



SOCIO-ECONOMIC STATUS AND HEALTH PRACTICES FOLLOWED BY TYPE II DIABETIC PATIENTS FROM ROHTAK DISTRICT, HARYANA

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ABSTRACT

Type II diabetes mellitus is a metabolic disorder and typically results from excess of caloric intake over energy expenditure. It is characterized by a progressive insulin secretory defect due to insulin resistance, which increases the body's demand for insulin in order to retain glucose homeostasis. There are many lifestyle factors that increase the risk of type II diabetes. The most important are poor-quality diet and physical inactivity linked to overweight and obesity. The present study was conducted in Rohtak District, Haryana to assess the Socio Economic status and health practices followed by Diabetic Patients. A total of 300 Diabetic patients (40-60 Years) were prepared by gathering information from patients coming to various hospitals and also through personal contacts. No Majority of patients 76 percent were suffering other complications with diabetes. 54 percent patients food habits was vegetarian while 69 percent patients were avoided the food which is not good for diabetics. Various complications like Hypertension, Obesity, heart disease and G.I disease were observed in most of the patients.

Keywords: Diabetes mellitus, hyperglycemia, Patients, Complications, Hospitals, Vegetarian.

Introduction

Diabetes refers to any of the diseases characterized by an excessive discharge of urine. The word 'diabetes' literally translates as 'siphon', or 'pass through' (Webster, 2003). Diabetes Mellitus is a chronic hereditary disease characterized by a lack of endogenous insulin and resulting in hyperglycemia and the excretion of excess glucose in urine. The basic defect appears to be an absolute or relative lack of insulin production from the pancreas, which leads to abnormalities mainly in carbohydrate metabolism, as well as in protein and fat metabolisms. Severe untreated diabetes, of which hyperglycemia is just one aspect of metabolic derangement, can lead to both macro and micro vascular complications. A relatively simple and non-invasive method of preventing these complications is to recognize the impact of diet on insulin production and maintenance. Therefore, people with diabetes mellitus need help in planning and accepting a daily diet which contains the appropriate amounts of carbohydrates, protein, fat and fiber, together with adequate amounts of vitamins and minerals. (Webb, 2002)

There are many lifestyle factors that increase the risk of type 2 diabetes. The most important are poor-quality diet and physical inactivity linked to overweight and obesity (Zimmet et al., 2001). Obesity is one of the major risk factors for diabetes, yet there has been little research focusing on this risk factor across India (Rao et al., 2011). The risk of type 2 diabetes is determined by interplay of genetic and metabolic factors. Ethnicity, family history of diabetes, and previous gestational diabetes combine with older age, overweight and obesity, unhealthy diet, physical inactivity, excess body fat, a summary measure of several aspects of diet and physical activity, is the strongest risk factor for type 2 diabetes, both in terms of clearest evidence base and largest relative risk. Overweight and obesity, together with physical inactivity, are estimated to cause a large proportion of the global diabetes burden. The frequency of type 2 diabetes increases dramatically with age and as populations live longer this contributes to the rising prevalence of diabetes. At the same time, there is an increasing prevalence in younger, economically active individuals in developing countries linked to increasing obesity rates (Colagiuri et al, 2005; Wild et al., 2004). Type II diabetes can be prevented or delayed in adults at high risk through modest weight loss with diet and exercise or through use of hypoglycemic drugs metformin.

Approximately half of all individuals with type 2 diabetes remain undiagnosed, even in the most developed countries (Harris et al., 1998). Type 2 diabetes is asymptomatic for several years, from the start of initial hyperglycemia (Thompson et al., 1996). Therefore, treatment of diabetes usually starts late in the natural history of the disease, which suggests that intervention at an earlier stage might reduce the complications in the long term. The long-term, relatively specific complications of diabetes mellitus are predominantly vascular and include the development of retinopathy, nephropathy and neuropathy. People with diabetes also have a significantly increased risk of cardiac, peripheral arterial and cerebrovascular disease.

