

# A Study on Diabetic Care among Diabetic Patients in a Tertiary Care Health Centre

Mookambika R.V<sup>1</sup>, Sudhir Ben Nelson B.T<sup>2</sup>, Vishnu. G. Ashok<sup>2</sup>

## ABSTRACT

**Introduction:** The word 'DIABETES' in Greek means siphon [passing water] and mellitus in Latin means honey. The prevalence of Diabetes is increasing worldwide and is turning into a "global epidemic". Study aimed to assess the knowledge, attitude and practice of the patients with type 2 diabetes in a tertiary care health centre.

**Material and Methods:** The study was conducted at Outpatient department of, General Medicine in SreeMookambika Institute Of Medical Science, Kulasekharam. It was a cross sectional study where 120 diabetic patients were included. The study involved administration of pretested questionnaire.

**Results:** 60% of the diabetics know that management of Diabetes includes diet, exercise and drugs. Among the study population only 74% are taking diabetic medication regularly. 52.5% of the study population did their blood sugar check up once a month while 83% of the study subjects do their blood sugar check up at lab.

**Conclusion:** Results revealed good attitude but poor knowledge and practices towards diabetes. We conclude that there is a need for structured programs to improve attitude and practices of diabetic patients to promote better compliance towards diet, exercise and drug regimen and also about better foot care

**Keywords:** Diabetes, Diabetic Care, Blood Sugar

## INTRODUCTION

The word 'Diabetes' in Greek means siphon [passing water] and mellitus in Latin means honey. It is metabolic syndrome caused by deficiency or diminished effectiveness of endogenous insulin characterized by hyperglycaemia and deranged metabolism predominantly affecting vasculature.<sup>1</sup>

The prevalence of Diabetes is increasing worldwide and is turning into a "global epidemic". The total number of diabetics in the world was 415 million in 2015 is expected to increase to 642 million in 2040. 5 million people have died of Diabetes in 2015. India has come down in ranking of total diabetic population, occupying second place (69.2 million) after china (109.6 million) but the numbers are double that of USA (29.3 million) which occupies third place.<sup>2</sup> Prevalence of Diabetes in India was 9.3% among adults with a estimate 52.1% of diabetics remaining undiagnosed. There were 1 million deaths due to diabetes in 2015 in India.<sup>3</sup> As diabetes is multi-organ disorder, it has an significant impact on quality of life also costing huge amount of money for health care services.<sup>4</sup>

Patients with diabetes have an increased risk of developing coronary artery disease especially myocardial infarction which has become the leading cause of death in diabetes. It has been suggested that knowledge regarding diabetes and compliance to drug therapy and life style are inseparable entities to achieve proper control of diabetes. In countries like INDIA, there is a gap between knowledge and practice among people. Therefore,

sustained active patient education, support and evaluation is needed to bridge this gap and to improve the compliance and self-reliance in management of diabetes mellitus. So it requires team work between health care practitioner, pharmacist and patient to improve the health outcome. By giving special emphasis in these areas, we can achieve our goal of better quality of life for diabetic patients.<sup>5</sup> Various studies show that knowledge, attitude and practice regarding diabetes among patients with diabetes mellitus are low. In light of this we conducted a knowledge, attitude, practice study regarding diabetic care among diabetics. Study aimed to assess the knowledge, attitude and practice of the patients with type 2 diabetes in a tertiary care health centre

## MATERIAL AND METHODS

A Cross sectional study was conducted among 120 diabetic patients attending General Medicine OPD of a tertiary care hospital between April and May 2016. Those who are not willing or not able to answer were excluded. Prevalence (p) was taken as 46.3% based on study by Shah et al<sup>6</sup> and sample calculated to 116. 120 patients were selected by convenient sampling. Institutional Ethical clearance obtained before start of the study and informed written consent obtained from individual subjects before data collection.

## STATISTICAL ANALYSIS

Data was collected using a Pretested semi-structured questionnaire and entered in MS Excel. Analysis was done using SPSS 20 trial version and results brought out as proportion and associations tested using Chi Square test.

## RESULTS

Overall 120 patients participated in this study (74 were males and 46 were females). In this study, 14.2% were illiterate and remaining were educated the most common being middle school education i.e. 25%. When considering time since diagnosis of diabetes in study group, it was less than 1 year in 13.3%, 1 – 5 years in 40.8%, 5 – 10 years in 20.8%, >10 years in 25%. In our study, 16.7% were professional workers, 20% skilled workers, 25% semiskilled workers, 6.7% unskilled workers and 31.7% unemployed. 26.7% of the diabetics had a habit of smoking and alcohol. Regarding complication of Diabetes, 50% of study

<sup>1</sup>Assistant Professor, Department of General Medicine, <sup>2</sup>Assistant Professor, Department of Community Medicine, Sree Mookambika Institute of Medical Sciences Kulasekharam, Tamilnadu, India

**Corresponding author:** Dr Vishnu. G. Ashok, Assistant Professor, Department of Community Medicine, Sree Mookambika Institute of Medical Sciences Kulasekharam, Tamilnadu, India

**How to cite this article:** Mookambika R.V, Sudhir Ben Nelson B.T, Vishnu. G. Ashok. A study on diabetic care among diabetic patients in a tertiary care health centre. International Journal of Contemporary Medical Research 2016;3(10):3091-3092.

population had problem with their vision, 20 % had kidney problem, 15% had heart problem and 15% had nerve problem. About 29% thought that diabetes was due to hereditary cause. 60% of the diabetics knew that management of Diabetes includes diet, exercise and drugs. Among the study population only 74% were taking diabetic medication regularly. 52.5% of the study population did their blood sugar check-up once a month while 83% of the study subjects did it at a laboratory. Majority of the diabetics (73.3%) in this study did not have any idea about Hb A<sup>1</sup> c.

