



ASSESSING THE KNOWLEDGE, ATTITUDE AND PRACTICE ABOUT DIABETES IN PATIENTS AND ITS IMPACT ON THE MANAGEMENT OF T2DM

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ABSTRACT

Diabetes mellitus is a prominent healthcare problem in India. Poor awareness among diabetics influences the progression of diabetes and complications. Objective of this study was to evaluate the KAP in diabetics for DM and impact of the diabetic education on knowledge attitude and practice (KAP score).

The study was conducted in the Department of Biochemistry and Medicine, GMC Jammu. Total 100 adult target subjects of either gender were included in the study taken from OPD and IPD of medicine department from July -Nov 2018. The results showed that the mean KAP score at baseline was quite comparable, which changed to 11.67 ± 6.30 and 20.68 ± 4.27 during follow-up, showing a significant intervention of patient education. Besides, the mean RBS test score also improved from 246.98 ± 74.91 mg/dl to 198.32 ± 47.18 mg/dl in the control group, while the same for test group, which improved significantly from 256.88 ± 94.36 mg/dl to 185.13 ± 55.96 mg/dl.

KEYWORDS :

INTRODUCTION

Diabetes mellitus is a group of metabolic disorders in which a person develops high blood sugar, either due to inadequate insulin production, insensitivity of the cells to insulin.¹ Of all the chronic non-communicable diseases, diabetes is associated with highest morbidity and complications and it affects people from all socioeconomic backgrounds.² Globally the number of people suffering from diabetes is projected to rise from 171 million in the year 2000 to 366 million in 2030.³ With an estimated 50.8million people living with diabetes, India has the world's diabetic population, followed by china with 43.2 million the prevalence of diabetes in India varies from 5.4% in northern states to as high 12.3% to 15.5% in south India.⁴ The increased prevalence of this disease in India is said to be increased urbanization, lifestyle transition and change in nutrition (e.g. consumption of diet rich in fat, sugar and nutrition).⁵ Also the incidence of both micro and macro vascular complications involving the nervous and the cardiovascular systems are high perhaps due to a poor glycemic control.⁶ The main stay of therapy in diabetes mellitus is insulin and oral-anti-diabetic drugs. However, studies have shown that implementation of simple lifestyle modifications like decrease in saturated fat intake, increase in dietary fibre content and a empowerment of patients themselves by promoting self management results in achieving optimal blood glucose outcome and reduces the incidence of complications.¹ Diabetes self-management education (DSME) has become an integral part of diabetes care for all patients who want to achieve successful health-related outcomes regardless of age.⁷

Patient education plays an important role in effective management of chronic diseases such as diabetes mellitus.⁸ Patient if given proper education and guidance towards diabetes care would be able to make a significant improvement in lifestyle which is helpful for good glycemic control. Education to diabetic patients would be more effective if we know the level of knowledge, attitude and practice of our patients.⁹ Education on disease, drugs, diet and life style modifications can improve patients compliance to treatment, recommendations and improves knowledge, attitude and practices to enable patients to self manage the disease. Diabetes care includes knowledge in symptom recognition, diet and lifestyle medications like routine exercise, adherence to medications, which includes dosage, adjustment and timings, and detection and management of signs and symptoms of hyperglycemia and hypoglycaemia.¹⁰ Patients with diabetes mellitus often lack sufficient knowledge about

their disease and thus frequently have self-management skills.¹¹ so the present study is planned to evaluate the effect of diabetes education on glycemic control and improvement in knowledge, attitudes and practices regarding diabetes mellitus.

MATERIAL AND METHODS

The study was conducted in the department of biochemistry in collaboration with department of medicine, GMC Jammu. Total 100 adult target subjects of either gender were included in the study taken from OPD and indoor wards of medicine department from July 2018-Nov 2018 Diagnosis of diabetes was made as per American Diabetes Association (ADA) guidelines. Patient not fulfilling the definition of diabetes mellitus as per American Diabetes Association were excluded. Each subject underwent a detailed history elicitation including physical examination. A total of hundred diabetic subjects were enrolled and randomized into the test and control groups. The patients in the test group the education received on their disease, drugs, diet and life style modifications and also patient education leaflet in Hindi to complement the verbal counselling highlighting the disease, diet and lifestyle modifications at the baseline and reinforcement of the same was done at the first follow-up. The control group patients had received education at the end of the study. After the baseline, two follow-ups were made at two months interval between the follow-up. During each visit patients random blood glucose was measured by using GOD-POD method. In case the patient included in the study did not come for first follow-up. Then patient was approached for the same. A suitable designed and validated knowledge, attitude and practice questionnaire (KAP Questionnaire).had been administered at baseline and final follow-up for both test and control group patients to assess the disease management awareness. The KAP questionnaire had a total of 25 questions (knowledge,-14, attitude-5, and practice-6). Each "yes" answer was given a score of "one" and "no" answer was given a score of "zero" the questionnaire had been translated into Hindi. Patient taken for the study had been treated as per treatment schedule.

