

A study on awareness of diabetic complications among type 2 diabetes patients

SharolAshma Menezes¹, Mohsin Mohammed Bava², RoshanM³

Abstract: A structured questionnaire was used to assess the knowledge of diabetic complications and its prevention among type 2 diabetes patients. Among 100 individuals included in the study, 68% were females. Individuals with educational qualification below primary school certificate (66%), monthly income less than Rs.5000/- (35%) and housewives (15%) were least aware of the complications of diabetes. Only 66% of the study group were aware about diabetic nephropathy and only 59% were aware of diabetic retinopathy. Majority of the study population (49%) considered heart disease as the most serious complication of diabetes. Only seventy eight patients (78%) acquired the information of diabetic complications from the physicians of the tertiary care centre.

I. Introduction

Diabetes mellitus is a global epidemic and a leading cause for increasing mortality and morbidity. More than 170 million people worldwide have diabetes, and this figure is projected to double by the year 2030, if the current trend continues.⁽¹⁾ India is the diabetes capital of the world, with 41 million Indians having diabetes, every fifth diabetic in the world is an Indian.⁽²⁾

Diabetes Mellitus is the leading cause/risk factor for various cardiovascular and renal diseases. It is the leading cause for hospital admissions in medical wards in most of the tertiary hospitals.

The quality of life of patients with diabetes can be improved if complications of the disease are detected early. Thus, training of the individual is an integral part for self-management of diabetes. Optimum management of the problem requires an individual to be aware of the nature and consequence of the disease, its risk factors, treatment and its complications. Hence, an attempt has been made to study the knowledge of complications of diabetes in patients with diabetes attending tertiary care centre.

II. Materials And Methods

Source of data:

The data was included from patients with type 2 diabetes attending outpatient and inpatient services in Father Muller Medical College Hospital, Mangalore.

Method:

A structured questionnaire was used to assess the knowledge of diabetic complications and its prevention among type 2 diabetes patients. The entire questionnaire is available in english version but interviewed carefully with the proper translation of the language of the patients. Results were then analyzed and correlated. All patients were provided with a handout about diabetic complications and its prevention after they complete the questionnaire.

Inclusion criteria:

- Type 2 diabetes patients of all age groups.

Exclusion criteria:

- Associated comorbidities like hypertension, infection, malignancy etc.

Study design:

This study is a cross sectional study on type 2 diabetes inpatients and outpatients in Father Muller Medical College Hospital. The study included a total of 100 subjects.

Data analysis:

Data was tabulated and analysed by frequency, mean, percentage and standard deviation.

Results:

A total of 100 patients attending both OP and IP basis to Father Muller medical college hospital having type 2 diabetes were analysed as mentioned below.

Age distribution:

AGE (in years)	NUMBER	%
21-30	5	5%
31-40	28	28%
41-50	42	42%
51-60	20	20%
>60	5	5%

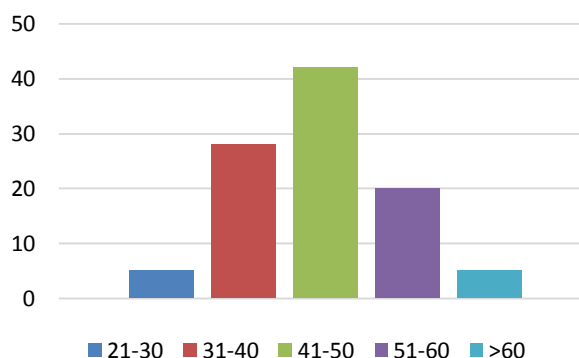


Table 1: Age Distribution **Figure 1: Age Distribution**

Mean (\pm SD) age of the patients was 45.29 (\pm 10.89) years. Most knowledgeable group was 31-40 years.

Sex Distribution of cases

Females were more knowledgeable regarding complications of diabetes than males.