Material and Methods

The present study was conducted on Diabetic patients in the age group of 40-60 years. Total 300 patients i.e. 150 Male and 150 Female were selected proportionality for the study from patients coming to various hospitals like Civil Hospital, P.G.I and Private Nursing Homes at O.P.D time of Rohtak District., Haryana and also through personal contacts. Socio Economic status and health practices followed by Diabetic Patients assessed by a well-structured interview schedule was

prepared in accordance with the methodological procedure keeping in view the objectives of the investigation. The interview schedule will be pretested initially, based on the responses obtained and difficulties realized, suitable amendments will be made to make it more functional.

Result and Discussion

The information regarding Age, Sex, Education qualification, Marital Status, Occupation, Income and Activity presented in Table – I. 46 percent of the patients were in the age group of 40-50 years, followed by 53 percent in 51-60 years of age. 50 percent patients were male and 50 percent were female.

Table 1: Socio- Economic profile of of on Type II Diabetic Patients (n=300)

Characteristics	Frequency	Percentage
Age		
40-50 years	139	46.33
51-60 years	161	53.66
Sex		
Male	150	50.00
Female	150	50.00
Education Qualification		
Uneducated	37	12.33
Primary	42	14.00
Middle	36	12.00
Metric	69	23.00
Sr. Secondary	34	11.33
Graduate	56	18.66
Post Graduate	26	8.66
Marital Status		
Single	11	3.66
Married	228	76.00
Widow	39	13.00
Divorced	18	6.00
Separated	4	1.33
Occupation		
Private Service	68	22.66
Govt. Service	62	20.66
Business	55	18.33
Agriculture	11	3.66
House Wife	84	28.00
Retire	20	6.66
Income		
Up to 50,000	114	38.00
50,000 to 1 lac	126	42.00
1 lac to 1.5 lac	37	12.33

1.5 lac to 2 lac	17	5.67
2 lac to 2.5 lac	6	2.00
Activity		
Sedentary	225	85.00
Moderate	38	12.66
Heavy	7	2.33
Food Habits		
Vegetarian	164	54.67
Non – Vegetarian	84	28.00
Weekly consume	12	4.00
Fortnightly consume	20	6.67
Monthly consume	34	11.33
Occasionally consume	18	6.00
Eggetarian	52	17.33
Daily consume	16	5.33
Weekly consume	22	7.33
Fortnightly consume	6	2.00
Monthly consume	8	2.67

Maximum patients (23%) were having Metric education followed by Graduate (18%) and 14 per cent up to Primary, while 12 per cent with middle and almost similar percentage (12%) were illiterate and 11 per cent were educated up to Sr. Secondary and 8 per cent of patients were Post Graduate. Majority of patients (76%) were married followed by 13 per cent Widow while 6 per cent were divorcee and other 3 per cent were Single and remaining 1 per cent was separated. Majority of patients (28%) were house wife followed by 22 per cent were in private service while 20 per cent Govt. Service and other 18 per cent were in business and other 6 per cent are retired and remaining 3 per cent were in agriculture. Majority of subjects (42%) had monthly income 50,000 to 1 Lac followed by 38 per cent with up to 50,000 while 12 per cent with monthly income 1 Lac to 1.5 Lac and other 5 per cent with monthly income 1.5 Lac to 2 Lac and only 2 per cent was between 2 Lac to 2.5 Lac. Majority of patients (85%) were sedentary workers followed by 12 per cent were moderate workers while remaining 2 per cent were heavy activity workers.

Majority of patients (54%) were vegetarian followed by 28 percent. Non-vegetarian from them (11%) were consuming monthly and (6%) were taking ch fortnightly same (6%) were eating occasionally and remaining (4%) consumed weekly although (17%) were eggetarian from whom (7%) were consuming egg weekly and (5%) were eating daily while (2%) were having monthly and same (2%) consumed fortnightly.

