

EVALUATION OF DIABETIC DIETARY EDUCATION PROGRAMME

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SUMMARY

The efficacy of a patient education programme in diabetes was evaluated by a questionnaire method. Twenty non-insulin dependent diabetics who were newly registered at the Centre, were randomly selected for this study. Patients were tested for their knowledge of dietary principles in diabetes by a well planned questionnaire, both before and after a course of diabetes education. Significant improvement in the dietary knowledge of the patients was noted after participating in the education programme.

Introduction :

The management of diabetes mellitus though under the overall control of the physician demands the active participation of the patient. A necessary prerequisite for successful treatment is that the patient accepts the diagnosis and learns adequately about his disease. Patient education is therefore of fundamental importance in the management of diabetes (1).

A successful education programme involves certain cognitive and behavioural skills, e.g. diet and self monitoring (2). The better the patient's understanding of diabetes and of the therapeutic goal, the

more will he be motivated to accept the regime and to maintain as normal a life as possible. At the Diabetes Research Centre and M. V. Hospital for Diabetes, Madras, a comprehensive and intensive patient education programme has been in progress for nearly a decade. This involves the participation of a health care team involving diabetologists, dietitians and patient educators. One of the important areas stressed in the education programme is learning of principles of dietetics and nutrition in diabetes. The success of an education programme can only be assessed by an effective evaluation of the programme. There is very little information on evaluation of nutritional programmes for diabetes. Extensive studies for over two decades at the Diabetes Research Centre have shown the efficacy of the High Carbohydrate High Fibre Diet therapy in control of diabetes (3, 4) as well as hyperlipidemia (5). To date no evaluation has been done to see how much of this success is due to

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the nutritional counselling given to the patients.

This study presents a preliminary analysis of the effectiveness of the diet education programme at our Centre. To our knowledge there is only one earlier report of a nutritional counselling programme from our country (6).

Material and Methods :

The study group comprised of 20 non-insulin dependent diabetics who were seen at the Centre for the first time. The selection was done randomly, irrespective of age, sex or social class of patients and also the duration of diabetes as it has been reported that these parameters do not influence the educational system to any considerable extent (7, 8).

A detailed questionnaire was prepared incorporating the various principles of dietary management of diabetes. Some of the items specifically included were; the avoidance of refined carbohydrates, total calories of food, the type and quantity of carbohydrates, the distribution of food, food exchanges etc. The questionnaire had 17 different parameters on the dietary management of diabetes.

The questionnaire was first given to the patient before he had any formal education. Points were given for the correct answers. Bonus points were given for more important principles. For example; avoidance of refined sugars being perhaps the most important principle would get more points than another minor item of diet. A total of 150 points was the maximum score. The individual points obtained were converted into percentage.

The diet education was imparted both in English and in regional language by two methods; 1) through a diet exhibition where charts, models and other visual aids were used and b) a detailed lecture on diet.

The questionnaire was given again after the dietary education programme was completed. The points were once again recorded and the final scores tabulated. Statistical evaluation was done by 't' test.

Results :

There were 12 males and 8 females in the age group of 30-65 years. The duration of diabetes varied from 6 months to 15 years.

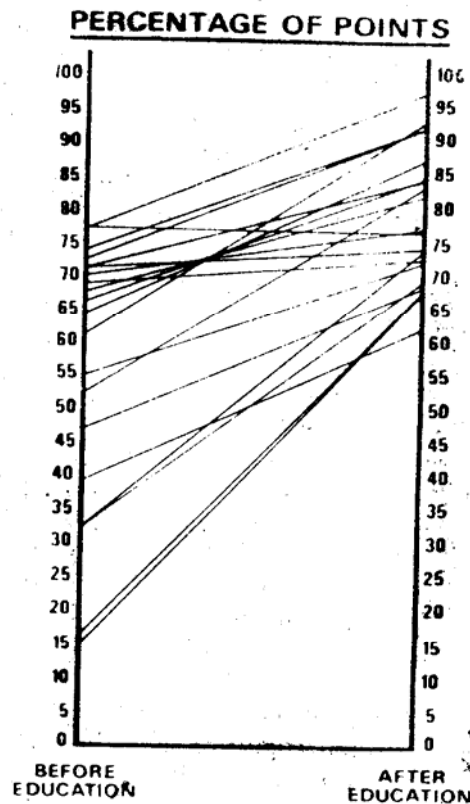


Fig. 1: Scores of individuals before and after education.

