

Burden of Diabetes Mellitus in the families of Medical Students of lower Sindh

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ABSTRACT

Background: The non communicable diseases are chronic and exist in human body for long period, diabetes is one of those. The origin word of diabetes means siphon or a pipe from which water or any liquid can pass to another container or bottle the word mellitus is Latin and it means sweet, thus diabetes mellitus means sweet urine excreted from the body of person.

Objectives: To ask history of Diabetes in the families of Medical Students. To calculate the burden of diabetes patients present in the family.

Study Design: cross sectional study.

Place and Duration of Study: This study was carried out at faculty of community medicine and Public Health Sciences Liaquat University of Medical Health Sciences Jamshoro from 1st February 2013 to 31st May 2013

Materials and Methods: It is a cross sectional through a pre design and pre tested. Questionnaire having questions about personal bio data like age, sex, rural, urban, merit seats or self financed seats admission history of diabetes in the family and other relevant

Result: The study shows male and female gender of students out of total 154 medical students there were male were 42 (27.27%) and there were 112 (72.72%) female students regarding the type of History of Diabetes in Families of medical students out of total medical students 154, there were 59 (38.31 %) who reported history of diabetes while 95 (61.68%) of no history of diabetes in their families. The Glucometer is a small machine, available in 53(34.41%) families and not available 101(65.58%) in the families of the students. The distribution of students according to seat of admission shows out of total 154 students who participated in the study 733 were on merit while 82 were on self finance which means having good income source.

Conclusion: The study concludes that there is high burden of diabetes in medical students families in Sindh. Majority is managed on diet, more counseling is required.

Key Words: Diabetes, Students, Glucometer, LUMHS

INTRODUCTION

The non communicable diseases are chronic and exist in human body for long period diabetes is one of those. The origin word of diabetes means siphon or a pipe from which water or any liquid can pass to another container or bottle the word mellitus is Latin and it mean sweet, thus diabetes mellitus means sweet urine excreted from the body of person.

It is a metabolic syndrome clinically characterized by polyuria polyphagia, poly dyspsia hyperglycemia and glycosuria due to absolute or relative deficiency of the hormone insulin (either by action or by secretion or both) that controls the metabolism of carbohydrate, protein, fat and electrolytes, cute metabolism of decompensation leads to immediate death whereas chronic metabolic decompensation results in damage or dysfunction ultimately failure of various organs especially Brian, eyes, kidneys nerves heat and blood vessels resulting in complications like encephalopathy retinopathy nephropathy , neuropathy, coronary artery disease, intercurrent infections etc., leading to

irreversible disability and death. Insulin dependent diabetes mellitus (IDDM) worldwide this number is predicted to double by the year 2025 with the greatest number of cases being expected in china and India. It is 4th leading cause of death in USA. is varying in different parts of the world The trend of the disease, which was affecting middle aged and elderly, the type 2 DM, has shown to affect younger age, affecting the heath status of that county this rising with industrialization and urbanization , indicating the role of not only genetic factors but also environmental factors like quality of life and lifestyle. ^{1,2,3,4,5,6} . The Indian physicians in the ancient time called diabetes madhumeha or "honey urine". They saw ants on the urine and was considered person suffering from this disease⁷. In year 2010, 285 million people were suffering from diabetes, type 2 diabetes account for 90% of the cases⁸. The type 2 diabetes incidence is on rise and by year 2030 it will be doubled⁹. Type 2 diabetes is more common in developed countries as compared to developing countries. In Asia and Africa

the diabetes prevalence will be higher in the coming decades.

MATERIALS AND METHODS

Study design was cross sectional through a pre design and pre tested. Questionnaire having questions about personal bio data like age, sex, rural, urban, merit seats or self financed seats admission history of diabetes in the family and other relevant p

Place of study was faculty of community medicine and Public Health Sciences Liaquat University of Medical Health Sciences Jamshoro

Date 1st February 2013 to 31st May 2013

Date collection was done through a closed questionnaire under supervision of regular qualified staff of the LUMHS Jamshoro and was feed in computer with facility of SPSS version 17.

Sample Size: The sample of study was 154 students of senior MBBS class of Fourth year both male and female

Inclusion criteria: student of fourth year MBBS who verbally consented to participate in the study were included.

