorders, and in severe cases, amputation is required due to poor blood supply to limbs.[4] Diabetic peripheral neuropathy is the most common complication of Type II diabetes requiring proper care and management. The management of diabetes depends on the patient’s ability to pursue self-care in their daily routine. The important component in the management is the adherence to the treatment.

MATERIALS AND METHODS

This cross-sectional study was conducted at Saveetha Dental College in Kancheepuram District, Tamil Nadu. An 18-item questionnaire was self-prepared and circulated among 100 participants. Few responses were also gained through online survey method. The questionnaire included demographic variables such as age, sex, marital status, education, occupation, and years with diabetes and family history of diabetes mellitus (DM). Questions on awareness regarding DM were divided under three headings, namely knowledge...
of DM, self-care practices, and knowledge regarding complications of DM.

The questionnaire was as follows:

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1. Do you have diabetes? Yes/No
2. If yes, which type? Type I/Type II
3. Period of diabetes (in years)? No/1/2/3/>4
4. Does diabetes run in your family? Yes/No
5. Do you go for a regular checkup? Yes/No
6. Are you taking regular medications? Yes/No
7. Are you taking insulin injections? Yes/No
8. Do you know it’s a life lasting chronic disorder? Yes/No
9. Do you do any kind of physical exercise? Yes/No
10. Which are the risk factors of diabetes? Hypertension/Age/Obesity/Genetics/Do not know
11. Do you know persistent diabetes can affect your eyes, heart and kidneys? Yes/No
12. Do you know about diabetic foot and amputation? Yes/No
13. Do you have any knowledge of neuropathy? Yes/No
14. Treatment options for diabetes? Only medication/diet/both medication and diet/exercise
15. Preventive measures for diabetes? Stop alcohol/Normal BP/Weight loss/Do not know
16. Diabetics cannot eat fruits – it’s a myth? Yes/No
17. Underground vegetables are prohibited – it’s a myth? Yes/No
18. All sugar-free stuff can be consumed as much as diabetic patient can – it’s a misconception? Yes/No

RESULTS

According to Table 1, the number of participants was 45 males, 18 from 20 to 30 years, 15 from 31 to 40 years, and 12 from 41 to 50 years; 55 females, 25 from 20 to 30 years, 17 from 31 to 40 years, and 13 from 41 to 50 years, a total of 100 participants.

According to Table 2, 64% of the participants are affected with diabetes and 36% are not affected. Of the 64%, 12% of them have Type I and 52% have Type II diabetes. About 17% of them suffering from diabetes past 1 year, 20% past 2 years, 16% past 3 years, and 11% more than 2 years.

Figure 1 describes the knowledge of the lifestyle of the population, 61% of the participant’s family members are affected by diabetes. About 72% of them go for a regular medical checkup, but only 45% of them take regular medications. Only 52% of them do some form of physical exercise daily.

Figure 2 denotes the knowledge about treatment options, 36% of them say it must be treated by both medications and diet, while 31% say only medications can treat, 10% of them exercise, and 23% of them only diet. Figure 3 denotes the knowledge of preventive measures among the participants, 10% of them think alcohol as a major risk factor and curbing alcohol can be a preventive measure, 20% weight loss, 30% of them to main normal blood pressure, and 40% of them are not aware of the preventive measures.

DISCUSSION

In the present study, patient’s age range from 30 to 50 was highly affected by diabetes. A study conducted in rural Tamaka in Kolar District, where 54.8% of
diabetic patients were observed to be in the age group of 30–45 years and another conducted in Dharwad, an urban area in India, where 65% in the age group of 30–49 years.\textsuperscript{[5,6]} Mild-moderate awareness was seen regarding diabetes being a lifestyle disorder, self-monitoring of sugar and renal, and ocular and cerebral complications in this study. In the study conducted by Mehta et al., 42.9% were familiar with complications of diabetes.\textsuperscript{[7]}

In a study conducted regarding awareness and knowledge of diabetes in Chennai, only 19.0% of entire population knew that diabetes can cause complications.\textsuperscript{[8]} Among those aware, foot problems – 23.0% and kidney disease – 17.4% were the most commonly reported complications. Another study concluded that 74.2% were aware that diabetes could produce some complications.\textsuperscript{[5]} About 85.4% of respondents were not aware of glycosylated hemoglobin (HbA1c). Similarly, in a study conducted by Gulabani et al., 94.1% of patients lack knowledge of HbA1c.\textsuperscript{[9]}

In the study by Foma et al., almost 50% of the participants had no clue on how diabetes could be prevented while a very few people thought that weight loss (0.5%) and exercise (5.6%) were important measures in preventing the condition.\textsuperscript{[10]} Similar results have been reported from India,\textsuperscript{[11]} Oman,\textsuperscript{[12]} and Tanzania.\textsuperscript{[13]}

**CONCLUSION**

DM poses a major health challenge both epidemiologically and economically. However, awareness of this condition among population is medium. Our study shows that the majority of participants have moderate knowledge of several aspects of the condition including its causes, complications, management, and prevention. Hence, there is a need to raise the level of awareness of this condition.

**REFERENCES**


