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Original Research Article

Assessment of knowledge, attitude and practice on people with diabetes mellitus in general medicine department of tertiary care teaching hospital

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ABSTRACT

Background: Diabetes has become a scourge to mankind. According to World Health Organization, over 366 million people are affected with diabetes worldwide and its number is likely to be doubled by 2030. The study was conducted to educate the patients regarding diabetes which may lead in improving the quality of life of the patients. However, prior to educating and intervening the patients regarding the disease, KAP study was conducted to assess the current status and behaviour of the patients towards Diabetes Mellitus (DM).
Methods: The study was cross sectional study conducted for the period of six months starting from July 2019 to December 2019 in medicine department of Tertiary care teaching Hospital, Karnataka. Pre-structured questionnaires were formed for data collection.
Results: In our current study, 60 (46.15%) were men and 70 (53.85%) women. Out of the total of ten knowledge question asked, average of men answering correctly were 29.5% and women answered correctly were 21% and rest were incorrect. Among the total of five attitude questions asked, average of 25.08% men agreed to correct response and 18% women agreed to correct response rest disagreed whereas in total of six practice questions average of 26.92% men and 14.61% women claimed that they practice the activities as per the questionnaires.
Conclusions: Knowledge of diabetic patients was fairly good, attitude and practices were not satisfactory females showed relatively poor response towards the disease in comparison to male. We strongly feel that there is a need to design and develop individualized diabetes educational program to aware and educate people about diabetes.

Keywords: Attitude, Diabetes, Knowledge, Practice

INTRODUCTION

According to World Health Organization (WHO), "Diabetes is defined as a chronic metabolic disease characterized by elevated levels of blood glucose or sugar which leads over time to serious damage to heart, blood vessels, kidneys, eyes and nerves". According to WHO, by the year 2030 diabetes will be the 7th leading cause of death. In developing countries the main public health concern is diabetes.[1] Diabetes is a self-managed condition. An optimal glycemic control can be achieved by regular exercises, eating a healthy diet, weight loss if overweight or obese, and adherence to a prescribed drug therapy. Therefore, knowledge, attitude and practices about glycemic controlling diabetes patients can influence the overall treatment outcomes and complications of the disease. It also provides better insight for the development of preventive and treatment strategies for the patients.[2] Diabetes is found in every population of the world and in all regions, including all rural parts of low and middle income countries.[3] People with diabetes are increasing day by day. According to WHO, people with diabetes in 1980 was 108 million which rose to 422 million in 2014. In 2016, diabetes was the direct cause of

1.22 million deaths. Over 366 million people are affected with diabetes worldwide and its number is likely to be doubled by 2030. The prevalence of T2DM i.e., type-2 diabetes mellitus continues to grow at an unprecedented rate.[4]

In India, 69.1 million people suffer from diabetes and it is ranked second in the world after China.[5]

Objective

To analyze knowledge, attitude and practice in people with Diabetes Mellitus (DM) in general medicine department; to provide patient counseling and thereby increase in quality of life of patients.

METHODS

Study site: The study was conducted in Chigateri District Hospital, Davangere (tertiary care teaching hospital).

Study duration: The study was conducted for a period of 6 months starting from July 2019 to December 2019.

Study design: The study was a cross sectional study.

Sampling method: A convenient sampling method was used.

Sample size

A total of 130 cases from general medicine department of the hospital were taken.

Inclusion criteria: Patients diagnosed with type-2 DM of either gender were included in the study.

Exclusion criteria: People who were not willing, gestational diabetic patients and outpatients were excluded.

Ethical approval: The study was approved by the Institutional Ethics Committee of SCS College of Pharmacy, Harapanahalli.

Materials used

Data collection form of semi structured KAP questionnaires and patient profile forms were used.

Method of data collection

A cross sectional study was conducted in the inpatients of general medicine with diabetes in Chigateri District Hospital, Davangere; the data required for the study was collected from data collection forms of questionnaires; inpatients in the general medicine ward, meeting the inclusion criteria was enrolled in the study; the demographic details, social history as well as family history was recorded; response to the questionnaires was recorded and the results was analyzed in percentage.

Statistical method: Data was represented graphically and analyzed using statistical method like MS Excel (percentage analysis).

