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Research Article

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A study of knowledge, practices and treatment seeking behaviour among diabetic patients

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ABSTRACT

Background: Adherence is a complex process and patients' decisions about how to manage their medications are likely based on economic, physical, psychological, and social considerations. Identifying factors associated with adherence would be of value for family physicians in focusing strategies to enhance patient adherence to antihypertensive medications. The objectives of the study were to knowledge, practices and treatment seeking behavior of patients with diabetes.

Methods: Present study is a hospital based cross sectional study using interview technique carried out in the Medicine department of Malla Reddy hospital among 64 diabetic patients. Data was collected in predesigned, semi structured questionnaire. Information on socio-demographic profile, knowledge about diabetes, practices about diabetes, treatment seeking behaviour related to diabetes and quality of life was collected and recorded.

Results: Overall knowledge of patients as assessed by these seven questions was very good. The overall treatment seeking behavior was found to be very good among these patients. It is observed from above table that majority of patients were following practices like wearing shoes regularly and dietary advice. Only 50% of patients had got their eyes checked in the last one year. However, practices such as checking blood sugar levels, blood pressure levels and consulting the physician regularly were not followed, as they should be.

Conclusions: Knowledge of most diabetic patients was good. However, they were not regular with their check-ups. The overall treatment seeking behaviour was in line with modern medicine as well as diet. Diabetic patients were not extensively affected by the disease regarding quality of life. Most patients were able to carry out daily tasks. Still, there is a need of health education as many patients do not have adequate knowledge.

Keywords: Knowledge, Practices, Treatment seeking behaviour

INTRODUCTION

The term "diabetes mellitus" describes a metabolic disorder of multiple aetiology characterized by chronic hyperglycaemia with disturbances of carbohydrate, fat and protein metabolism resulting from defects in insulin secretion, insulin action, or both. The effects of diabetes mellitus include long–term damage, dysfunction and failure of various organs (WHO 1999).

Diabetes is an "iceberg" disease. Although increase in both the prevalence and incidence of type 2 diabetes have occurred globally, they have been especially dramatic in

societies in economic transition, in newly industrialized countries and in developing countries. Currently the number of cases of diabetes worldwide is estimated to be around 347 million; of these more than 90% are type 2 diabetes. In 2008, an estimated 1.2 million people died from consequences of high blood sugar. More than 80% diabetes deaths occur in low and middle income countries. ¹

The world prevalence of diabetes among adults (aged 20-79 years) will be 6.4%, affecting 285 million adults, in 2010, and will increase to 7.7% and 439 million adults by 2030. Between 2010 and 2030, there will be a 69%

increase in numbers of adults with diabetes in developing countries and a 20% increase in developed countries.²

Adherence is a complex process and patients' decisions about how to manage their medications are likely based on economic, physical, psychological, and social considerations. Identifying factors associated with adherence would be of value for family physicians in focusing strategies to enhance patient adherence to antihypertensive medications.³

Unfortunately, there is still inadequate awareness about the real dimension of the problem among the general public. There is also a lack of awareness about the existing interventions for preventing diabetes and the management of complications.¹

Studies have shown that increasing patient knowledge regarding disease and its complications has significant benefits with regard to patient compliance to treatment and to decreasing complications associated with the disease.⁴

With this background, present study has been conducted to study knowledge and practices, treatment seeking behaviour and quality of life of diabetic patients.

METHODS

Present study is a hospital based cross sectional study was carried out in the medicine department of Malla Reddy hospital using interview technique. Diabetic patients from diabetic clinic of Dr. Kiran Grandhi, Shapur, were also interviewed. A total of 64 Diabetic patients were interviewed.

Ethical aspects

Institutional ethics committee permission of MRIMS was obtained (Annexure-I). Informed consent was obtained from every patient. (Annexure-II) at the end of the interview, patients were given health education regarding risk factors, complications, prevention of complication and self-care in diabetics.

Data collection

Diabetic patients attending outpatient department of medicine department, Malla Reddy hospital and admitted patients and patients from diabetic clinic of Shapur were interviewed. Data was collected in predesigned, semi structured questionnaire (Annexure III). Information on socio democratic profile, knowledge about diabetes, practices about diabetes, treatment seeking behaviour related to diabetes and quality of life was collected and recorded.

Socio economic status

Modified Prasad's scale was used to classify the studied subjects on to categories of socio economic status.

Statistical analysis

The data was entered in MS-excel sheet and results were analysed using SPSS software.

RESULTS

The above table shows the knowledge of diabetes among patients. Overall knowledge of patients as assessed by these seven questions appears to be very good because out of 7 questions, majority of patients have shown a good 5 questions.

Table 1: Distribution of study subjects as per their knowledge about diabetes.

