Research Paper

Medical science

Compliance To Therapeutic Regimen Among Clients With Type II Diabetes Mellitus

Digina Jacob	Lecturer, OBG Department, Sree Gokulam Nursing College Venjaramoodu, Trivandrum-695607
Chithra T S	Lecturer, OBG Department, Sree Gokulam Nursing College, Venjaramoodu, Trivandrum-695607

ABSTRACT

Diabetes is a challenging disease where a lot of life style modification is needed to control it effectively. Compliance is a key factor, that permeates all areas, be it therapeutic regimen, exercise or diet, irrespective of the type of illness. The problem of poor compliance or adherence to prescribed treatments is very complex. In spite of advanced technology in the medical field and the management of diabetic clients in terms of drugs and diet, the problem of non-compliance to prescribed therapy continues to occur among diabetic clients. This attitude of non-compliance has called for a greater concern in the follow- up of clients to treatment and the overall response to the diabetic management in the hospitals. The present study was an attempt to assess the level of compliance to therapeutic regimen among clients with type II diabetic mellitus. Objectives: To assess the level of compliance to therapeutic regimen among clients with type II diabetes mellitus, to determine the association between the level of compliance and selected socio demographic variables and to determine the association between the level of compliance to therapeutic regimen and clinical variables. Methodology: The research approach adopted was quantitative research approach. The study was conducted among 140 patients attending Medical OPD of private hospital, Venjaramoodu. After obtaining consent, data was collected by interviewing the type II diabetic patients. Results : Analysis revealed that, majority of clients reported average compliance to therapeutic regimen among clients with type II diabetes mellitus and only 15.7% had good compliance to therapeutic regimen. There was an association between socio-demographic variables (marital status and habit), and compliance to therapeutic regimen and no association between compliance to therapeutic regimen and clinical variables.

KEYWORDS : compliance, therapeutic regimen, Diabetes mellitus

Introduction

Diabetes mellitus is a metabolic disorder characterized by the presence of hyperglycemia due to defective insulin secretion, defective insulin action or both.[1] Diabetes mellitus, the most common endocrine disease in the world is a major global public health issue. Diabetes mellitus is the fourth leading cause of death in most of the developed countries. Kerala is the diabetic capital of India with a prevalence of diabetes as high as 20%, double the national average of 8%.[2] Adherence to therapy is defined as the extent to which a person's behavior in taking medication, following a diet, and/or executing lifestyle changes, corresponds with agreed recommendations from a healthcare provider. Patients presenting with type 2 diabetes mellitus are initially encouraged to maintain a healthy diet and exercise regimen, followed by early medication that generally includes one or more oral hypoglycemic agents and later may include an injectable treatment. To prevent the complications associated with type 2 diabetes, therapy frequently also includes medications for control of blood pressure, dyslipidemia and other disorders, since patients often have more than three or four chronic conditions. Despite the benefits of therapy, studies have indicated that recommended glycemic goals are achieved by less than 50% of patients, which may be associated with decreased adherence to therapies. As a result, hyperglycemia and long-term complications increase morbidity and premature mortality, and lead to increased costs to health services.[6] Despite several approaches and strategies taken to tackle the problem of non-compliance of client to diabetic treatment, noncompliance to diabetes treatment remains a public health challenge. Several factors such as educational status as well as occupation of patient are important in the daily compliance with prescribed regimen in chronic conditions like diabetic mellitus. Non-compliance to treatment regimens possesses a great threat to patient's recovery as well as maintenance of good health. Barriers to non-compliance according to World Health Organization (2005) include attitude and belief of individuals which explains the health behaviours of such individuals. The perceived benefits of such health behaviours are greatly influenced by culture, religion and level of education among other factors. Improving patient compliance should therefore be of particular interest to all health care providers in health institutions.[7] Successful management of diabetes relies on clients self-care. The degree of patient's compliance (adherence) to Diabetes self-care is the extent to which patients carry out the set of daily activities recommended to them by a health care professional as a means of managing their diabetes .Developments of more effective behavioral strategies to promote adherence is needed to achieve maximum benefits to the clients.[3] The problem of poor compliance or adherence to prescribed treatments is very complex. Therapeutic compliance has been a longstanding concern since 1970's due to the wide spread nature of non-compliance with therapy.[4] Since diabetes is a chronic disease the patients with diabetes must learn to co-ordinate the treatment regimen. The diabetic patient is ultimately responsible for managing his or her own care and to prevent complications, he or she must have adequate knowledge and other facilitating factors towards compliance to therapeutic regimen. Type2DM needs therapeutic control, generally involving strict, rigorous and permanent lifestyle changes that include dietary interventions, physical activity, strict medication regimes and good metabolic control. The human and economic toll of diabetes mellitus particularly type 2 diabetes is likely to grow globally in the foreseeable future due to rapid cultural changes, aging population, increasing urbanization, dietary changes, decreased physical activity and other unhealthy lifestyle and behavioral patterns. According to international diabetes institute in Australia, India has been estimated to have 32.7 million people with diabetes. The prevalence was 31 millions in India during 2000 which is expected to reach 79 Million by 2030 (WHO, 2005).[8] Considering the above factors, the researcher felt a need to conduct the study on the level of Compliance to therapeutic regimen among clients with Type II Diabetes mellitus