RESULTS

The questionnaire was given to 130 type 2 diabetes mellitus patients of general medicine department of tertiary teaching hospital, Davangere. Among the respondents, 60 were males and 70 were females. A total of 130 diabetes patients were enrolled in accordance with the inclusion criteria, out of which 70 (54%) patients were male and 60 (46%) patients were males (Table 1). Out of 130 patients selected, 83 (64%) patients were employed such as teachers, self-employed (business, farmers, drivers etc.) and 47 (36%) patients were unemployed such as house wife etc. Out of 130 patients, 82 (63%) patients were with normal BMI, 28 (21%) patients were overweight, 6 (5%) patients were obese and 14 (11%) patients were underweight. Out of 130 patients enrolled, majority of patients were in the age group of 51-60 years which has 42 (32%) patients, followed by 61-70 years which has followed by 31-40 years which has 11 (9%) patients, and in 20-30 years 6 (5%) patients. 37 (28%) patients, followed by 41-50 years which has 34 (26%) patients. Out of 130 patients enrolled, 77 (59%) patients had a family history of diabetes mellitus and 53 (41%) patients don't have the family history of DM. Out of 130 patients, 53 (41%) patients have diabetes from past 5 years, 50 (38%) patients have diabetes from 6-10 years, 16 (12%) patients have diabetes from 11-15 years, 9 (7%) patients have diabetes from 16-20 years and 2 (2%) patients have diabetes from 21-25 years.

Knowledge based assessment

The prepared questions were asked to the patients and the response was classified as correct and incorrect. At first, patients were assessed based on their knowledge. 62% (out of which 43 were males and 38 were females) patients responded correctly that they know about diabetes whereas 38% (out of which 17 were males and 32 were females) patients responded incorrectly. The second question was about who are at the risk to get diabetes. For that 32% (of which 27 were males and 14 were females) patients responded correctly whereas 68% (out of which 33 were males and 56 were females) patients doesn't know the answer. Regarding the knowledge about symptoms, 79% (out of which 54 were males and 49 were females) patients responded correctly whereas 21% (of which 6 were males and 21 were females) patients responded incorrectly. Regarding the knowledge whether exercise is beneficial, 54% (out of which 43 were males and 27 were females) patients responded correctly whereas 46% (of which 17 were males and 43 were females) patients responded incorrectly. The question was about diet, the patients

were asked whether maintaining diet is important or not. 62% (out of which 43 were males and 37 were females) patients responded correctly that maintaining diet is important whereas, 38% (out of which 17 were males and 33 were females) patients responded incorrectly. Regarding the knowledge about what diet has to be taken, 64% (of which 46 were males and 37 were females patients responded correctly about the diet whereas 36% (out of which 14 were males and 33 were females) patients responded incorrectly. The patients were asked which medications have to be taken 38% (out of which 42 were males and 12 were females) patients responded correctly whereas 62% (out of which 18 were males and 58 were females) patients responded that they don't know about the medicines. Next the patients were asked whether the drug is more important than diet, 42% (out of which 32 were males and 18 were females) patients responded correctly whereas 58% (out of which 28 were males and 52 were females) patients responded incorrectly. Last the patients were asked if once the blood sugar has been controlled should the medicines also be stopped, 21% (out of which 17 were males and 10 were females) patients responded correctly whereas 79% (out of which 43 were males and 60 were females) patients responded incorrectly. Among the total of ten knowledge question asked, average of men answering correctly were 29.5% and women answered correctly were 21% and rest were incorrect.

Table 1: Distribution of patients based on knowledge.

Question	Male-correct	Female-correct	Male-incorrect	Female-incorrect
K1	33%	29%	13%	25%
K2	21%	11%	25%	43%
K3	42%	38%	5%	16%
K4	33%	21%	13%	33%
K5	33%	28%	13%	25%
K6	35%	28%	11%	25%
K7	25%	14%	22%	40%
K8	32%	9%	14%	45%
K9	13%	8%	33%	46%
K10	28%	24%	18%	30%

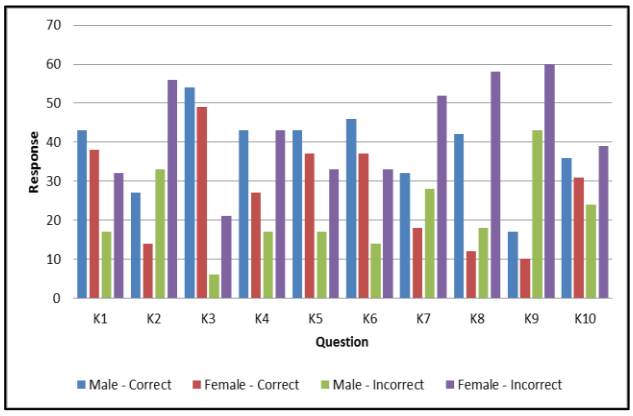

Figure 1: Assessment of knowledge.

Attitude based assessment

To assess the attitude of the DM patients, 5 questions were included in the questionnaire and asked to them. Regarding the attitude, 40% patients (32 males and 20 females) told that diabetic complications reduced life expectancy whereas 60% of the patients (28 males and 50females) disagreed that diabetic complications reduce the life expectancy. 52% (38 were males and 29 were females) quoted that regular blood glucose monitoring is important to prevent diabetic complications whereas, 48.5% (22were males and 41 were females) disagreed that regular blood glucose monitoring is important to prevent diabetic complication. 52% (36 were males and 31 were females) agreed that diabetes causes damage to organs whereas 48.5% (24 were males and 39 were females) disagreed that. 52% (40 were males and 27 were females) agreed that regular exercise is helpful in blood sugar control whereas 48.5% (20 were males and 43 were females) disagreed that regular exercise is not helpful. 21% (17 were males and 10 were females) agreed that medication can be discontinued once the blood sugar comes normal whereas 79.2% (43 were males and 60 were females) disagreed that the medication can't be stopped once the blood sugar level comes normal. Out of the total of five attitude questions asked, average of 25.08% men agreed to correct response and 18% women agreed to correct response rest disagreed.