Table-I shows the mean percentage of marks scored by the study group before and after the education programme. Before the education, the mean percentage was 56.3 percent, which increased to 78 per cent after the implementation of diet education programme. ($p < 0.001$).

TABLE I

Mean Percentage of Points before and after the Education Programme

Mean Percentage of Points		
Before Education Programme	After Education Programme	Significance
56.3±19	78±11.1	P < 0.001

Table-II details the percentage of patients with different various scores before and after the education programme. The changes in the scores of individual patients are illustrated in the figure 1. The figure shows that there has been significant improvement in the individual scores of almost all the patients.

TABLE II

Percentage of Patients in Different Classes of Points

	Points (% age)			
	Below 40%	40-60%	60-70%	Above 70%
Before Education	25%	15%	30%	30%
After Education	0%	5%	20%	75%

Discussion :

The study illustrates the value of diabetes education programme in the management of diabetes. Definite improvement in the dietary knowledge of patients after the course of the diet education was noted as seen by a higher per-

centage of points obtained after the programme.

As many as 75 percent of the patients scored above 70 percent points after the education programme, whereas only 30 percent of the patients had this score before the education programme. There was no individual who scored below 40 percent marks after the education programme, against 25 percent who had such a score before the programme. This clearly proves the efficacy of the method of education programme in the management of diabetic patients.

Obviously, in a vast country like India with varied dietary habits, diet education programmes must be planned by regional centres to suit the needs of local patients.

Our studies are now being extended to large groups incorporating a more comprehensive diabetes education programme and more detailed evaluation methods covering all aspects of diabetes. Such studies will help to promote the dietary knowledge of the patients and also help to motivate them to adhere to the diet. Obviously long term compliance by the patients can be ensured only by constant motivation of the patients to adhere to the therapeutic measures advised.

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ABSTRACT

Three who picked up and sang. Bonheim R., Irvine J. and Frederick G. Diabetes Forecast 36; 36, 1983.

This article deals with three persons with remarkable creative ability and who had diabetes for more than fifty years. Rev. Karl Baehr graduated from the Chicago Theological Seminary in 1942. He devoted himself to creating understanding and cooperation between Christians and Jews. This work led him to an interest in Israel and middle east. The first signs of impaired vision appeared in 1950. He had studied sculpture before he became blind. Some of his works have appeared in galleries and museums and he takes them with him to illustrate his sermons and lectures. He had made a piece, called "Prejudice", a statue of a man whose various parts are distorted to reflect intolerance to others. "Morning ritual", his work to commemorate his 50th years with diabetes, consists of a large red circle, symbolic of a U-100 insulin bottle cap, depicting the sun, insulin bottles, some clear, others green to reflect the earth are enmeshed in a white plaster cloud.

Dorothy Arthur, developed diabetes at the age of 11. In high school, she played trumpet and violin and led an all girl band. She worked in diabetes associations, helped to establish diabetic camp for diabetic youngsters and was awarded Joslin clinic's 50 year medal.

Michael Siegal, is a microbiologist by training, photographs chemical substances like insulin, testosterone, penicillin, aspirin morphine etc. His pictures have been displayed in shows art fairs and have adorned walls of buildings. He has diabetes for 54 years but had missed only six days in his career because of diabetes. "You can live with diabetes and live very successfully", he says. "It is not a normal life, but then whose life is?"

A.S.G.