Questions	Answers	Females	Males	Total
Knowledge of disease	Yes	27 (43.5%)	35 (56.5%)	62 (96.9%)
	No	00	02 (100%)	02 (3.1%)
Knowledge of risk factors	Good	02 (100%)	00	02 (3.1%)
	Average	02 (40%)	03 (60%)	05 (7.8%)
	Poor	23 (40.4%)	34 (59.6%)	57 (89.1%)
Knowledge of complications	Good	03 (42.9%)	04 (57.1%)	07 (10.9%)
	Average	05 (50%)	05 (50%)	10 (15.6%)
Knowledge of normal blood sugar level	Yes	10 (38.5%)	16 (61.5%)	26 (59.4%)
	No	17 (44.7%)	21 (55.3%)	38 (40.6%)
Knowledge of hypoglycemia	Yes	13 (46.4%)	15 (53.6%)	28 (56.3%)
	No	14 (38.9%)	22 (61.1%)	36 (43.7%)
Knowledge of treatment of hypoglycemia	Yes	15 (50%)	15 (50%)	30 (53.1%)
	No	12 (35.3%)	22 (64.7%)	34 (46.9%)
Knowledge of foot care	Yes	14 (50%)	14 (50%)	28 (56.3%)
	No	13 (36.1%)	23 (63.9%)	36 (43.8%)

Table 2 shows treatment seeking behaviour of the diabetic patients. Maximum patients (84.4%) were taking treatment of modern medicine. It was seen that 40.6% of patients were on diet + oral hypoglycemic drugs and only 3% were on dietary advice along without the use of

drugs. 90.6% of patients were taking the medicines regularly. Thus we can say that the overall treatment seeking behaviour was found to be very good among these patients.

Table 2: Distribution of study subjects as per their treatment seeking behaviour related to diabetes (DM).

Questions	Answers	Females	Males	Total
Where do you seek	Modern medicine	22 (40.7%)	32 (59.3%)	54 (84.4%)
treatment	No	05 (50%)	05 (50%)	10 (15.6%)
What kind of treatment taken for DM	Diet	00	02 (100%)	02 (3.1%)
	Diet + oral hypoglycemic drugs	13 (50%)	13 (50%)	26 (40.6%)
	Oral hypoglycemic drugs	05 (33.3%)	10 (66.7%)	15 (23.4%)
	Insulin	02 (50%)	02 (50%)	04 (6.3%)
	Oral hypoglycemic drugs + Insulin	03 (60%)	02 (50%)	05 (7.8%)
	All of these	04 (33.3%)	08 (66.7%)	12 (18.8%)
Are you taking prescribed medicines regularly	Yes	25 (43.1%)	33 (56.9%)	58 (90.6%)
	No	02 (33.3%)	04 (66.7%)	06 (9.4%)
	No	13 (36.1%)	23 (63.9%)	36 (43.8%)

Table 3: Distribution of study subjects as per their practices of diabetes.

Questions	Answers	Females	Males	Total
Do you regularly check blood sugar levels	Yes	22 (44.9%)	27 (55.1%)	49 (76.6%)
Do you regularly check blood sugar levels	No	05 (33.3%)	10 (66.7%)	15 (23.4%)
Do you regularly get your BP checked	Yes	21 (43.8%)	27 (56.3%)	48 (75%)
	No	06 (37.5%)	10 (62.5%)	16 (25%)
Have you get your eyes shooked in the last one year	Yes	17 (53.1%)	15 (46.9%)	32 (50%)
Have you got your eyes checked in the last one year	No	10 (31.3%)	22 (68.8%)	32 (50%)
Do you consult your physician regularly	Yes	18 (46.2%)	21 (53.8%)	39 (60.9%)
	No	09 (36%)	16 (64%)	25 (39.1%)
Do you wear shoes regularly	Yes	11 (45.8%)	13 (54.2%)	24 (37.5%)
	No	16 (40%)	24 (60%)	40 (62.5%)
Do you follow dietary advice	Yes	23 (47.9%)	25 (52.1%)	48 (75%)
	No	04 (25%)	12 (75%)	16 (25%)

DISCUSSION

Present study is a hospital based cross sectional study using interview technique carried out in the Medicine department of Malla Reddy hospital among 64 diabetic patients from 1st November to 30th November 2013.

Overall knowledge of patients as assessed by these seven questions appears to be very good because out of 7 questions, majority of patients have shown a good 5 questions.

Maximum patients (84.4%) were taking treatment of modern medicine. It was seen that 40.6% of patients were on diet + oral hypoglycemic drugs and only 3% were on dietary advice along without the use of drugs. 90.6% of patients were taking the medicines regularly. Thus we

can say that the overall treatment seeking behaviour was found to be very good among these patients.

Only 50% of patients had got their eyes checked in the last one year. However, practices such as checking blood sugar levels, blood pressure levels and consulting the physician regularly were not followed, as they should be.