Table 2: Attitude based assessment.

Questions	Males-agree in %	Females-agree in %	Males-disagree in %	Females-disagree in %
A-1	24.6	15.4	21.5	38.5
A-2	29.2	22.3	16.9	31.5
A-3	27.7	23.8	18.5	30.0
A-4	30.8	20.8	15.4	33.1
A-5	13.1	7.7	33.1	46.2

Practice based assessment

For practice based assessment 6 questions were prepared and were asked to the patients. 62.3% patients quoted that they take the medications as prescribed by the doctor whereas, 37.7% quoted that they don't take the medications as prescribed by the doctor. 37.7% quoted that they exercise regularly whereas 62.3% said that they don't exercise regularly. 53.1% patients quoted that they make diet regimens whereas, 46.9% patients quoted that they don't make any type of diet regimens. 29.2% patients quoted that they check their blood sugar level regularly whereas, 70.8% quoted that they don't check the blood sugar level regularly. 20.8% patients quoted that they own a glucometer whereas, 79.2% patients doesn't have a glucometer. 46.2% patients told that they examine their feet and eyes often whereas, 53.8% patients do not check their eyes and feet. Out of six practice questions average of 26.92% claimed that they practice to

the activities stated in the questionnaires and 14.61% women do the same rest didn't practice.

Table 3: Practice based assessment.

Questions	Male-yes in %	Female-yes in %	Male-no in %	Female-no in %
P-1	44.62	17.69	9.23	28.46
P-2	27.69	10.00	18.46	43.85
P-3	29.23	23.85	24.62	22.31
P-4	23.85	5.38	22.31	48.46
P-5	15.38	5.38	30.77	48.46
P-6	20.77	25.38	25.38	28.46

DISCUSSION

Diabetes is a chronic disease with different level of complication that requires broad self-care knowledge and management. Extensive knowledge, attitude and good practice could be the means to control and prevent diabetes related consequences. In the present study the KAP of DM patients towards their disease and life style modification was assessed. 130 T2DM patients were recruited for the study, out them 70 were men and 60 were women and majority of the participants fell within the age group of 51-60 years (32%). It is well established that educational level is positively associated with disease knowledge. In the current study, the majority of the population had only primary education and 22% were illiterate. The level of knowledge seemed satisfactorily in our study population. However, patients' general awareness of diabetes symptoms and complications was relatively high, perhaps because they had experienced these symptoms themselves or observed them in fellow-patients which is comparable with the findings obtained by Al-Maskari et al.[6] Concerning the current study 62% (out of which 43 were males and 38 were females) patients responded correctly that they know about diabetes whereas 38% (out of which 17 were males and 32 were females) patients responded incorrectly. However, detailed analysis showed that there are gaps in their knowledge, for example, about 62% responded that they don't know which medication has to be taken. Some of our findings, e.g. that men had higher knowledge score than women appear to conflict with other studies Al-Maskari et al and Rahman et al. [6,7.]

Further, in case of attitude, our study finding showed unsatisfied level of attitude, while other studies from urban area of South India and UAE reported the contradictory findings that positive and good level of attitude among diabetic patients. The attitude and practices about the life style modifications in diabetics in the present study is as follows. 52% (38 were males and 29 were females) quoted that regular blood glucose monitoring is important to prevent diabetic complications and 52% (40 were males and 27 were females) agreed that regular exercise is helpful in blood sugar control. Self-care and good health practices can improve the duration and quality of life of diabetic patients. Slight modification in life style related to healthy diet, physical activity etc. can enable diabetic patients to live a normal life. 62.3% patients quoted that they take the medications as prescribed by the doctor whereas, 37.7% quoted that they don't take the medications as prescribed by the doctor. 37.7% quoted that they exercise regularly whereas 62.3% said that they don't exercise regularly. Here the level of attitude of doing regular exercise is high but the level of practice is not satisfied which is comparable with the findings obtained by Gautam et al.[8]

The study has certain limitations. It was just based on a single hospital and hence it cannot be generalized also communication barriers were present during the data collection and patient counselling. The study was only based on in-patients and the outpatients were excluded.

CONCLUSION

Knowledge of diabetic patients was fairly good but attitude and practices were not up to the mark. They also follow good health practices but these patients need to be encouraged to stick to regular exercise and dietary advice since they showed relatively poor adherence in these two domains. We strongly feel that there is a need to design and develop individualized diabetes educational program that could help in diabetes management and improvement of quality of life.

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