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Original Research Article

Practices for diabetes mellitus in doctors

Vasanti A. Jeergal[1], Jayshree J. Upadhye[2]*

[1]Department of General Medicine, Srinivas Institute of Medical Sciences and Research Centre, Mangaluru, Karnataka India
[2]Department of Obstetrics and Gynaecology, Narayan Medical college and Hospital, Jamuhar, Bihar, India

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***Correspondence:**
Dr. Jayshree J. Upadhye,
E-mail: jayshreeupadhye@gmail.com

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ABSTRACT

Background: Doctors know everything about cause, diagnosis, treatment and care to be taken for diabetes mellitus. This study was carried out to evaluate awareness, attitude and practices of diabetes in doctors.
Methods: A cross sectional study was conducted among 100 male and 100 female doctors of various subjects who attended a conference at Mangaluru 25th to 27th October 2018.
Results: Prevalence of diabetes mellitus was 12% in male doctors while it was 8% in female doctors. 11 (91.66%) male doctors and 8 (100%) female doctors were taking medicines for diabetes regularly, 8 (66.66%) male doctors and 7 (87.5%) female doctors were doing blood sugar regularly, 7 (58.33%) male doctors and 5 (62.5%) female doctors were doing diet control, 7 (58.33%) male doctors and 5 (62.5%) female doctors were doing exercise regularly, 9 (75%) male doctors and 8 (100%) female doctors were using footwear while 6 (50%) male doctors and 4 (50%) female doctors were taking proper dental care.
Conclusions: In present study, doctors were aware of causes, diagnosis, treatment & care to be taken in diabetes. Still, routine check-up was not seen in 100%. After diagnosis, doctors were taking medicines quite regularly but regular follow up for diabetes & cardiovascular risk was seen in less numbers.

Keywords: Blood sugar, Diabetes mellitus, Diet control, Practices, Prevalence, Regular exercise

INTRODUCTION

Diabetes is a well-known global public health challenge with people affecting over 400 million people worldwide. Despite the awareness of the problem and technological advances in healthcare systems, the prevalence of diabetes in adults has almost doubled since 1980 worldwide. Diabetes is a huge financial burden and a major cause of mortality around the world.[1]

According to the World Health Organization (WHO), India today leads the world in having more than 32 million diabetic patients. This number is projected to increase to 79.4 million by the year 2030.[2]

According to recent surveys, diabetes now affects a staggering 10-16% of urban population and (5-8%) of rural population in India.[3]

According to WHO, a BMI of less than 18.5 as underweight and may indicate malnutrition, an eating disorder, or other health problems, while a BMI equal to or greater than 25 is considered overweight and above 30 is considered obese.[4]

American Heart association/American college of cardiology guidelines recommend adherence to dietary and lifestyle habits including body weight control and physical activity.[5]

Diabetes is a chronic disease, requiring a multipronged approach for its management. Here, the patient has an important role to play. Patient is required to follow certain self-care practices to achieve an optimal glycaemic control and prevent complications. These include regular physical activity, appropriate dietary practices, daily foot care practice, regular treatment regimen, and tackling complications like hypoglycemia.[6]

People with diabetes can benefit from education about the disease and treatment, good nutrition to achieve a normal body weight, and exercise. The goal should be to keep both short-term and long-term blood glucose levels within acceptable limits. In addition, due to associated higher risks of cardiovascular disease, lifestyle modifications are recommended to control blood pressure.[7]

Doctors are often reluctant to seek medical advice. In one survey, 26% of doctors with a medical problem reported that they feel inhibited consulting another doctor.[8]

American Heart association has recommended screening schedule for diabetes, heart disease as follows (Table 1).[9]

Table 1: Recommended screenings AHA June 2017.[9]

Recommended Screenings AHA June 2017	How Often?
Blood pressure	Each regular healthcare visit or once every 2 years if blood pressure is less than 120/80 mm Hg
Cholesterol ("fasting lipoprotein profile" to measure total, HDL and LDL cholesterol)	Every 4-6 years for normal-risk. More often if any elevated risk for heart disease and stroke
Weight/Body Mass Index (BMI)	During regular healthcare visit
Waist circumference	As needed. It evaluates cardiovascular risk if BMI is greater than or equal to 25 kg/m2
Blood glucose test	Every 6 months

The aim of the study was to evaluate weight awareness, attitude and practices in terms of diet and exercise in doctors and to evaluate awareness, attitude and practices of diabetes in doctors.

METHODS

A cross sectional study was conducted among 100 male and 100 female doctors of various subjects who attended a conference at Mangaluru in October 2018. Selection of doctors was done randomly.

This survey was conducted in Mangaluru, Karnataka in doctors of MBBS and higher degrees from 25th to 27th October 2018 using a questionnaire.

Inclusion criteria

- Male and female doctors above 30 years of age.
- Doctors who were ready to participate in the study.

