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Impact of Counseling on Diabetic Patients

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ABSTRACT

In the last two decades role of pharmacist has changed dramatically. At present the pharmacists are becoming more patient oriented than product. Patient counseling by pharmacist deals with providing information to the patients regarding the disease, medications and lifestyle modifications. This study was conducted during Jan 2009 to April 2009 in Moradabad, (U.P) India to determine whether counseling for diabetes patients regarding disease, medication, diet/ nutrition and exercise can improve glycemic control and associated complications. In diabetes, self management and patient adherence to the prescribed medication and lifestyle modifications is very essential and pharmacist can play an important role in counseling. These studies suggest that it is essential to educate the patients regarding proper diet, exercise, glucose control and periodic consultations. In our study, it was found that the most commonly affected domains of quality of life questionnaire in population were freedom to eat, freedom to drink and enjoyment of food, followed by family life and sex life of the individuals. Remaining domains such as, ease of travel, working life and finance were also affected significantly. The counseling plan should address the non-pharmacological and pharmacological measures. Education regarding the acute and chronic complications should be given. There is considerable evidence that Pharmacist provided counseling enhances the patient compliance and improves the quality of life outcomes in diabetes.

Keywords: Diabetes, medications, exercise, counseling.

INTRODUCTION

At present, India is considered as the diabetic capital of the world. There are approximately 3.5 corer diabetics in India, and this figure is expected to increase up to 5.2 corers by 2025. Every fifth patient visiting a consulting physician is a diabetic and every seventh patient visiting a family physician is a diabetic. Keeping in view the alarming increase in the incidence and prevalence of diabetics in India, the World Health Organization (WHO) has declared India as the Diabetic Capital of the World. Diabetes is a chronic incurable condition that has considerable impact on the life of each individual patient. Patient involvement is of paramount important for the successful care of diabetes. The principal task of the health care team is to give each patient knowledge, self- confidence and support. Patients with diabetes and their families provide 95 % of their care themselves, and as a consequence, educational efforts to improve self- management are central components of any effective treatment plan. The role of pharmacist has changed dramatically over the past three decades. Traditionally pharmacists were viewed as individuals who dispense

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medicine to the public. The later stage of 1960s revealed the growth of a new development that changed the concept of pharmacy from a product oriented to a patient focused one, called clinical pharmacy. Pharmacists are now becoming indispensable in monitoring patient drug therapy. [1] The responsible provision of drug therapy for the purpose of achieving definite outcomes improves the patients' quality of life. It involves the pharmacist's decision to avoid, initiate, maintain, or discontinue drug therapy, both of prescription and non- prescription drugs. It is thus practiced in collaboration with patients, physicians, nurses, and other health care workers. [2] Patient counseling is an important means for achieving pharmaceutical care. It is defined as providing medication related information orally or in written form to the patients or their representatives, on topics like direction of use, advice on side effects, precautions, storage, diet and life style modifications. [3] It should include an assessment of whether or not the information was received as intended and that the patient understands how to use the information to improve the probability of positive therapeutic outcomes. [4] The ultimate goal of counseling is to provide information directed at encouraging safe and appropriate use of medications, thereby enhancing therapeutic outcomes. [5] Several guidelines specify the points to be covered by the pharmacist while counseling the patients. [5-6] Overall, it is the pharmacist's role to help a diabetic patient in the best possible way to cope with their disease.

MATERIAL AND METHODS

The study was conducted to determine whether counseling for diabetes patients regarding disease, medication, diet/ nutrition and exercise can improve glycemic control and associated complications during Jan 2009 to April 2009 in Moradabad, (U.P). India

The intended work was divided in to several steps

1. Counseling on diabetes patients.
2. Studying over a period of three months.
3. Dividing the counseling in to two phases:
    a) Pre-counseling
    b) Post-counseling
4. Designed questionnaires to measure whether a patient has knowledge regarding disease, medication, diet/ nutrition and associated complications.
5. Evaluation the response obtained according to following category:
    a. Duration of disease
    b. Sex
    c. Age group treatment aspect
6. Counting the data obtained & comparing of the responses obtained pre & post counseling

RESULTS

Among the total patients 61.70 % were males and 38.28 % were females (Table-1).

