RESEARCH PAPER | Medical Science | Volume : 5 | Issue : 1 | Jan 2015 | ISSN - 2249-555X

A study on the demographic profile of DM patients and prevalence of risk factors in DM patients attending government hospitals of Jamnagar district.

KEYWORDS: Diabetes Mellitus, Risk factor, Demographic profile

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ABSTRACT *According to WHO, India is likely to have 75 million diabetics by the year 2025. The upsurge in diabetic population in India has been ascribed to dietary indiscretion, central obesity, sedentary lifestyle and stressful living. The aim is to assess the demographic profile and prevalence of risk factors in DM patients. Total 400 Diabetic patients attending OPD at government hospital were included. 29.3% were belonging to age below 50 and remaining above 50 years, 51.2% were males and 48.8% females. Majority i.e.81.7% was Hindu, 17.5% were Muslims. 37.8% were from urban and 62.2% from rural side. 41.3% were illiterate and 58.7% were literate. 19.2% were from upper socio-economic class, while 80.8% from lower class. 32.5% patients had family history of DM, 25.3% were obese, physical inactivity in 50.2%, 33.8% had habit of tobacco consumption. Poor dietary practices were seen in 42.5%.*

Introduction:
Over the past three decades, diabetes has become a major cause of morbidity and mortality affecting the youth and the middle-aged [1]. Although Type 2 diabetes is predominantly a disease of adults, during the last few decades, the number of Type 2 diabetes children and adolescents has increased globally and particularly in some parts of the Asians-Pacific regions [2] [3]. Diabetes is emerging as an important public health problem in India. According to WHO, India is likely to have 75 million diabetics by the year 2025. The upsurge in diabetic population in India has been ascribed to dietary indiscretion, central obesity, sedentary lifestyle and stressful living [4]. Present study is an attempt to assess the demographic profile and prevalence of risk factors in DM patients attending government hospital.

Aims and objectives:
To study the demographic profile of DM patients attending government hospital

To assess the prevalence of risk factors in DM patients attending government hospital

Materials and Methods:
It was a cross sectional study. Total 400 Diabetes Mellitus patients attending OPD at the tertiary care hospital, and Patients attending OPD at sub-district hospital and CHCs of the Jamnagar district were included in study. The study period was one year, from January 2012 to December 2012. Data collection was done through oral questionnaire method using a pre-tested, semi-structured type of proforma. The data entry and analysis were done using Microsoft Office Excel 2013.

Results:
Age break up of total 400 study subjects studied showed that, 5(1.3%) belonged to the age group of 20-29 years, 28(7%) belonged to the age group of 30-39 years, 84(21%) belonged to the age group of 40-49 years, 27.8% (111) belonged to the age group of 40-49 years, 122(30.5%) belonged to the age group of 60-69 years, 41(10.3%) belonged to the age group of 70-79 years, 9(2.3%) were of above 80 years of age. It shows that around one third were belonging to age below 50 and remaining two third belonged to above 50 years. As the age rose, the percentage of diabetic patients also rose. 51.2% were males and 48.8% were females [table 1]. Majority i.e. 81.7% were Hindu, 17.5% were Muslims and remaining 0.8% was of other cast including Jain and Christians. 37.8% were from urban area and 62.2% were from rural side.

Table 1 Age and Sex wise distribution of study subjects

Age (years)	Males	Female	Total
	No. (%)	No. (%)	No. (%)
20-29	4(1.9)	1(0.5)	5(1.3)
30-39	10(4.9)	18(9.2)	28(7)
40-49	33(16.1)	51(26.2)	84(21)
50-59	50(24.4)	61(31.3)	111(27.7)
60-69	74(36.1)	48(24.6)	122(30.4)
70-79	26(12.7)	15(7.7)	41(10.3)
>80	8(3.9)	1(0.5)	9(2.3)
Total	205	195	400

Regarding education status, 165(41.3%) were illiterate and 235(58.7%) were literate. 122(30.5%) subjects were educated up to primary level, 58(14.5%) were educated up to secondary level, and 27(6.8%) were educated up to higher secondary levels while 28(7%) had got education above higher secondary level. Out of total 400 subjects, 156(39%) engaged in household work, 98(24.4%) were labourer, 57(14.2%) were doing service, 49(12.3%) were farmer, 23(5.8%) had their own business and 17(4.3%) were unemployed. No specific occupation shows predominance.

Out of total 400 individuals studied, maximum i.e. 161(40.3%) belonged to socio economic class IV, followed by 90(22.5%) from class III, 68(17%) from class V, 52(13%) from class II and 29(7.2%) from class I [figure 1]. These findings indicates that only 19.2% were from upper socio-economic class (class I and II), while remaining 80.8% were from lower socio-economic class (class III, IV and V). This would be due to the fact that in government health care set up, beneficiaries (patients) are generally from lower Socio economic class. These also suggest the possibility of

Volume : 5 | Issue : 1 | Jan 2015 | ISSN - 2249-555X

wider distribution of diabetes among low as well as upper class, breaking the earlier pattern of diabetes being the disease of upper class.

