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ASSESSMENT OF THE IMPACT OF PATIENT COUNSELING ON THE KNOWLEDGE, ATTITUDE AND PRACTICE IN PATIENTS WITH DIABETES MELLITUS IN A TERTIARY CARE HOSPITAL

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ABSTRACT

INTRODUCTION: Diabetes Mellitus (DM) is a chronic condition associated with abnormally high levels of sugar (glucose) in the blood. The management of diabetes mellitus (DM) largely depends on patients' ability to self-care in their daily lives, and therefore, patient education is always considered an essential element of DM management. Patient counselling involves providing drug information, dietary and lifestyle modifications. Thus patient counselling plays a major role in increasing patient's medication adherence and improving the patient's quality of life. The current study is to study the effect of counselling on Knowledge, attitude and Practice among type 2 Diabetes mellitus. **MATERIALS AND METHODS:** A prospective observational study was carried out over a period of six months in General Medicine Department Of Muthoot Healthcare, Pvt. Ltd, Kozhencherry. The type 2 diabetic patients who were on oral hypoglycemic were enrolled in the study. A suitable data collection form was prepared and used to collect the required data. The demographic data, disease data and the utilization of various oral antidiabetic agents were analyzed and the knowledge of the patients was assessed by using a Knowledge, Attitude and Practice questionnaire. For this study 398 subjects were enrolled based on the inclusion and exclusion criteria. **RESULTS:** Among 398 subject, 89.5% shows elevated FBS before counselling and this is decreased to 53.5% after counseling, mean value of Pre-test (Before counselling) and Post-test (After counselling) was 35 and 16.4 respectively. In our study it was found that counseling was effective in maintaining glycaemic control.

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INTRODUCTION

Diabetes Mellitus (DM) is a group of metabolic disorders characterized mainly by hyperglycemia and is associated with abnormalities in carbohydrate, fat and protein metabolism and results in chronic complications including micro vascular, macro vascular, and neuropathic disorders^[1]

The management of diabetes mellitus (DM) largely depends on patients' ability to self-care in their daily lives, and therefore, patient education is always considered an essential element of DM management. Studies have consistently shown that improved glycemic control reduces the rate of complications and evidence suggests that patients, who are knowledgeable about DM self-care, have better long term glycemic control. Thus it is indispensable to ensure that patients' knowledge, attitudes and practices are adequate.^[2]

Also knowledge about diabetes mellitus, appropriate attitude and practices are vital to reduce the incidence and morbidity associated with DM.^[3]

In modern days pharmacist are aware of the fact that the practice of Pharmacy has grown over the years to include not only compounding and dispensing of medication to patients but also interaction with the patients and other Healthcare providers through provisions of Pharmaceutical care like patient counselling, drug information services etc. The most important role of patient counselling is to improve quality of life and provide quality care for patients. Patient Counseling is the sympathetic interaction between pharmacist and patient, it may go beyond a conveying of straight forward information about the drug and how and when to use it.^[4]

Knowledge, attitudes and practices (KAP) studies are highly focused evaluations that measure changes in human knowledge, attitudes and practices in response to a specific intervention, usually outreach, demonstration or education. Each knowledge, attitudes and practices study is unique to a particular setting and designed for a specific issue.

The main aim of this study was to assess the impact of pharmacist provided patient counselling on treatment outcomes and quality of life in hypertensive and diabetes mellitus type-II patients, improving their knowledge, attitude and practice.^[5]

Diabetic patients have a lot of misconceptions and myths about diet control and being health professionals it is an important duty to dispel their myths and correct their misconceptions so that diabetic patients can improve their health status. Hence studying KAP is important to resolve this issue. Knowledge about diabetes mellitus, appropriate attitude and practices are vital to reduce the incidence and morbidity associated with DM. The KAP score of patients improved significantly after counselling. Diabetes and its complications can largely be prevented if appropriate and timely measures are taken. Health education plays a very crucial role in prevention and control of diabetes and its complications. Since there is a gap between knowledge, attitudes and practices among diabetics, it is important to formulate strategies so that positive attitudes can be converted into beneficial practices. A proper education and awareness program can change the attitude of the public regarding diabetes, as a large gap between knowledge and attitude among the diabetes patients was found and proper knowledge regarding various aspects of health education program can improve the knowledge of patients and change their attitude.^[6]

