



EVALUATION OF RISK FACTORS OF TYPE 2 DIABETES MELLITUS BURDEN IN PUNE: A CROSS-SECTIONAL STUDY

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ABSTRACT

India is currently passing through epidemiological transition. [1] The chronic diseases like Diabetes Mellitus, Hypertension and other cardiovascular diseases, Cancer etc. constitute significant health burden in Indian community and cannot be ignored. Various evidences have reported information on the status of hypertension and Diabetes Mellitus in urban and rural population of India with different prevalence rates. The present study was conducted out to assess the knowledge of study population about Diabetes Mellitus type 2 and to find out the risk factors for type 2 Diabetes Mellitus in urban population of Pune City. A Cross-sectional survey was carried out among 105 patients who were present on occasion of 'Diabetes Screening Camp' which was held at Janwadi urban slum area of Pune City. The present study revealed inadequacies in knowledge of general community people about type 2 Diabetes Mellitus. The study also found significant risk factors for Diabetes among people.

KEYWORDS : Knowledge, Risk factors, Type 2 Diabetes Mellitus

INTRODUCTION

India is currently passing through epidemiological transition.¹ The chronic diseases like Diabetes Mellitus, Hypertension and other cardiovascular diseases, Cancer etc. constitute significant health burden in Indian community and cannot be ignored. Various evidences have reported information on the status of hypertension and Diabetes Mellitus in urban and rural population of India with different prevalence rates.^{2,3}

As per International Diabetes Federation (IDF), 61.3 million people in India had diabetes and 77.2 million were prediabetics in 2011. That figure is projected to rise to 101.2 million by 2030.⁴ The highest number of diabetics is in India as compared to any other country in the entire world. India leads the world with largest number of diabetic subjects earning the dubious distinction of being termed the "diabetes capital of the world".⁵

The present study was conducted out to assess the knowledge of study population about Diabetes Mellitus type 2 and to find out the risk factors for type 2 Diabetes Mellitus in urban population of Pune City.

METHODOLOGY

A Cross-sectional survey was carried out among 105 patients who were present on occasion of 'Diabetes Screening Camp' which was held at Janwadi urban slum area of Pune City. All 105 patients were included as study participants after obtaining informed consent from them. All of them were in age group between 25 to 65 years. A brief history was taken followed by clinical examination and findings were recorded on specific proforma. Detailed information about risk factors for Diabetes Mellitus type 2 was recorded on specified proforma. Detailed anthropometry like weight, height, body mass index (BMI) etc. was done. A structured questionnaire in local language was given to participants. The questionnaire consisted of ten multiple choice questions on DM type 2. Face to face interview was conducted to obtain information from illiterate study participants. Entire data was entered into Microsoft Office Excel Sheet and analysed.

RESULTS

A total of 105 participants were included in this study. Of which 65 (61.90%) were males 40 (38.09%) were female participants. All of them were in age bracket of 25-65 years of age. Forty two (40%) participants were illiterate. Thirty eight (36.19%) participants were graduate and remaining 25 (23.80%) were educated up to primary level.

Table 1: Knowledge of Study Participants about DM-type 2 (n-105)

Knowledge	No of participants with correct knowledge (%)
DM and diet	44 (41.90)
DM and exercise	95 (90.47%)
DM and related drug information	47 (44.76%)
DM and co-morbidities	72(68.57%)
DM and Self care	65(61.90%)
DM and Symptoms	48(45.71%)
DM and complications	38 (36.19%)

DM – Diabetes Mellitus

Table 1 depicts that study participants had poor knowledge about diet as well as drugs/medicines in relation to DM type 2. However better level of knowledge was found for exercise and self-care aspects of DM.

Table 2: Associated Risk Factors among Study Participants for DM-type 2 (n-105)

Risk Factors	No of participants with risk factor (%)
Obesity	25(23.80)
Hypertension	13(12.38)
Alcoholism	55(52.38)
Smoking	61(58.09)
Poor dietary habits	78(74.28)
Family History of DM	09 (8.57)
Sedentary work pattern	23(21.90)
Lack of exercise	85(80.95)

DISCUSSION

In present study, only 45 (48.71%) participants were aware of the symptoms of DM. A study conducted in South India by Rameez Hussain et al. reported that A total of 1647 (26.5%) people were unaware of the symptoms of DM.⁶

The current study revealed poor knowledge levels in 63.80% of the participants about DM and its related complications. As per Chennai urban rural epidemiology study,⁷ only 19.0% (4951/26,001) of the total population and only 40.6% (621/1529) of diabetics were aware that DM could produce some complications. Rani et al.⁸ reported that 966 (49.9%) participants had knowledge about DM and 718 (37.1%) participants were aware about its complications.

Other major concern in present study was that only 66% of the participants knew that DM could be prevented. This study finding corroborates with study of M.Deepa et al.⁹ where 60 % of participants were aware about prevention measures of Diabetes Mellitus. The knowledge of significant risk factors for DM like

obesity, family history of diabetes, lack of exercise and hypertension was also poor. Indian Community should be aware about DM especially about preventive measures, since there is high prevalence of DM and its co-morbidities. The study findings reiterate the need to sensitize general community people about Diabetes Mellitus.

The present study also reported significant risk factors for Diabetes Mellitus among study participants (Table 2). The study also emphasizes the need for complete diabetes education through sensitization/orientation programs particularly for all diabetic subjects. The information about risk factors, diet control, self-care, physical activity, periodic check-up etc. need to be disseminated through communities in achieving better control of Diabetes. The National Program for Control of Diabetes, Cardiovascular Disease and Stroke need to be strengthened all over the country to reduce huge burden of Diabetes Mellitus on country.

CONCLUSION

The present study revealed inadequacies in knowledge of general community people about type 2 Diabetes Mellitus. The study also found significant risk factors for Diabetes among people.

ACKNOWLEDGEMENTS

We are thankful to Dr. Nitin Chougule and Mr. Parmeshwar Sontakke for their valuable help for conduction of this study.

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