About 15% strongly agree that diet alone can control diabetes whereas 24.2% disagree with it. A significant proportion of our study group modified their diet after been diagnosed diabetics. 54% of the diabetics thought that exercise can control the disease and brisk walking was the post preferred exercise (73%). But only 35.8% were doing exercise daily. 63.3% of the people in our study knew importance of foot care. Among this, 36.2% were giving foot care by keeping the foot dry. But 78.4% did not have MCR slippers. 56% of diabetics gave importance to getting treated at hospital, when they develop a wound in foot. Duration of diabetes was significantly associated with the risk for developing complication in diabetic people ( $p=0.07$ ). Even though, Patients knew about the importance of foot care, significant portion of them did not know about MCR slipper ( $p=0.02$ ). Although patient knew about the mode of treatment (diet, exercise and drugs) they were not aware about the importance of HbA<sub>1c</sub> in diabetic control

## DISCUSSION

In our study, 29% of patients believed that diabetes occurs due to hereditary cause, whereas 38.5% of patients in study by Nikhil P. Hawal et al<sup>7</sup> and 66.6% in study by Karam Padma et al<sup>8</sup> at Karminagar, Andhra Pradesh knew about the hereditary aspect of Diabetes. Among the study population only 74% were taking diabetic medication regularly, which was lower than that seen in the study done by Mangaiarkarasi et al<sup>9</sup> in Pondicherry where 85% were taking regularly medication.

In our study, 60% of the diabetics knew that management of Diabetes includes diet, exercise and drugs. This was similar to finding by Karam Padma et al<sup>8</sup> were two third respondents were aware of importance of exercise, drug and diet. In our study, 61% of the study subjects said that diet can help in control of diabetes which is lower than 88% seen in study by Karam Padma et al.<sup>8</sup> Our area people lacked the knowledge about diet control. Knowledge about role of exercise in the control of diabetes was also lower i.e. 54% when compared to studies by Karam Padma et al (61.68%).<sup>8</sup> In a study done by Thungathurthi et al in Warangal, 87.5% knew that physical activity was essential for control of diabetes.<sup>10</sup> 43.3% patients in our study and 40% patients in Mangaiarkarasi et al study exercised at least once a week but 35.8% did it daily as compared to 8% (5 times a day) in Mangaiarkarasi et al study.<sup>9</sup> Study in Mangalore by Rajasekharan et al showed 43.4% exercising regularly.<sup>11</sup> This might be due to the urban setting of the study.

In our study 69.7% of the study population did their blood sugar check-up at least once a month similar to that of Pondicherry study (i.e.) 66%.<sup>9</sup> Rajasekharan et al showed 76.6% doing check-up regularly.<sup>11</sup> 63.3% patients in our study and 44% in Mangaiarkarasi et al study knew the importance about foot care.

Majority of the diabetics (73.3%) in this study did not have any idea about Hb A<sup>1</sup> C. This finding is similar to that of Pondicherry study were 74% did not know about Hb A<sup>1</sup> C.<sup>9</sup>

## CONCLUSION

Results revealed good attitude but poor knowledge and practices towards diabetes. We conclude that there is a need for structured programs to improve attitude and practices of diabetic patients to promote better compliance towards diet, exercise and drug regimen and also about better foot care.

## REFERENCES

1. Park K. Epidemiology of chronic non communicable diseases and conditions. In Park's Textbook of Preventive and Social Medicine. Jabalpur: Banarsidas Bhanot p. 362-413.
2. International Diabetes Federation. Diabetes Atlas. [Online].; 2015 [cited 2016 August 18. Available from: <http://www.diabetesatlas.org/>.
3. International Diabetes Association. Diabetes Atlas. [Online].; 2015 [cited 2016 August 18. Available from: <http://www.diabetesatlas.org/across-the-globe.html>.
4. Kumar A, Goel M K, Jain R B, Khanna P, Chaudhary V. Australasian Medical Journal. India towards diabetes control: Key issues. 2013;6:524–531.
5. Wild S, Roglic G, Green A, Sicree R, King H. Global prevalence of diabetes: estimates for the year 2000 and projections for 2030. Diabetes Care. 2004;27:1047-53.
6. Shah N V, Kamdar P K, Shah N. Assessing the knowledge, attitudes and practice of type 2 diabetes among patients of Saurashtra region, Gujarat. International Journal of Diabetes in Developing Countries. 2009;29:118–122.
7. Hawal N P, M S S, Kambar S, Patil S, Hiremath M B. Knowledge, attitude and behaviour regarding self-care practices among type 2 diabetes mellitus patients residing in an urban area of South India. International Multidisciplinary Research Journal. 2012;2:31-35.
8. Padma K, Samir B D, Bodhare T N, Valsangkar S. Evaluation of Knowledge and Self Care Practices in Diabetic Patients and in Disease Management. National Journal of Community Medicine. 2012;3:3-6.
9. Mangaiarkarasi, Nithya, Meharali, Ramaswamy. A Study to Assess the Knowledge, Attitude and Practice about Diabetes among Diabetic Patients in Pondicherry. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 2012;3:1185-96.
10. Thungathurthi S, Thungathurthi S, Kumar V G. Self care knowledge on diabetes among diabetic patients in Warangal region. Int J Life Sci Pharma Res. 2012;2:16–21.
11. Rajasekharan. D, Kulkarni V, Unnikrishnan B, Kumar N, Holla R, Thapar R. Self-care activities among patients with diabetes attending a tertiary care hospital in Mangalore Karnataka, India. Ann Med Health Sci Rec. 2015;5:59-64.

**Source of Support:** Nil; **Conflict of Interest:** None

**Submitted:** 19-09-2016; **Published online:** 30-10-2016