The occurrence of drug related problems such as adverse effects, side effects, drug interactions and errors in use of medication reduce quality of life and interfere with quality care. Patient counseling mainly benefits the patient in a number of ways concerning improved outcomes and satisfaction with care. It is the responsibility of pharmacists to counsel the patients before dispensing medications. Knowledge, attitudes and practices (KAP) studies are highly focused evaluations that measure changes in human knowledge, attitudes and practices in response to a specific intervention, usually outreach, demonstration or education.^[7]

Patient education is always considered an essential element of DM management. And improved glycemic control reduces the rate of complications and evidence suggests that patients, who are knowledgeable about DM self-care, have better long term glycemic control. Thus it is indispensable to ensure that patients' knowledge, attitudes and practices are adequate.^[4,7]

The present study aims to assess the glycemic control before and after providing effective patient counselling regarding the disease and its management on the basis of KAP questionnaires. KAP Study confirms that improvement in knowledge of the disease and its management had positive impact on treatment outcomes and quality of life

REVIEW OF LITERATURE

Memon M S(2015)conducted an observational, cross-sectional study on An assessment of knowledge, attitude and practices (KAP) towards diabetes and diabetic retinopathy in a suburban town of Karachi. The study enrolled 692 subjects and of the total respondents, 271 had diabetes. The study revealed that lack of knowledge of diabetes was found in the surveyed community.^[26]

Alrasheedy A A(2014) conducted a study on Patient knowledge, perceptions, and acceptance of generic medicines: a comprehensive review of the current literature Patient. The study showed that medicine consumers prefer original brand medicines rather than generic versions. Most patients were aware of the value and benefits of generic medicines as being less expensive medicines and with safety and efficacy profiles comparable with those of the original brand medicines.^[29]

Andre C(2014)conducted a cross sectional study on Knowledge, perceptions and use of generic drugs. A crosssectional study was conducted with 278 volunteers and questionnaire was drawn up with questions on their use, perceptions and knowledge of generic drugs. The study concluded that for the lay public,the sample in this study has sufficient knowledge of generic drugs in terms of definition, efficacy and cost. Consequently, the volunteers interviewed are very likely to use generics. The results of this study indicate that programs should be implemented in order to boost generic drug prescriptions by medical practitioners.^[30]

Bhat K S (2014), conducted a study on Knowledge, Attitude And Practices Study On Type II Diabetes And The Influence Of Education On It. The study assessed the effect of nutrition education on Knowledge, attitude and Practice among type 2 Diabetes mellitus. About 140 diabetes patients were included in this study. KAP among the selected subjects were classified as poor, moderate and good (75% and above: Good, 56% to 74%: Moderate, 55% and below: Low).

The results revealed that a majority of (65.7%) of the respondents had moderate KAP scores and 34.3% had good KAP scores and there was a significant improvement in the knowledge, attitude, practice and total KAP of both dietary and lifestyle practices after intervention.^[31]

Al-Maskari F(2013) conducted a cross-sectional study on Knowledge, Attitude and Practices of Diabetic Patients in the United Arab Emirates. A random sample of 575 DM patients was selected from diabetes outpatient's clinics and their knowledge attitude and practice were assessed using a questionnaire modified from the Michigan Diabetes Research Training Center instrument. The study concluded that thirty-one percent of patients had poor knowledge of diabetes and low levels of diabetes awareness but positive attitudes towards the importance of DM care and satisfactory diabetes practices.^[33]