Table 2: Frequency and percentage distribution of patients according to presence of Complications at the time of diagnosis of diabetes. (n=300)

Complications	Frequency	Percentage
No Complications with Diabetes	72	24.00
Complications Observed with Diabetes	228	76.00
Hypertension	58	19.33
Obesity	27	9.00
Ischemic heart disease	18	6.00
Double vision	8	2.67
G.I. disease	13	4.33
Renal problem	11	3.67
Liver disorder	8	2.67
Hypertension + Obesity	16	5.33
Hypertension + Ischemic heart disease	10	3.33
Hypertension + G.I. disease	11	3.67
Hypertension + Renal problem	9	3.00
Obesity + Renal problem	17	5.67
Double vision + Bulimia nervosa	22	7.33

The data regarding prevalence of complication is presented in Table 2 which shows that twenty four percent patients were having no other complications with Diabetes while seventy six percent were suffering with other complications. Majority of patients had Hypertension (19%) and (9%) were obese and (7%) having double vision + bulimia nervosa and (6%) suffering with Ischemic heart disease and (5%) having Obesity + Renal problem as well as same (5%) suffering from Hypertension + Obesity while (4%) having G.I disease and (3%) patients who were suffering from renal problem and same ratio (3%) having Hypertension + G.I disease and there were also (3%) suffering with Hypertension + Ischemic heart disease and same (3%) suffering with Hypertension + Renal problem and it was found that (2%) having double vision and also (2%) suffering with liver disorder.

Table 3: Frequency and percentage distribution of Foods Avoided and Foods preferred by the Type II Diabetic Patients (n=300)

Food Avoid	Frequency	Percentage
Patients not avoid Food	92	30.67
Patients that avoid food	208	69.33
Reason for Avoidance		
Doctor's Advice	97	32.33
Friend's advice	62	20.67
Decreased Digestive efficiency	49	16.33
Food Prefer		
No Preference	84	28.00
Preference	216	72.00
Reason for Preference		
Doctor's Advice	101	33.67
Friend's advice	115	38.33

Data regarding foods avoided by the diabetic patients is shown Table 3. Majority of the subjects (69%) were avoiding any food due to diabetes rest 30% were not avoiding any food due to diabetes. Majority of patients (32%) were avoiding foods on advice of Doctor while (20%) were avoiding on friend's advice and remaining 16% because of decreased digestive efficiency. Majority of patients (72%) had food preference and 28 percent did not have any preference for any type of food. Maximum patients (38%) preferred foods on the advice of friends and remaining (33%) preferred on Doctor's advice.

Table 4:List of the foods avoided by selected Type II Diabetic Patients:

Foods Avoided	Frequency
Sugar and Sweets	208
Roots and Tubers	55
Sweet fruits	120
Starchy Foods	106
Meat and Egg	164
Fat, Fried and Spicy foods	88
Nuts and Dry Fruits	21
Tea and Coffee	23
Alcohol	202
Preserved Foods	80
More Salt	150

Table 4 shows that majority of the patients were avoiding sugar and sweets foods followed by most of the patients avoiding alcohol, meat and egg, more salt, sweet fruits, starchy foods, fat, fried and spicy foods, preserved foods and roots and tubers while smaller number of patients were avoiding other foods like nuts and dry fruits and tea and coffee.

Table 5: List of the foods preferred by selected Type II Diabetic Patients

Foods preferred	Frequency
Whole cereals and legumes	130
Legumes	163
Green Leafy vegetables	185
Salads	97
Fruits*	99
Butter milk and Skim milk	84
Salty Biscuits	134
Alternative Sweeteners	54
Tea without sugar	148

*Fruits – Citrus fruits, jamun, guava, papaya, pitches, apple.

Table 5 shows that maximum patients used to prefer Green leafy vegetables followed by Legumes, Tea without sugar, Salty Biscuits combination of whole cereals and legumes, fruits, salads, butter milk and skim milk while lesser patients also used to prefer alternative sweeteners.

Conclusion

The present study was conducted to determine the Socio Economic status and health practices followed by Type II diabetic patients. For this study, a total of three hundred Diabetic patients in the age group of 40-60 Years i.e. 150 male and 150 female were drawn proportionately from the randomly selected hospitals of District Rohtak. The study thus reported that majority of patients observed various complications like hypertension, obesity, ischemic heart disease, renal, G. I. and vision problems etc.



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