Exclusion: students who did not consent or filled incomplete in the questionnaire were excluded.

RESULTS

Table 1 shows male and female gender of students out of total 154 medical students there were male were 42 (27.27%) and there were 112 (72.72%) female student

Table 2 shows age of students of medical out of total 154 there were 77(50%) in age group ff 21 years, 37 (24.2 %) in age group of 22 years, 34(22.07 %) in age group of 23 years, 6 (3.89 %) in age group of 24 and above years and .The majority of students were in age of 21 Years.

Table 3 shows type of History of Diabetes in Families of medical students out of total medical student 154 there were 59 (38.31 %) who reported history of diabetes while 95 (61.68%) of no history of diabetes in their families.

Table 4 shows of domicile of student as rural or urban out of total medical student 154 there were 117 (75.97%) rural and urban 37(24.02%) majority belong to rural domicile.

Table 5 shows availability of Glucometer which is small machine in the blood it was available 53(34.41%) families and not available 101(65.58%) in the families of the student.

Table 6 shows that is 59 diabetes patient of student families 30(43.47%) where on diet12 (20.33%) on oral medicine while 17(28.81%) on insulin majority were on diet control.

Table 7 shows the distribution of students according to seat of admission out of total 154 students who participated in the study 733 were on merit while 82 were on self finance which means having good income source.

Table No.1: Showing sex of students

Sex	No	%
Male	42	27.27
Female	112	72.72
Both sexes	154	100

Table No.2: Showing Age students

Age in years	Male	female	Both sexes	%
21	14	63	77	50
22	15	22	37	24.02
23	13	21	34	22.07
24+	0	6	6	3.89
Total	42 (27.27%)	112 (72.72%)	154	100

Table No.3: Showing History of Diabetes in Families of Medical Students Sindh

History of D.B	Male	Female	Both sexes	%
Yes	11 (7.14%)	48 (31.16%)	59	38.31
No	31 (20.12%)	64 (41.55%)	95	61.68
Total	42 (27.27%)	112 (72.72%)	154	100

Table No.4: Showing Domicile of students as Rural or Urban

Domicile	Male	Female	Both sexes	%
Rural	34	83	117	75.97
Urban	08	29	37	24.02
Total	42	112	154	100

Table No.5: Showing availability of Gluco meter in the Family/Home

Glucometer	Male	Female	Both sexes	%
Yes	12	41	53	34.41
No	30	71	101	65.58
Total	42	112	154	100

Table No.6: Showing Diabetes Patient

Diabetes patient	Male	Female	Both sexes	%
Diet	4	26	30	43.47
Oral	5	07	12	20.33
Ins	2	15	17	28.81
Total	11	48	59	100

Table No.7: Showing admission seats on Merit and Self finance for admission in medical student Sindh

Seats	Male	Female	Both sexes	%
Merit	12	60	72	46.75
Self	30	52	82	53.24
Total	42	112	154	100

DISCUSSION

Diabetes also destroys the small vessels known as capillaries and condition is known as microangiopathy¹⁰. In some studies there is association between learning skills deficiencies and diabetes's when compared with non diabetics It was found that non diabetic learning is 1.2 to 1.5 fold higher while cognitive function was low in diabetics. World while blue circle is symbol of Diabetes.^{11, 12, 13, 14}.

While prevalence of diabetes in between 10 to 12% in our study families of students 31.38% which is higher than reported the reason is we have asked families histories and burden in family 3 to 4 members present hence actual burden is close to 10 to 12 %. Majority of patients was on diet, this is positive trend and these people be given counseling and regular diet advice. The year 2024 for Pakistan is significant as 14.5 million diabetic citizens will be in the country and half of them will not be aware of the disease, hence their will be great burden on Health system which is deficient in human resources¹⁵. Any disease as per biomedicine involves a set of sign and symptoms and medically diagnosed pathological abnormalities for lay people culturally health is good status and admiration^{16,17}. It is repeated in many old and new studies changes in lifestyle can be major contributor for reducing burden of diseases same can be used in medical students families^{18, 19,20}.

CONCLUSION

The study concludes that there is high burden of diabetes in medical students families in Sindh majority is managed on diet more counseling is required.

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