Raj P (2010) conducted a study on Hospital-based KAP Study on Diabetes in Bijapur, Karnataka. This is a hospital based cross-sectional study in 730 type 2 diabetic patients. Poor awareness and practices are some of the important variables influencing the development and progression of diabetes and its complications, which are largely preventable. Preventive strategies need to be formulated based on factors contributing to the development and progression of diabetes. The study concluded that a good number of respondents had positive knowledge and attitude regarding diabetes.^[38]

Upadhyay K D (2007) conducted a cross-sectional study on Knowledge, Attitude and Practice about Diabetes among Diabetes Patients in Western Nepal. A 182 patients were enrolled in the study. There were 103 (56.59%) males and 79 (43.41%) females. The greatest number of patients were in the age group of 51-60 years. The KAP scores of the patients were low. This suggests the need for educational interventions to improve the knowledge, attitude and practices of the diabetes patients.

MATERIALS AND METHODS

STUDY DESIGN:

This study is a Prospective Observational Study.

STUDY SITE:

This study was conducted at the General Medicine Department of MUTHOOT HEALTHCARE, Pvt.Ltd, KOZHENCHERRY.

STUDY PERIOD:

6 months (November 2018- May 2019)

SAMPLE SIZE:

A sample size of 398 patients with Type II Diabetes Mellitus prescribed with oral anti-diabetic drugs was included. The sample size was calculated using standard statistical formula.

STUDY APPROVAL:

This study was approved by the Institutional Ethical Committee of the MUTHOOT HEALTHCARE, KOZHENCHERRY.

STUDY SUBJECTS:

All the patients under General Medicine Department of the hospital during the study period who were eligible for enrollment as well as patient who meets the criteria was enrolled.

STUDY CRITERIA:

INCLUSION CRITERIA:

Geriatric and Adult Patients (Patients diagnosed with Type II Diabetes Mellitus for more than 1 year) under General Medicine Department.

EXCLUSION CRITERIA:

- Pregnant ladies
- Pediatric Population
- Patients with incomplete data
- Patients who are not co-operative.

SOURCES OF DATA:

- Informed consent form
- Data collection form
- Lab reports
- KAP questionnaires

All the collected data were documented in the pre designed data collection form.

DATA ENTRY

The data was entered in Microsoft Excel 2010 and the results were analyzed as tabular form and percentages. Paired t-test was used to determine the significant difference between quantitative variables.

RESULTS ANS DISCUSSION

TABLE NO.1 : MEAN OF PRE-TEST AND POST TEST.

