KNOWLDEGE OF URBAN POPULATION REGARDING DIABETES MELLITUS AND ITS COMPLICATION: A COMMUNITY BASED STUDY

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Abstract

Aim: To assess the knowledge on diabetes among diabetic patients of urban poor.

Background: Diabetes has been a major threat to public health as 3.2 million deaths are attributed to diabetes every year. The management of diabetes depends on knowledge of patient, self care activities and knowledge on symptoms and complications.

Materials and methods: The study was carried out in the Urban Health Center area of Belgaum. The knowledge on diabetes, signs or symptoms and complications was assessed among diabetic patients, by using scoring system. Data were analyzed using percentages, proportions and statistical test (chi-square test) was used for categorical data.

Results: The study revealed that 108(56.25%) knew about diabetes out of 192 diabetic patients. More than half, 142 (73.93%) patient knew the impact of diabetes on other organs. Sixteen (11.26%) said kidneys, 13(9.13%) as heart and 45(31.69%) said that diabetes affects multiple organs. Majority 142 (73.95%) of patients had knowledge of complications.

Key words: *Diabetes, knowledge, symptoms, Complications, awareness, risk factors.*

Introduction

An epidemic of Non Communicable Diseases has set in developing countries posing a major health burden. The world wide prevalence of diabetes is estimated to increase to 5.4% by 2025 and developing countries will be responsible for 75% of diabetics in 2025.[1] The highest burden will be on India being the second most population country in the world, which is predicted to almost 70 million Diabetics in India by 2025.[2]

The co-morbidities and complications can affect the quality of life of diabetics and can be severe or fatal if not detected and treated promptly. Especially among vulnerable population groups including urban poor, low income groups, illiterates' etc.[3] Diabetes has been a major threat to public health as 3.2 million deaths are attributed to diabetes every year.[4]

The management of diabetes depends on knowledge of patient on self care activities, knowledge on symptoms, complications etc. The diabetes is a lifelong disease and poses a huge economic burden on patients especially treatment and management of complications. World Bank estimated that diabetes will account for 18,70,000 disability adjusted life years (DALY) in India, with per capital health expenditure of $21.[5]

Awareness of disease, its risk factor, associated symptoms and complications is

equally important in preventing complications and managing disease condition as treatment and restriction of diet. There are evidences that, diabetic patients often have inadequate knowledge on disease and its complications which markedly increase their risk of CVD, stroke, kidney failure etc.[6]

A study done by Tan et al showed that, the education intervention improved diabetics' knowledge and long term control of diabetes.[7] The questions are whether our patients especially, vulnerable population is aware about their disease, its symptoms and complications .There is a need to assess the level of awareness about diabetes and assess educational needs of diabetic patients; hence, the study was planned to provide base line information to develop an appropriate education tool for intervention program.

Materials and methods

The study was carried out in the Urban Health Center area of Khasbag, Belgaum, where in an, underprivileged population resides. The study was conducted over a period of one year (2008-2009). The house to house survey was conducted in ward no: 21 and all known adult diabetic patients were included in the study. A pre designed and pre tested questionnaire was used as study tool which comprised of general information, knowledge on diabetes, its risk factors, signs or symptoms and complications. The level of awareness was assessed by using scoring system. Each correct answer was awarded with maximum score 2, not sure answers was given 1and incorrect response was given 0 point. Data were analyzed using percentages, proportions and statistical test (chi-square test) was used for categorical data.

Results

A total of 192 subjects were identified and included in the study. Among the interviewed 107(55.73%) were males and 85(44.27%) were females. Out of 192 diabetics, 120(62%) were literates and majority 115(59.88%) belonged to class IV and V socio-economic status.

More than half (53.64%) of diabetic patients belonged to 36 to 60 yrs which is the most productive age group. The overall knowledge of diabetic patients was average (63%) fig1. The study revealed that 108 (56.25%) knew about diabetes and said that it is rapidly increasing, but only 11(10.18%) knew about the types of diabetes.

Most of the patients 160(83.33%) knew one or other symptoms of diabetes mellitus table 1.

Table No 1. Knowledge regarding symptoms of diabetes Mellitus among diabetic patients.