Table 1: The percentage of total number of male & female patient present in the study

S. No	Sex	Total no. of Patients	% of patient
1.	Male	58	61.70 %
2.	Female	36	38.28 %
3.	Total Patient	94	100%

Disease history of the study population was shown in the Fig. 1, in which 13.82 % (1-6 month), 25.53 % (7-12 month), 30.85% (1-2 year), 19.14 % (2-5 year) and 10.6% (above 5 year) patients were suffering from duration of diabetes. The number of patients in different age group is furnished in Table 2.
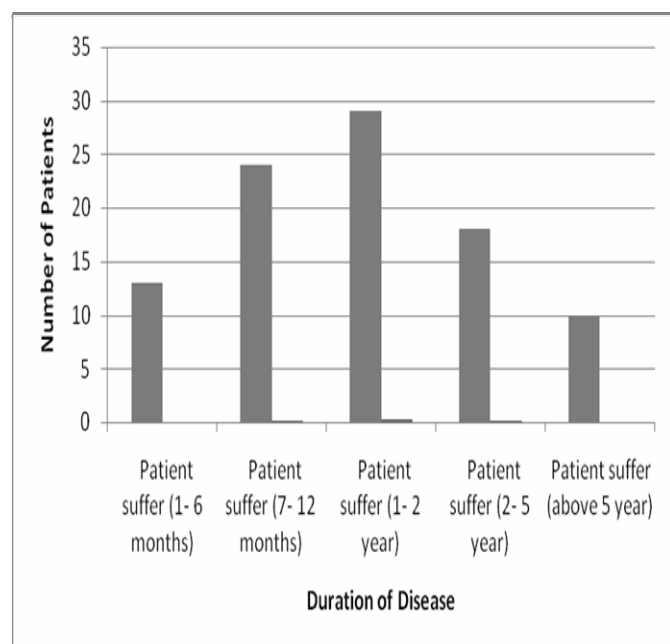

Fig. 1: The graphical representation of patients according to duration of disease

Table 2: The percentage of patient in different age groups

S. No	Age- group	No of patient	% of patient
1.	(20 -29) yr	14	14.8%
2.	(30 -39) yr	22	23.4%
3.	(40 -50) yr	25	26.5%
4.	(Above 50 year)	33	35.1%

The treatment aspects of the study population are shown in Table-3. In which 7.4% patient were using not any drug,19.14% patient were using only Metformin alone,25.53% patient were using combination of sulphonyl urea,26.59% patient were using only Insulin and 21.2 % patient were using Thiazolidinedione.
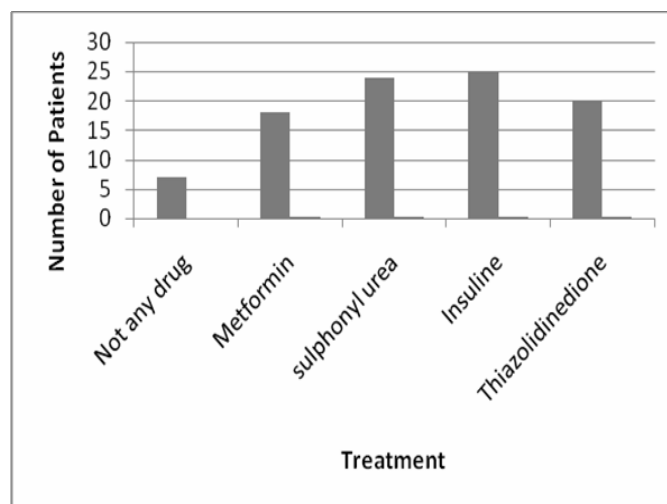

Fig. 2: The treatment aspects of the study population

There were 25-item questionnaire which in general give an idea of present quality of life from the patient' point of view. The quality of life of the diabetic patients was measured using the questionnaire during each visit and the average scores are shown in Fig 3 by comparing the pre & post counseling response. The percent of patients who answered correctly were found to be 37.94 & 77.22 % during pre and post counseling of patients respectively.