Exclusion criteria

- Male and female doctors below 30 years of age were excluded as very young male doctors don't think of investigating themselves.
- Doctors who were not ready to participate in study.
- This evaluated implementation of screening and preventive measures used by them for Diabetes Mellitus (Table 2).

Table 2: Questionnaire.

Variables
Name
Age
Height and Weight for BMI
Exercise per week
Outside food per week
Blood sugar done
Blood pressure checked
ECG and Lipid Profile done
Practices of prevention of Diabetes Mellitus
Practices of treatment of Diabetes Mellitus

Data was collected in Microsoft excel sheet. Computation was done. Statistical analysis was taken out in percentages.

RESULTS

In present study, out of 100 male doctors, 44 (44%) male doctors were between 41-50 years, 27 (27%) male doctors were between 51-60 years, 16 (16%) male doctors were between 31-40 years, 13 (13%) male doctors were >60 years. Male doctors of <30 years were excluded (Table 3).

In present study, out of 100 female doctors, 48 (48%) female doctors were between 41-50years, 21 (21%) female doctors were between 51-60 years, 20 (20%) female doctors were between 31-40years, 11 (11%) female doctors were >60 years. Female doctors of <30 years were excluded (Table 3).

So, majority of male and female doctors were 41-50 years age group. In present study, out of 100 male doctors, 38 (38%) male doctors had normal BMI, 31 (31%) male doctors were overweight, 29 (29%) male doctors were obese while 2 (2%) male doctors were underweight (Table 4).

Table 3: Age distribution.

Age distribution	No. of male doctors	Percentage	No. of female doctors	Percentage
31-40 years	16	16%	20	20%
41-50 years	44	44%	48	48%
51-60 years	27	27%	21	21%
>60 years	13	13%	11	11%

Table 4: Body mass index (BMI).

Body mass index (BMI)	No. of male doctors	Percentage	No. of female doctors	Percentage
Normal	38	38%	30	30%
Underweight	2	2%	6	6%
Overweight	31	31%	52	52%
Obese	29	29%	12	12%

Table 5: Diet and exercise pattern.

Diet pattern	No. of male doctors	Percentage	No. of female doctors	Percentage
Outside food >3 times a week	45	45%	35	35%
Exercise >3 times a week	64	64%	54	54%

Table 6: Check-up done for diabetes Mellitus and associated cardiovascular disease.

Check-up done	No. of male doctors	Percentage	No. of female doctors	Percentage
Blood sugar	84	84%	78	78%
Blood pressure	86	86%	82	82%
ECG and Lipid profile	82	82%	70	70%

In present study, out of 100 female doctors, 52 (52%) female doctors were overweight, 30 (30%) female doctors had normal BMI, 12 (12%) female doctors were obese while 6 (6%) female doctors were underweight (Table 4).

So, more than half female doctors were overweight while in male doctors, there was almost same proportion of normal, overweight and obese doctors.

In this study, out of 100 male doctors, 45 (45%) male doctors were eating outside food >3 times a week. In present study, out of 100 male doctors, 64 (64%) male doctors were doing exercise >3 times a week (Table 5). In present study, out of 100 female doctors, 35 (35%) female doctors were eating outside food >3 times a week. In present study, out of 100 female doctors, 54 (54%) female doctors were doing exercise >3 times a week (Table 5).

So, more number of male doctors were eating outside often and doing exercise more often than female doctors.

In present study, out of 100 male doctors, 86 (86%) had their own blood pressure check-up, 84 (84%) had their own blood sugar checked, 82 (82%) had got their own lipid profile and their electrocardiogram (ECG) done (Table 6). In present study, out of 100 female doctors, 78 (78%) had their own blood pressure check-up, 82 (82%) had their own blood sugar checked,70 (70%) had got their own lipid profile and their electrocardiogram (ECG) done (Table 6).

In present study, prevalence of Diabetes Mellitus was 12 % in male doctors while it was 8% in female doctors (Table 7).

In present study, 11 (91.66%) male doctors and 8 (100%) female doctors were taking medicines for diabetes regularly, 8 (66.66%) male doctors and 7 (87.5%) female doctors were doing blood sugar and HbA1c regularly, 7 (58.33%) male doctors and 5 (62.5%) female doctors were doing diet control, 7 (58.33%) male doctors and 5 (62.5%) female doctors were doing exercise regularly, 9 (75%) male doctors and 8 (100%) female doctors were using footwear while 6 (50%) male doctors and 4 (50%) female doctors were taking proper dental care (Table 8). So, majority of male and female doctors were taking medicines regularly and using footwear.

Table 7: Prevalence of diabetes mellitus.

