

Research Article

**Frequency of diabetes mellitus among patients
presenting at tertiary care hospital**

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ABSTRACT

Objective: To determine the frequency of diabetes mellitus in individuals presenting at out patients department of Nishter Hospital, Multan.

Material and methods: This cross sectional study was conducted at Department of Medicine, Nishter Hospital, Multan from April 2018 to October 2018 over the period of 6 months. Adult patients having age >18 years either male or female coming to out patients department were screened for diabetes mellitus. Diabetes mellitus was studied in selected patients.

Results: Total 76 patients were selected for this study. Mean age of the patients 42.21±17.65 years. Diabetes mellitus was found in 13 (17%) patients. Out of 76 patients, male patients were 18 (23.7%) and female patients were 58 (76.3%). Married were 73 (96%) and unmarried were 3 (4%).

Conclusion: Results of present showed a higher percentage of diabetes mellitus. Most of the patients were female. Higher number of patients were educated. Most of the patients were smokers.

Key words: Diabetes mellitus, endocrine, WHO

INTRODUCTION

Diabetes is a serious, chronic disease that occurs either when the pancreas does not produce enough insulin (a hormone that regulates blood sugar, or glucose), or when the body cannot effectively utilize the insulin it produces. Diabetes mellitus is considered as a group of metabolic disorders characterized by a hyperglycemic state, as a result of chronic insulin resistance, which leads to pancreatic beta-cell dysfunction and subsequently massive failure in insulin secretion. Diabetes mellitus, a major lifestyle disease is undoubtedly

the most challenging public health problem of 21st century with a worldwide prevalence of 387 million (8.3%) and predicted to be 592 million by 2035.¹

Diabetes Mellitus is the most common endocrine disorder, affecting an estimated 5% to 10 % of the adult population in industrialized Western countries, Asia, Africa, Central America and South America and it has a large impact on society.² Globally, an estimated 422 million adults were living with diabetes in 2014, compared to

108 million in 1980. The global prevalence (age-standardized) of diabetes has nearly doubled since 1980, rising from 4.7% to 8.5% in the adult population (WHO).³⁻⁴ In 2000, India (31.7 million) topped the world with the highest number of people with diabetes mellitus followed by China (20.8 million) with the United States (17.7 million) in second and third place respectively.⁵⁻⁶ Diabetic patients, if undiagnosed or inadequately treated, develop multiple chronic complications leading to irreversible disabilities and death. So, knowledge of the prevalence of diabetes and pre-diabetes and of related risk factors would raise awareness of the disease and lead to new policies and strategies for prevention and management. In this context, the present study was conducted to get an estimate of the prevalence of diabetes mellitus and associated factors in a sample of adult population.

MATERIAL AND METHODS

This cross sectional study was conducted at Department of Medicine, Nishter Hospital, Multan from April 2018 to October 2018 over the period of 6 months. Adult patients having age >18 years either male or female coming to out patients department were screened for diabetes mellitus. Patients below 18 years, pregnant women and patients with any other systemic disease were excluded from the study.

Five ml of blood sample was drawn and send to laboratory for sugar level. Patients having random blood sugar level ≥ 200 mg/dl on the day of examination were labelled as diabetic. History of all the patient like smoking status, education status, area of residence, marital status, physical activity were noted in pre-designed performa. Height of all the patients was measured with measuring tape and weight of the patients was taken on weighing machine.

All the collected was entered in SPSS version 20 and analyzed. Mean age SD was calculated for numerical data and percentages and frequencies were calculated for categorical data.