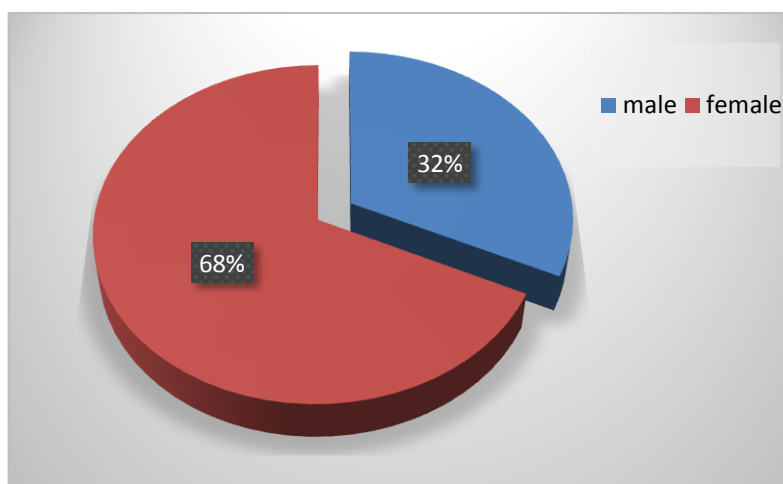


Figure 2: Sex Distribution of cases

A total of 66(66%) participants had attained education below Secondary School Certificate (BSC), 20(20%) had SSC and Higher Secondary School Certificate (HSC) and 14(14%) above HSC level. Subjects with above HSC level had more knowledge as compared to subjects with BSC.

Professionally, 62(62%) were housewives, 15(15%) service holder, 7(7%) business and 16(16%) others. Individual monthly incomes of < 5000.00 Rs /- were 35(35%), 5000.00-10000.00 were 45(45%) and > 10000 were 20(20%)

Subjects with service holder as their profession had maximum knowledge as compared to housewives being the least.

Although in this study all the patients were aware that diabetes can lead to complications but only seventy eight patients (78%) came to know the information of diabetic complications from the physicians of the tertiary care centre, rest from different sources like other patients 6(6%), 4(4%) from the near relations and others 8(8%) via television, radio, posters, books & rallies. However, four patients (4%) couldn't remember the information of diabetic complications.

Frequency distribution of the most serious complication of diabetes mellitus as patients came to know from different sources