DISCUSSION

The management of Diabetes Mellitus not only requires the prescription of the appropriate nutritional and pharmacological regimen by the physician but also intensive education and counseling of the patient. Diabetes is a chronic disease with altered carbohydrate, lipid and protein metabolism. Various factors like understanding of the patients about their disease, dietary regulation, self-monitoring of blood glucose are known to play a vital role in diabetes management. In our study total 94 patients were selected for counseling regarding disease, medication, personal hygiene, diet and exercise. The number of male patients was more than female. The maximum number of patients was found in the productive age range of 41-50 years (35.10 %). If diabetes is not controlled at this age, it leads to early complications and which in turn affects the patient's quality of life, family life, productivity and the society. Also there is no awareness about Diabetes disease, foot care, eye care, teeth care, self monitoring of glucose, diet and exercise. Also patient feedbacks from V. G. Kuchake et al [7] shows that there were less awareness in patients about personal hygiene and life style modification. The questionnaire was developed to assess the perception of the patients about their
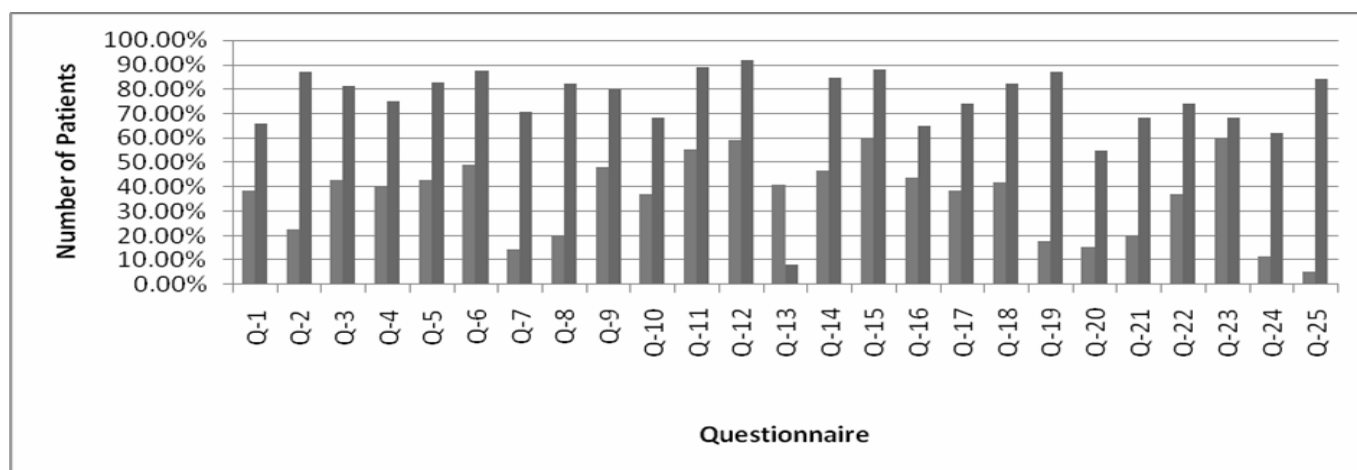
Fig. 3: The percentage of total 25 Questionnaire answered correctly given to the patients in pre and post counseling

The list of questions are given below

Q-1 Have you ever heard about diabetes?

Q-2 Do you know about diabetes?

  Q-3 Do you know basis sign & symptoms of diabetes?

       1- Tension

       2- Blood pressure

       3- Increase urine frequency

Q-4 Did anyone suffer from diabetes in your family?