MEAN SCORES	MEAN	SD	T VALUE	P VALUE
PRE TEST	35.0	36.9053	3.8624	0.03
POST TEST	16.4	76.4504	3.1824	0.03

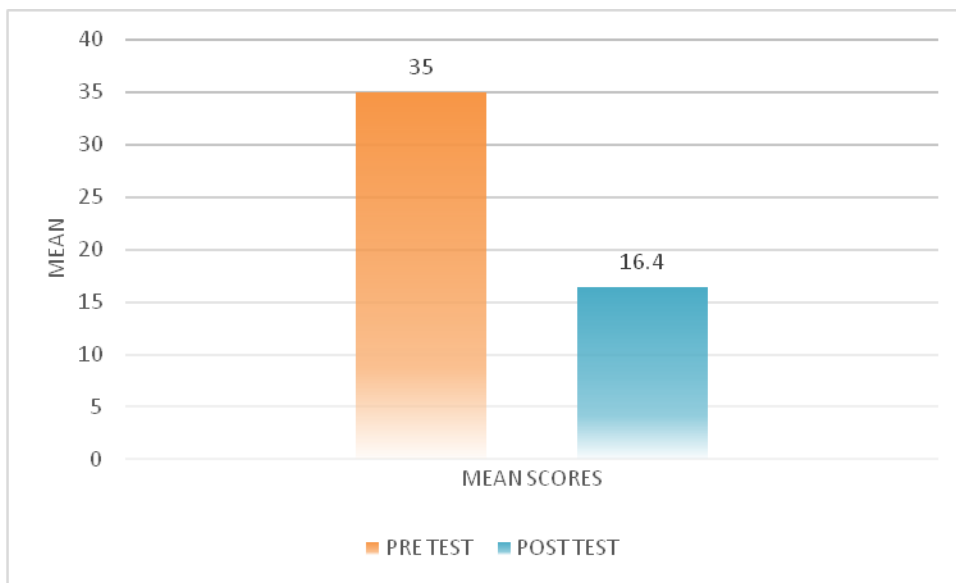


FIGURE.NO:1 : DISTRIBUTION OF PRE-TEST AND POST-TEST.

Among 398 subjects,mean value of Pre-test(Before counselling) and Post-test(After counselling) was 35 and 16.4 respectively. In our study it was found that counselling was effective in maintaining glycemc control.

TABLE NO.2:DISTRIBUTION OF FBS (BEFORE AND AFTERCOUNSELLING).

SL.NO:	FBS	Before Counselling	Percentage	After Counselling	Percentage
1	NORMAL	42	10.5	185	46.5
2	ELEVATED	356	89.5	213	53.5
	TOTAL	398	100	398	100

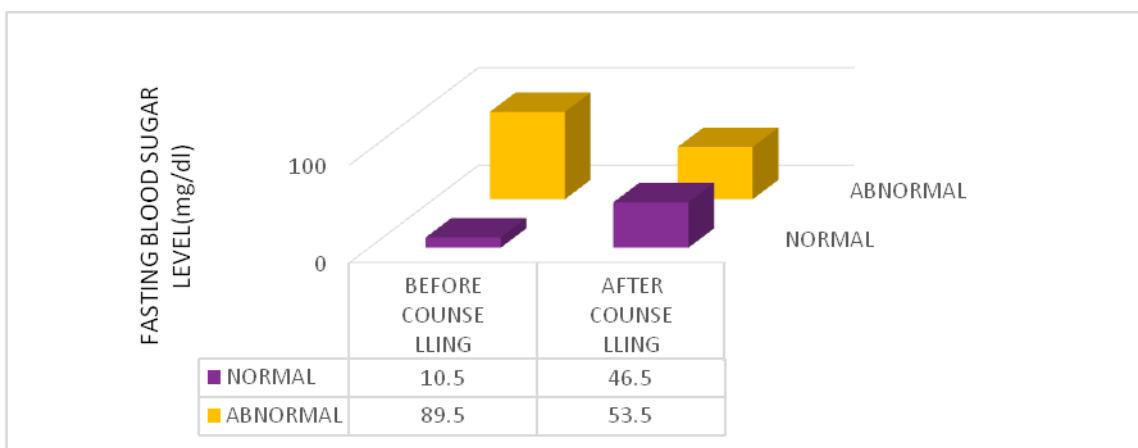


FIGURE NO.2: DISTRIBUTION OF FBS BEFORE AND AFTER COUNSELLING.

Out of 398 subjects, 89.5% shows elevated FBS before counselling and this is decreased to 53.5% after counselling.

DISCUSSION

Decreased medication adherence and lack of knowledge about disease and its management leads to various diabetic complications like vascular and neuropathic disorders. Thus providing patient counselling plays a major role in improving patient's quality of life and increasing medication adherence. It is well understood that diabetes management requires patient involvement for a better disease control. Patient counseling by the pharmacist can play a vital role in imparting education to the diabetes patients. There exists enough evidence to show that not only risk of diabetes can be reduced by life style change, but also the diabetic complications can also be greatly reduced by good blood glucose level.

CONCLUSION

Our study concluded that improvement in knowledge of the disease and its management had positive impact on treatment outcomes and quality of life. The evaluation of FBS, before and after counselling showed a significant decrease in number of patients with elevated FBS value (from 89.5% to 53.5%). Thus our study strongly highlights that patient counselling is effective in diabetic patients.

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