Viswanathan V et al observed that a score of <50 was obtained in 67.2%.⁶ Low score was significantly more common in women (78.5%) than in men (62.5%) Low scores (<50) were more common among those with lower level of formal education. Significant foot problems like gangrene, foot ulcers were present in 27.2% and low scores were more common among those with these complications (82% vs 62%).

Kaur K et al in their study found that most of the study subjects (60%) opined that diabetic should consume whatever is cooked in the family. Forty eight diabetics knew that sweets and fatty foods should be avoided but only 18.3% were avoiding them. Genital hygiene was maintained by 51.7% and foot care was done by 63.3% through regular washing. Monitoring of blood sugar was poor (46.7%), only 3 knew and were continuing self-testing of urine. Oral anti-diabetic drug compliance rate was 62.9%. None of the patients on insulin injections knew about self-therapy. Knowledge regarding diabetic complications was partial. There is a need to reorient and motivate health personnel's in educating diabetics about self-care.

Tham KY et al observed that there was no difference (P = 0.51) between the diabetics' mean score of 29.2/43 (68.1%) and the non-diabetics' 28.3/43 (65.9%). The younger diabetics tended to score higher with those <54.99 years obtaining the highest score of 34.2/43 (79.5%) in the study. More than 50% of diabetics practiced what they knew of self-care but 25% were ignorant of key aspects like need for home glucose monitoring and regular ophthalmic reviews. Only 21.2% diabetics performed home glucose monitoring though another 42.1% knew they should but were not doing it.

Bruce DG et al found that patients who were older, not fluent in English or from an indigenous Australian background were significantly less likely to have received diabetes education, dietetic advice or to be performing SMBG.⁸

Singh AK et al⁹ reported that one-third of the diabetic participants were aware of their condition; two-thirds of these were on treatment and three-fourths of those on treatment had controlled fasting blood sugar level. The awareness, treatment and control were better among women.

Porapakkam Y et al observed that overall, the proportion of unawareness for hypertension, diabetes mellitus and both conditions combined were 56.1%, 41.2% and 21.9%, respectively. For those undergoing treatment for the control of blood pressure (less than 140/90 mmHg) was 12.4 percent, diabetes mellitus (fasting plasma glucose less than 140 mg/ dL) 26.4 percent, and control of both conditions combined was 7.4 percent. Factors associated with unawareness and inadequate controls of the illnesses were subjects from rural areas, with low income, low educational levels, currently working, and the oldest age group.

Srinivas G et al found that noncompliance was seen in 57% of the 112 patients interviewed, and reasons were elicited. ¹¹ Interruption of treatment was significantly associated with lack of education. The study identified the lack of a patient-friendly, flexible health care system as the primary reason for noncompliance.

Hasan SS et al reported that a significant number of patients (35.5%) were using CAM for diabetes mellitus. Thirteen types of CAM were identified in the study with the most common being vitamins supplements (48.2%), herbal medicines (26.4%), ginseng (4.7%) and traditional Chinese medicine (4.0%). The patients with higher education level, higher income, and aged more than 50 years were independently associated with CAM use. Majority of the patients (77.6%) reported that their condition had improved by using CAM.

Nandini Natarajan et al found that seventy-seven percent of patients reported high adherence as measured by the Morisky scale.³ On multiple logistic regression, being older than 55, taking more than 7 prescribed medications, and having a lifestyle that included regular exercise or a healthy diet with low salt intake or both were significant independent predictors of high adherence scores on the Morisky scale.

Grant RW et al found that the average 7-day adherence was 6.7 ± 1.1 days. Total number of medicines prescribed was not correlated with medication adherence. Adherence was significantly lower for medicines not felt to be improving current or future health (6.1 vs. 6.9 days out of 7, P value 0.001). Among patients on three or more medicines, 71% (15 of 21 patients) with suboptimal adherence were perfectly adherent with all but one medicine. Side effects were the most commonly reported problem with medication use. Of 29 medicines causing side effects that interfered with adherence, 24 (83%) did so for 1 month, and only 7 (24%) were reported to the patient's primary care physician.

Katarina Hjelm et al found that females more often focused on follow-up of DM and chronic pain in joints, while males described fewer problems. ¹⁴ Among those who felt that healthcare had failed, most had turned to traditional healers in the folk sector for prescription of herbs or food supplements, more so in women than men. Males more often turned to private for-profit clinics while females more often used free governmental institutions.

CONCLUSION

Knowledge of most diabetic patients was good. However, they were not regular with their check-ups. The overall treatment seeking behaviour was in line with modern medicine as well as diet. Diabetic patients were not extensively affected by the disease regarding quality of life. Most patients were able to carry out daily tasks. Still, there is a need of health education as many patients do not have adequate knowledge.

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Institutional Ethics Committee

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