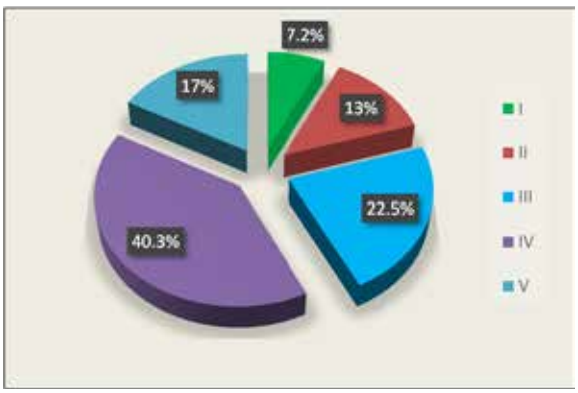

Fig 1 Distribution of study subjects according to their Socio economic-class

Table 16 Presence of various Risk factors

Type of Risk factors	No. (n=400)	%
Obesity (BMI)	101	25.3
Family History of DM	130	32.5
Physical inactivity	201	50.2
Poor Diet	170	42.5
Duration of DM > 5 years	251	62.7
Tobacco Consumption	134	33.5
Alcohol consumption	14	3.5
Dyslipidaemia	88/225*	39.11

*based on reports available with patients

Out of total 400 subjects studied, 32.5% patients had family history of diabetes mellitus, 25.3% were obese, physical inactivity was seen in 50.2%, 33.8% had habit of tobacco consumption and dyslipidaemia seen in 39.11% of patients. Poor dietary practices were seen in 42.5% of patients [table 2]. About one-third i.e. 149(37.3%) had diabetes of less than 5 years duration, 105(26.3%) had a disease from 6-10 years; 90(22.5%) had from 11-15 years; 27(6.8%) from 16-20 years; 19(4.8%) from 21-25 years and 10(2.5%) had more than 26 years. Mean duration of diabetes among patients was 9.84 with standard deviation 6.751.

Discussions:

In this study almost two third patients were above the age of 50 years and remaining was below 50 years of age. Majra and Acharya in their study reported that 37% of the respondents were in the age group of 61-70 years, followed by 24%, 20% and 19% in the age group of 41-50 years, 51-60 years and >70 years respectively [5] .This trend is similar to the observation of present study. Shah et al in their study also observed similar trend. They reported that out of total population 3.78% belong to age group 30-39 years, 21.08% belong to age group 40-49 years, 40.33% belong to 50-59 years, 24.78% belong to 60-69 years, 8.40% belong to 70-79 years and 1.68% belong to more than 80 years [6]. In our study 51.2% were males and 48.8% were females. Shah et al in their study reported that 50.42% were males while 49.58% were females which almost similar to finding of present study [6]. Majra and Acharya in their study reported that 53% were men and 43% were women. They show slight higher finding in males [5]. So gender wise distribution of diabetes mellitus is almost equal.

Regarding education status, 41.3% were illiterate and 58.7% were literate. Shah et al in their study observed that 36.64% were illiterate, 52.35% were upto school and 10.99% were graduate [6]. The observation indicates that almost 72% of patients were either illiterate or low literate, suggesting an inverse relationship between literacy status and diabetes. As literacy rose the percentage of diabetes declined. Shah et al also show inverse relationship.

Findings of SEC indicates that only 19.2% were from upper socio-economic class (class I and II), while remaining 80.8% were from lower socio-economic class (class III, IV and V). This would be due to the fact that in government health care set up, patients are generally from lower Socio economic class. These also suggest the possibility of wider distribution of diabetes among low as well as upper class, breaking the earlier pattern of diabetes being the disease of upper class. Gupta et al in their study also reported similar pattern. They reported that 5.73% belonged to socio economic class I, 12.60% from class II, 20% from class III, 20% from class IV and 32.80% were from class V [7]. Shah et al observed that nearly 60% of patients were from low socio-economic status [6].

Regarding risk factors, 32.5% patients had family history of diabetes mellitus. Gupta et al in their study reported that majority 88.58% of the respondents had no family history of diabetes mellitus [7]. Out of total, 25.3% patients were obese. High percentage of female (37%) were obese than male (14.2%) patients. Similarly more number of female (77.5%) are overweight than males (52.7%). Gautam et al in their study found similar finding. They reported that the overweight and obese status was seen more in female (59.8%) patients than male (46.2%) [8].

Poor dietary practices were seen in 42.5% of patients. Majra and Acharya in their study show that only 43% followed the recommended diet schedules [5].

In our study, positive history of tobacco consumption was found in 33.5% patients. Majra and Acharya in their study reported that 30.40% diabetic patients had habit of smoking which is almost similar to finding of present study [5].

Out of 400 individual studied, physical activity was seen in around half of patients i.e. 49.8%. Exercise is very crucial an important for effective management of diabetes and for prevention of complication. Gautam et al in their studied reported that regular physical activity was undertaken by less than half of the subjects (46.5%). These findings are similar to observation of present study [8]. In the present study, half of the patients were not doing exercise indicating the very casual attitude towards such serious disease and indicate poor life style modification.

Conclusion:

From the observation of the present study it is concluded that though the DM is the disease of old age but in last few decades because of faulty dietary practice and poor life style, DM was seen in young also. Previously it was seen that DM is the disease of upper socioeconomic class but in our study it was more in lower class. These suggest the possibility of wider distribution of diabetes among low as well as upper class, breaking the earlier pattern of diabetes being the disease of upper class. Also presence of

Volume : 5 | Issue : 1 | Jan 2015 | ISSN - 2249-555X

prevalent risk factors of DM such as obesity, poor dietary practice, physical inactivity etc. predispose to early onset of DM.

The observations of the study indicate careless attitude of diabetic patients towards their health in general and prevention of complication of diabetes in particular.

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