Q-5 Do you know cause of diabetes?

Q-6 is diabetes curable or not?

Q-7 is diabetes genetic or not?

Q-8 Do you know duration of treatment of diabetes.

Q-9 Do you know, if diabetes not treated leads to eye problem?

Q-10 Is obesity major cause of diabetes?

Q-11do you know the most common drugs used for the treatment of Diabetes Mellitus?

Q-12 what precautions should be taken to avoid diabetes?

Q-13 Is weight reduction useful in controlling diabetes.

Q-14 Do you know the urine frequency increases in diabetic patients.

Q-15 Do you know the types of diabetes?

Q-16 What should be done if patient miss the dose?

Q-17 Do you know how diabetes is diagnosed?

Q-18 Do you know the correct method to measure blood sugar level?

Q-19 Do you know the main etiology of diabetes?

Q-20 Did you know if diabetes not treated leads to kidney problem?

Q-21 Do you know how often a diabetic patient should check their eyes?

Q-22 Do you know how often a diabetic patient should check their blood pressure?

  Q-23 Do you know how to prevent/ manage the hypoglycemic condition?

  Q-24 Are you aware of a condition in which the blood sugar level falls below the normal (hypoglycemia)?

Q-25 Have you ever taken insulin injection yourself to manage your diabetes?

disease (symptoms, cause, prognosis and complications) and to assess the changes in the perception after the pharmacist provided patient counseling and also motivated the patients to quit smoking and practice healthy life styles. The significant changes in the average response of pre-counseling (37.94 %) and post counseling (77.22 %) were observed. The higher percentage of correct answers from patients with positive family history of diabetes was not surprising. A Study by Shobana [8] showed that, patients with positive family history knew better about the role of hereditary, diet as a mode of therapy and also regarding the long term complications of diabetes mellitus. Similarly educational status improved the background knowledge**.** Paulose [9] carried out a disease awareness study in 400 literate diabetic patients in Kerala found that although 80 % of patients knew the symptoms of hypoglycemia and 76 % knew what to do when they develop these symptoms, only 17 % carried glucose packets with them during their travel, and 29 % patients told that their doctors did not inform them about hypoglycemic complications. These studies suggest that it is essential to educate the patients regarding proper diet,

exercise, glucose control, and periodic consultations. In the study, it was found that the most commonly affected domains of quality of life questionnaire in the study population were freedom to eat, freedom to drink and enjoyment of food, followed by family life and sex life of the individuals. Remaining domains such as, ease of travel, working life and finance were also affected significantly. Diabetes Mellitus has been referred as an emerging epidemic health problem. Poorly controlled diabetes mellitus affects the end organs such as kidneys, heart and eyes. These complications have a tremendous impact on quality of life and health care costs of the individual and at large to the society. Effective treatment of chronic diseases like diabetes mellitus requires life long adherence to medication regimen, exercise and diet. Along with other health care professionals, role of pharmacist as diabetic counselor is much appreciated in many developed countries. The program was successful in producing improvements in both knowledge and compliance but a need for individualization of patient education efforts was indicated. [10] This study reveals that patient counseling by pharmacists not only improves the knowledge, attitude and

practices of the patients towards their disease management but also increases their quality of life.

CONCLUSION

Patient adherence to medication and lifestyle modifications plays an important role in diabetes management. The majorities of individuals with diabetes were overweight, did not engage in recommended levels of physical activity, and did not follow dietary guidelines for fats, fruits and vegetable consumption. This study provides evidence that a community-based patient counseling regarding disease, medication and Life style modification for diabetic patients can be effectively implemented in developing nations. The knowledge of the patients visiting the first time was found to be inadequate. It means it is concluded that continuous education programmers and counseling should be conducted for diabetic patients to emphasize and re-emphasize the importance of risk factor, prevention, adherence to medication and behavioral

ACKNOWLEDGEMENT

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