Prevalence of Diabetes Mellitus	No. of doctors	Percentage
In male doctors	12	12%
In female doctors	9	9%

Table 8: Practices of treatment in Diabetes Mellitus

Practices of treatment in Diabetes Mellitus	No. of male doctors (n=12)	Percentage	No. of female doctors (n=8)	Percentage
Taking medicines regularly	11	91.66%	8	100%
Doing blood sugar and Hb1Ac regularly	8	66.66%	7	87.5%
Diet Control	7	58.33%	5	62.5%
Regular exercise	7	58.33%	5	62,5%
Using footwear	9	75%	8	100%
Dental care	6	50%	4	50%

DISCUSSION

In present study, out of 100 male doctors, 44 (44%) male doctors were between 41-50 years, 27 (27%) male doctors were between 51-60 years, 16 (16%) male doctors were between 31-40 years, 13 (13%) male doctors were >60 years. male doctors of <30 years were excluded (Table 3).

In present study, out of 100 female doctors, 48 (48%) female doctors were between 41-50years, 21 (21%) female doctors were between 51-60 years, 20 (20%) female doctors were between 31-40years, 11 (11%) female doctors were >60 years. Female doctors of <30 years were excluded (Table 3).

Shera AS, a total of 767 FPs, 756 males and 11 females were included in the study. The average age was 42.18 years.[11]

In present study, out of 100 male doctors, 38 (38%) male doctors had normal BMI, 31 (31%) male doctors were overweight, 29 (29%) male doctors were obese while 2 (2%) male doctors were underweight (Table 4).

In present study, out of 100 female doctors, 52 (52%) female doctors were overweight, 30 (30%) female doctors had normal BMI, 12 (12%) female doctors were obese while 6 (6%) female doctors were underweight (Table 4).

Priya D et al, reported that in 147 study subjects, according to BMI, 25 (17%) were undernourished while 111 (75.5%) and 11 (7.5%) were normally nourished and overweight respectively.[12]

In present study, out of 100 male doctors, 45 (45%) male doctors were eating outside food >3 times a week. In present study, out of 100 male doctors, 64 (64%) male doctors were doing exercise >3 times a week (Table 4). In present study, out of 100 female doctors, 35 (35%) female doctors were eating outside food >3 times a week.

In present study, out of 100 female doctors, 54 (54%) female doctors were doing exercise >3 times a week. (Table 4).

Bazargan M et al, reported that 35% of participants reported “no” or “occasional” exercise.[13]

In present study, out of 100 male doctors, 86 (86%) had their own blood pressure check-up, 84 (84%) had their own blood sugar checked, 82 (82%) had got their own lipid profile and their electrocardiogram (ECG) done (Table 6).

Wagh RV et al, found that 82 (82%) had their own blood pressure check-up, 74 (74%) had their own blood sugar checked, 62 (62%) had got their own lipid profile done while only 44 (44%) female doctors had their electrocardiogram (ECG) done and 48 (48%) had their bone mineral density done In present study, out of 100 female doctors, 78 (78%) had their own blood pressure check-up, 82 (82%) had their own blood sugar checked,70 (70%) had got their own lipid profile and their electrocardiogram (ECG) done.[14]

In present study, prevalence of Diabetes Mellitus was 12 % in male doctors while it was 8% in female doctors (Table 7). Contrary to our study, Chythra R et al, found that the overall prevalence of diabetes was 16%.[15]

In present study, 11 (91.66%) male doctors and 8 (100%) female doctors were taking medicines for diabetes regularly, 8 (66.66%) male doctors and 7 (87.5%) female doctors were doing blood sugar and HbA1c regularly, 7 (58.33%) male doctors and 5 (62.5%) female doctors were doing diet control, 7 (58.33%) male doctors and 5 (62.5%) female doctors were doing exercise regularly, 9 (75%) male doctors and 8 (100%) female doctors were using footwear while 6 (50%) male doctors and 4 (50%) female doctors were taking proper dental care (Table 8).

Similar to our study, Pasha M et al, found that 90% of patients were taking medications regularly. Only 23 %

exercised regularly. Regular blood glucose monitoring was poor, 86% patients were not maintaining record(s) of glucose levels.[14]

The knowledge regarding diet modification in diabetes was poor, common perceptions were to avoid sweets/high sugar diet, fruits (banana, watermelon, mangoes etc.), fatty foods and to consume more of wheat/millets/ vegetables.[16]

Sut Yee Tse et al, reported that 92% were aware of a relationship between DM and periodontal disease. This awareness was not associated with their years of experience, training status and personal oral health behavior. 90% knew the effect of poor DM control on periodontal disease. 76% were aware of the reverse effect of periodontal disease on DM.[17]

Dikeukwu RA et al, reported that 24.2% reported awareness of foot self-care, 71.7% had performed foot self-care sometimes in the past, and 69.2% had done so at least one day within the last week. Only 5.8% had their feet examined by a podiatrist, and 32.5% by a doctor or nurse. 46.7% regularly soaked their feet in water, 7.5% applied talcum powder to dry their feet, 54.2% inspected their shoes and 25% walked barefoot.[18]

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