Materials and methods

In this study researcher adopted a quantitative approach using a descriptive design. The setting of the study was Medical OPD of Sree Gokulam Medical College &Research Foundation, Venjaramoodu. Samples were clients with Type II diabetic mellitus undergoing therapeutic regimen and who met the inclusion criteria. Sample size was 140 recruited using purposive sampling technique .

Tools and techniques

Tool consists of 3 sections

Section A: sociodemographic performa

The tool consisted of total 8 items such as age, gender, marital status, educational status, occupational status, monthly income, administration of insulin and habits

Section B:Clinical data

The tool consisted of 10 items such as duration of diabetes mellitus, treatment system ,BMI, family history of diabetes mellitus. Type of treatment, duration of taking Oral Hypoglycemic Agent, duration of insulin therapy, type of insulin ,frequency of taking insulin ,FBS value within one month.

Section C: Compliance questionnaire

Compliance questionnaire was used to assess the compliance to therapeutic regimen such as drugs, exercise, diet, self care & follow up of type ll diabetic patients. It consist of 20 questions with common 4 options-always, most often, sometimes, & never. Mainly 14 positive questions and 6 negative questions. Total score is 60.Maximum score is 3 and minimum score is 0.

Scoring for positive question,

	Always	Most often	sometimes	Never
scoring	3	2	1	0

Scoring for negative questions,

	Always	Most often	sometimes	Never
Scoring	0	1	2	3

The level of compliance is graded as Good, Average, and poor.

Scoring,

>75%   - Good compliance

50-75% -   Average compliance

<50% -   Poor compliance

Data collection process

Data was collected after obtaining formal permission from the ethical committee of Sree Gokulam Nursing College and Research Foundation. The investigator introduced themselves to the subjects and the topic was explained to them. They were assured that all the data would be kept confidential and would be used only for the study purpose.an informed consent was taken from all the subjects individually after explaining the objectives and purpose of the study. After obtaining permission from the subjects, socio demographic performa, clinical data and structured compliance questionnaire were administered and data were collected. Data were collected over a period of one week from 14\06\2013 to 20\06\2013.

Results

Frequencies and percentage were used to analyze the sample characistitics.

Socio-demographic data revealed that, among 140 subjects, almost (47.8%) were above 60 years of age, 67.8% were males, 40% were widow/widower, 41.4% had primary education, 25.7% subjects were working in private firm, 38.5% subjects reported to had income of <2500 rupees monthly, 40% subjects were taking insulin injection (self-administration) and 42.8% reported absence of using alcohol, smoking and tobacco chewing habits.