RESULTS:

The study was conducted in GMC Jammu on a group of 100 patients of T2DM. Out of the total 100 patients studied, two equal set of 50 patients each were randomly assigned to either a test or a control group, the mean age being 51.65 ± 9.55 years. Out of the group 55 (55%) were males and 45 (45%) females. On being categorized on the basis of duration of

disease, maximum number of patients (51%) was having diabetes for 1 to 5 years. (Figure 1)

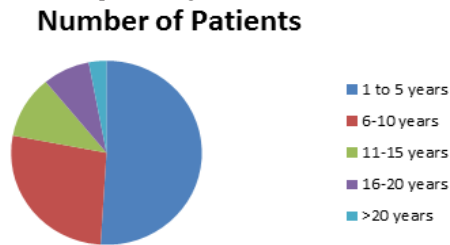


Figure 1: Showing the distribution on the basis of duration of disease.

In this study only 65% patients (65) were literate or educated, while 35 patients were illiterate. While, table 1 shows the comparatively analysis of the baseline and final follow up score for KAP (collectively) as well as for each of the individual item score of Knowledge, Aptitude and Practice, further baseline and final follow up comparison was also made for Random Blood Sugar levels in the test group as well as the controls.

Table 1: Comparative Chart of baseline and final follow up scores

Sr No		Controls	Test Group
1	Baseline Knowledge Score	6.55±4.31	6.21±4.42
	Final Follow Up Knowledge Score	7.44±2.89	10.93±3.72
2	Baseline Attitude Score	2.25±1.14	2.56±1.07
	Final Follow Up Attitude Score	2.83±1.29	4.49±0.84
3	Baseline Practice Score	2.37±1.18	3.15±1.30
	Final Follow Up Practice Score	2.95±1.76	4.92±1.88
4	Baseline KAP Score	11.05±5.91	11.47±5.98
	Final Follow Up KAP Score	11.67±6.30	20.68±4.27
5	Baseline RBS	246.98±74.91	256.88±94.36
	Final Follow Up RBS	198.32±47.18	185.13±55.96

The baseline mean knowledge, attitude and practice score were 6.55±4.31, 2.25±1.14 & 2.37±1.18 respectively in the control group and 6.21±4.4, 2.56±1.07 & 3.15±1.30 respectively in the case group; which was quite comparable. But this quite significantly changed to 10.93±3.72, 4.49±0.84 & 4.92±1.88 respectively for the later during follow-up.

The mean RBS score for baseline was 246.98±74.91 mg/dl which improved to 198.32±47.18 mg/dl in the control group in its follow up score, while the same for test group, which improved from 256.88±94.36 mg/dl to 185.13±55.96 mg/dl. All the findings were found out to be statistically significant, ($p < 0.001$) with the probability of reaching to any other findings, through similar procedures, being very less.

DISCUSSION:

While the present study was aimed at evaluating knowledge, attitude and practices in diabetic patients for T2DM, to assess the benefitting effects of education on KAP score. The study consisted of two groups of 50 patients each. The first group/test group were given education regarding disease, drugs, diet, exercise and the patient education leaflet at the start (baseline) and the same was given to the other group/controls at the end of the study. In both the groups, at each visit (two follow up visits in a period of three months), a KAP questionnaire was administered and a random blood glucose was measured, once at baseline and again at final follow up with a maximum possible score of 25 (Knowledge: 14, attitude: 5 and practices: 6).