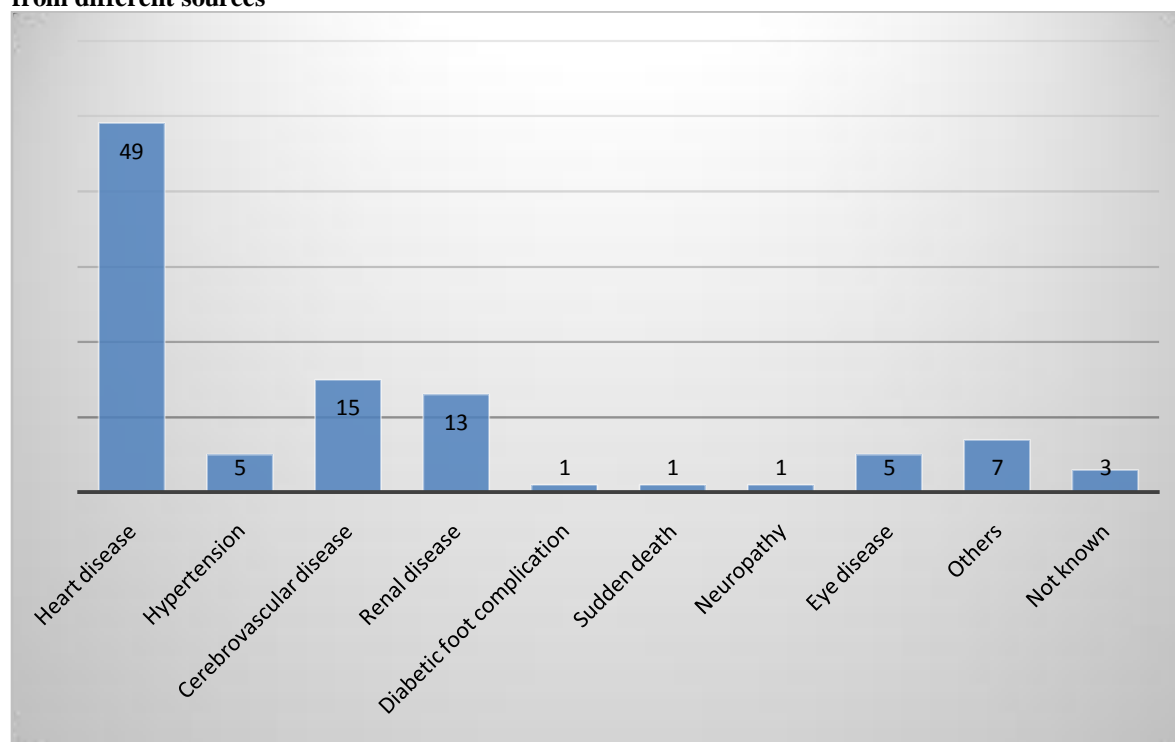


Figure 3: Frequency distribution of the most serious complication of diabetes mellitus as patients came to know from different sources

Majority of the study population considered heart disease as the most serious complication of diabetes.

Relationship of the individual residence with the degree of apprehension for diabetic complication.

Area of residence	Level of apprehension for diabetic complications		Total
	YES	NO	
Rural	16	6	22
Urban	50	28	78
Total	66	34	100

Table 2: Relationship of the individual residence with the degree of apprehension for diabetic complication.

Here urban population were more apprehensive about the condition (diabetes). There was 89% correct response for neuropathic complications from both the genders.

Sixty six percent patients were aware about diabetic nephropathy caused by uncontrolled blood glucose levels. Only 59% were aware of diabetic retinopathy. In addition to that, 83 % patients were aware that smoking and alcohol consumption worsens diabetes.

Knowledge of measures that can be taken for preventing complications in diabetes

Preventive measures	Number of patients identifying the preventive measures (%) (N = 100)
Regular blood sugar testing	87
Regular inspection of feet	42
Losing excess weight	31

Table 3: Knowledge of measures that can be taken for preventing complications in diabetes

III. Discussion

In this study, it was found that frequency distribution of the most important complication of diabetes mellitus as patients came to know from different sources, were heart disease (49 %), cerebrovascular disease (15%), renal disease (13%), hypertension (5%), eye diseases and others by (4%). There was some similarity of this study with another study where 53.5% patients reported that cardiovascular disease was a potential complication of diabetes mellitus.⁽³⁾ In a study in Pakistan, it has been shown that urban people are knowledgeable than the people residing in the rural area and they suggested the urgent need of diabetic education in the rural area.⁽⁴⁾ Of the African rural patient population, 52.2% had lower awareness of blood glucose compared to 47.5% of the African urban population.⁽⁵⁾

In this study, there was significant difference in apprehension of diabetic complications between rural and urban population probably because diabetes targeted education was lacking in the rural groups.

In a study conducted in Chandigarh, it was shown that knowledge concerning the prevention of diabetes complications was partial amongst diabetics, with only 63.3% of the diabetics taking care of their feet through regular washing.⁽⁷⁾ This indicates that diabetics are paying less attention on the complications with DM.

IV. Conclusion

This study reflects that there is a need to improve diabetic knowledge among the patients which can be achieved through community health centres.

This study emphasizes to bring awareness regarding complications of diabetes among people of lower socioeconomic group living in rural areas, uneducated individuals and housewives.

The study also emphasizes that health programs in mass campaigns should target the less aware yet potentially harmful complications of diabetes such as renal failure, neuropathy and retinopathy. Regular screening and assessment of complications of diabetes needs to be inculcated in all patients with diabetes in order to delay their onset.

It will be beneficial if diabetic clinic and information center for teaching diabetic patients is established. Also nurses, doctors, dietitians and other health team members should join hands to help these diabetic patients live healthy by providing them with the right information at every available opportunity.

References

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