Clinical data revealed that almost 1/3rd of samples had Diabetes Mellitus for 6-10 years, 24.5% subjects had BMI in between 18.5-24.5, 95% were using insulin & Oral Hypoglycemic Agents, 32.1% were taking Oral Hypoglycemic Agents for 2year-5 year, 44.2% were taking insulin for 2-5 year, 43.5% were taking short acting insulin, 65.6% were taking insulin twice and 36.4% have FBS value <140. According to family history of Diabetes mellitus, 25% subjects were reported history of paternal diabetes, 20.7% had history of maternal diabetes, 17.8% subject's siblings were diabetic and 17.1% subjects had no family history of Diabetes mellitus.

Level of compliance to therapeutic regimen

Table 1: Compliance to therapeutic regimen of subjects

Frequency and percentage distribution of subjects according to compliance to therapeutic regimen of subjects

Areas of compliance	Good		Average		Poor	
	n	%	n	%	n	%
Drugs	10	7.14	50	35.7	1	0.71
Exercise	2	1.42	15	10.71	2	1.42
Diet	5	3.57	30	21.42	1	0.71
Self care	2	1.42	13	9.28	0	0
Follow up	3	2.15	5	3.57	0	0

Level of compliance to therapeutic regimen was more in the area of drugs (35.7%) and least in the area of self care (9.28%) and follow up (3.57%).

In the present study, it was found that majority of the samples (80%) have average compliance to therapeutic regimen, only 15.7% have good compliance and 3.5% have poor compliance.

Chi-square test is used to assess the association between variables. There is significant association between sociodemographic variables (marital status and habit) to therapeutic regimen at 0.05 level. There is no association between clinical variables and therapeutic regimen at 0.05 level.

Discussion

In the present study, it was found that majority of the samples (80%) have average compliance to therapeutic regimen, only 15.7% have good compliance and 3.5% have poor compliance. Almost similar study findings was reported by Faiq U, Al-Kaseer A H (2009), where 50% of subject reported average compliance to diet, 60% reported good to drug, and 38.7% reported poor compliance to visits.[5] Therefore it can be concluded that there is a great need to enhance the compliance to therapeutic regimen among clients with type ll diabetes mellitus in order to prevent complication.

References

1. Goldenberg R, Punthakee Z. Definition, Classification and Diagnosis of Diabetes. Available from www.guidelines.diabetes.ca/browse/Chapter3

2. K. R. Thankappan.The Adherence to Medications in Diabetic Patients in Rural Kerala, India, Thiruvananthapuram Asia Pac J Public Health February 14, 2013

3. Shobhana R, Begum R, Snehalatha C, Vijay V, Ramachandran A. Patients' adherence to diabetes treatment J Assoc Physicians India. 1999 Dec;47(12):1173-5

4. Hankó B, Kázmér M, Kumli P, Hrágyel Z, Samu A, Vincze Z, Zelkó R. Self-reported medication and lifestyle adherence in Hungarian patients with Type

5. Faiq U, Al-Kaseer A H .Compliance of Diabetic patients. MMJ. Available from www.iasj. net/iasj? Func =fulltext&ald=25443. 2009. P. 8:17 22

6. Garcia Perez LE et.al, Adherence to Therapies in Patients with Type 2 Diabetes. US National Library of Medicine National Institutes of Health –Diabetes therapy. 2013. Available from www.ncbi.nlm.nih.gov › NCBI › Literature › PubMed Central (PMC)

7. Muhammad C, Jibril U N, Dauda S. Non-compliance with treatment regimens among clients with diabetes mellitus in university of Maiduguri teaching hospital, North-Eastern Nigeria. Journal of Research in Nursing and Midwifery .Vol. 5(1) pp. 011-020, January, 2016. Available from www.interesjournals.org/.../non-compliance-with-treatment-regimens-am.

8. Jansiraninatarajan. Diabetic compliance: A qualitative study from the patient's perspective in developing countries. IOSR Journal of Nursing and Health Science (IOSR-JNHS) e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 1, Issue 4 (May – Jun. 2013), PP 29-38. Available from iosrjournals.org/iosr-jnhs/papers/vol1-issue4/F0142938.pdf?id=1611