Among the important findings was the fact that the mean age of patients selected in both the groups combined was 51.65±9.55 years, which signifies the prevailing threat of diabetes in patients over 50 year of age and very often as low as 45. The study further showed that the mean knowledge, attitude and practice score at the baseline was much lower, with the mean KAP being 11.05±5.91 & 11.47±5.98 for the two groups, which was quite comparable. On the other hand the mean KAP changed to 11.67±6.30 and 20.68±4.27 which showed a significant intervention of patient education about the disease in treatment of diabetes and control. The same was interpreted by Bhuwan Sharma et al,¹² and FH Puepetet et al¹³ in their respective studies on diabetes studies.

Further analysis of the RBS test values at baseline and follow-up levels for both group of patients revealed significant improvement in the results on test patients. This demonstrates that diabetes education can improve patients' knowledge and practices towards diabetes mellitus and reflect on his/her actual blood test results also. These findings totally agree to other similar studies carried out earlier by Mazzuca SA et al,¹⁴ Jaber LA et al.¹⁵

Health education is thus much effective in attaining better glycemic control and to adopt a healthy lifestyle. Physicians should also emphasize on patients' education along with treatment and management of critical diseases like T2DM.

CONCLUSION

The patients with the better knowledge scores were more likely to have a favourable attitude towards the disease and good practice with respect to self management strategies. These results affirm our belief that when the patient is empowered with knowledge, they are more likely to make right choices which will enable them to control the disease. Most of the focus in the treatment of DM has been given to the life style changes, which constitute the primordial prevention, is lost on the patients. The next step that needs to be outlined is the formulation of curriculum for training the nurses and physicians to impart knowledge regarding self management to the patients so that they may themselves take control of their disease.

REFERENCES

- WHO expert committee on diabetes mellitus. Second report. Geneva: WHO, 1980. Technical report series 646.
- Zinnet PZ, Kelly West. Challenges in diabetes epidemiology. *Dia*. 1992;15:23-52
- WHO. The global burden of disease. Geneva: world health organization, 2004.
- Purty A, Vedapriya DR, Bazray J. Prevalence of diagnosed diabetes in a urban area of Chennai. *Int J Diabetes Dev Ctries*. 2009;29: 6-11.
- Misra R, Misra A, Kammalamma N, et al. Difference in prevalence of diabetes, obesity, metabolic syndrome and associated cardiovascular risk factors in rural areas in Tamil Nadu and an urban area of Delhi. *Int J Diabetes Dev Ctries*. 2011;31(2):82-90.
- Mohan V, Shah S, Saboo B. Current glycemic status and diabetes related complications among type2 diabetes patients in India: data from the Archieve study. *Jour Acad Phys Ind*. 2011;61: 5-12.
- Ambigapathy R, Ambigapathy S. A knowledge Attitude and practice klink Kesihatan Sui Manjung. *NCD Malasia* 2005;2: 6-16.
- Modh KM, Patel KM, Singh IA. Impact of clinical pharmacist intervention on quality of life in type2 diabetes mellitus. *Int J Adv Pharm Res*. 2011;8: 451-60.
- Sandic Z, Rushdi S, Alsheha M. A Study of knowledge, attitude and practices of Saudi women towards diabetes mellitus. A (KAP) study in Alqassim region. *The Int Jour of health*, 2009;11: 2-5.
- Renders CM, Valk GD, De Sonnaville JJ, et al. Quality of care for patients with type 2 diabetes mellitus-a long term comparison of two quality improvement programmes in neithelands. *Diabet Med* 2003;20: 846-52.
- Via PS, Salver J. Pshosocial self efficacy and personal characteristics of veterans attending a diabetes education programme. *Diabetes Educ* 199;25:727-37
- Sharma B, Mahajan H. Impact of health education on knowledge, attitude self-care practices and life style modification factors in diabetes patients. *Int Jour of General Med and Pharma*. 2013;2: 29-38.
- Puppet FH, Mijinyawa BB, Akogu I. Knowledge, attitude and practice of patients with diabetes mellitus before and after educational intervention in Jos, Nigeria. *The Jour of Medi in the Tropics*, 2007;9:3-10.
- Mazzuca SA, Moorman NH, Wheeler ML, Norton JA, Fineberg NS et al. The diabetes education study: a controlled trial of the effects patients. *Diabetes Care* 1986;9: 1-10.
- Jaber LA, Halapy H, Fernet M, Tummalapalli. Evaluation of a pharmaceutical care model on diabetes management. *Ann Pharmacother* 1996, 30: 238-43.