RESULTS

Total 76 patients were selected for this study. Mean age of the patients 42.21±17.65 years. Diabetes mellitus was found in 13 (17%) patients. (Fig. 1) Patients were divided into 4 age groups i.e. age group 18-38 years, age group 39-58 years, age group 59-78 years and age group 79-98 group. Total 44 (57.9%) patient belonged to age group 18-38 years followed by 16 (21.1%) patients, 12 (15.7%) patients and 4 (5.3%) patients. (Table 1) Out of 76 patients, male patients were 18 (23.7%) and female patients were 58 (76.3%). (Table 2) Married were 73 (96%) and unmarried were 3 (4%). (Table 3) Total 60 (78.9%) patients were educated and 16 (21.1%) patients were uneducated. (Table 4) Among the 76 patients, 48 (63.62%) were smokers and 28 (36.8%) patients were non-smokers. (Table 5)

Fig. 1: Frequency of diabetes mellitus

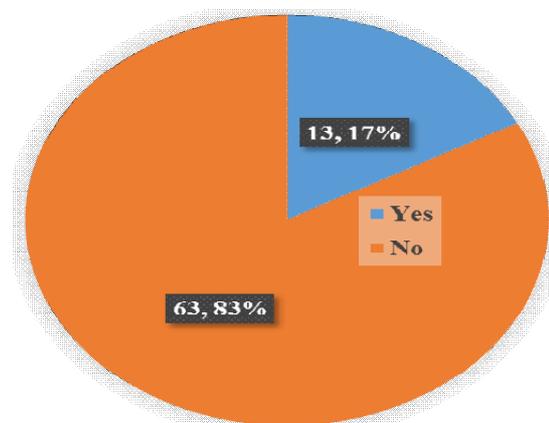


Table 1: Age distribution

Age group	N	%
18-38	44	57.9
39-58	16	21.1
59-78	12	15.7
79-98	4	5.3
Total	76	100

Table 2: Gender distribution

Gender	N	%
Male	18	23.7
Female	58	76.3
Total	76	100

Table 3: Marital Status

Marital Status	N	%
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Married	73	96
Unmarried	3	4
Total	76	100

Table 4: Educational status

Educational status	N	%
Educated	60	78.9
Uneducated	16	21.1
Total	76	100

Table 5: Smoking status

Smoking status	N	%
Smoker	48	63.62
Non-smoker	28	36.8
Total	76	100

DISCUSSION

In present study, prevalence of diabetes mellitus was 17.1% which also corroborate with the findings of Anjana RM et al, in their study found prevalence of diabetes mellitus between 13-4% to 17-7%.⁹ Ahmad J et al, in their study Kashmir found lower prevalence of diabetes mellitus (6.05%) in the age group of 20 years and above.¹⁰ Deepthi R et al, in rural Kolar, Karnataka also found lower prevalence (5.6%) of diabetes in their study.¹¹ Patil RS et al, in an urban slum of Pune found prevalence of diabetes was 4.6% with equal prevalence in both males and females.¹² D'Souza AM et al, in Mangalore and Kapoor D et al, in Kangra, Himachal Pradesh lower prevalence of diabetes mellitus i.e., 7.7% and 7.8% respectively.¹³⁻¹⁴

Present study showed, Diabetes was highest in 39-58-year age group (37.5%) Ahmad J et al, found prevalence of diabetes increased significantly with advancing age. Indeed there was almost three times increase in the prevalence of diabetes after the age of 60 years.¹⁰ A systematic review by D'Souza AM et al, in Mangalore showed the increasing rate of Diabetes with increasing in age i.e. in the age group 40-50 years and 60-70 years.¹³ Agarwal K in a study in Ahmedabad, Gujarat found the prevalence was highest (6.7%) in age group 21-30 and 51-60 years.¹⁵ ZamanAktar et al, in their study in North Eastern India found diabetes was highest among 50-59 years age group (32.10%).¹⁶ Present study showed that prevalence

of diabetes mellitus was more common in male (22.2%) compared to female (15.5%) but the study by D'Souza AM et al, found equal prevalence of diabetes mellitus in both male and female.¹³ This might be due to indulgence to unhealthy diet and sedentary lifestyle by the male adults. The study also revealed a significant association of diabetes mellitus with family history of diabetes mellitus. Patil RS et al, also in their study revealed abdominal obesity and family history of diabetes was found to be an associated risk factor.¹² ZamanAktar et al, also found mean body mass index and associated family history were added risk factors in prevalence of diabetes.¹⁶

CONCLUSION

Results of present showed a higher percentage of diabetes mellitus. Most of the patients were female. Higher numbers of patients were educated. Most of the patients were smokers.

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