Knowledge of Symptoms	No	Percentage
Yes	160	83.33
No	32	16.66
Types of Symptoms		
Itching	8	5.00
Drowsiness	8	5.00
Weight loss	9	5.62
Sweating	9	5.62
Slow healing	10	6.26
Visual disturbances	15	9.37
Excessive hunger	16	10.00
Thirst	16	10.00
Excessive urination	19	11.88
Multiple	50	31.25*

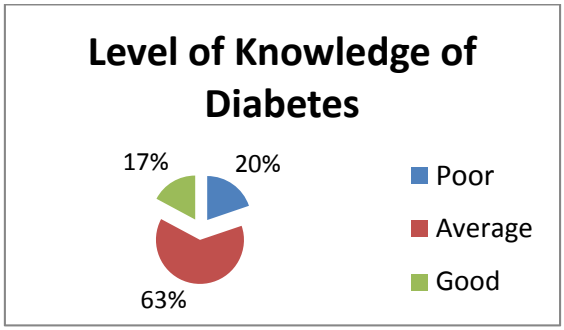

Fig 1 Level of Knowledge

The knowledge about impact of diabetes on other organs and complications of diabetes was also assessed among the patients. More than half, 142 (73.93%) patient knew the impact of diabetes on other organs. Among them 18(12.67%) said it affects eyes, 16(11.26%) said kidneys, 13(9.13%) as heart and 45(31.69%) said that diabetes affects multiple organs. Majority 142 (73.95%) of patients had knowledge of complications associated with diabetes mellitus table 2.

Table No 2. Knowledge regarding complication of diabetes mellitus among diabetic patients.

Knowledge of Complications	No	Percentage
Yes	142	73.95
No	50	26.05
Knowledge of various Complications		
Oral complications	2	1.40
Fever	2	1.40
Joint pains	4	2.82
Raised Blood pressure	9	6.33
Gangrene/foot ulcer	10	7.04
Hypoglycemia	11	7.74
Digestive problems	12	8.46
Heart	13	9.17
Nephropathy / Kidney problems	16	11.26
Retinopathy / eye problems	18	12.68
Multiple	45	31.70*
Total	**142**	**100**

*Multiple response

The knowledge of men was better than females and the association of knowledge and gender was significant. The knowledge among business men was average and knowledge among people in unorganized sector was poor. The significant association was found between knowledge of diabetes and occupation table 3.

Table No 3. Association of level of knowledge on Diabetes and Gender, Socio –economic and Education status.

Level of Knowledge	Poor	Average	Good	Total
Gender				
Male	12(11.21%)	70(65.42%)	25(23.36%)	107
Feamle	26(30.58%)	51(60.00%)	8(9.41%)	85
		p=.001		
Education				
Illeterate	29(39.73%)	44(60.27%)	0.00	73
Primary School	7(11.11%)	50(79.36%)	6(9.52%)	63
Secondary School	2(5.55%)	18(50.00%)	16(44.44%)	36
PUC & above	0.00	9(45%)	11(55.00%)	20
		p = .001		
Socio-Economic				
Class I	0.00	3(42.85%)	4(57.15%)	7
Class II	2(13.33%)	9(60.00%)	4(26.66%)	15
Class III	2(3.63%)	38(69.09%)	15(27.77%)	55
Class IV	16(22.53%)	46(64.78%)	9(12.67%)	71
Class V	18(40.90%)	25(56.81%)	1(2.27%)	44
		p=.001		

Discussion

Diabetes is a life time problem and its management is most complex one with poor awareness about the disease. Many studies have showed poor general awareness of disease among patients, which varied from place to place. The socio demographic profile of our patients revealed that, 59.88% belonged to poor (class 1V and V) socio economic status and 51.05% used to work in unorganized sector. In present study 56% had correct knowledge of diabetes and 90% did not know about its types. In Nepal study 82% knew about the disease they suffering.[8] And a study conducted in Chennai revealed that 75% of population knew about disease.[9] The knowledge about disease among patients was slightly better than our population. And it varied from place to place.

Fifty percent patients knew about risk factors of diabetes where as in a study conducted in Ludhiyana 71.3% did not know about the risk factors of a disease[10]. The urban population had better knowledge about risk factors. One third of patients in Belgaum knew multiple symptoms of DM where as in Karachi, Pakistan 42.2% patient could not name a single symptom of disease[6]. In the present study 73.95% subject were aware about complications of diabetes and one third of patients knew multiple complications. Similar study in southern Indian city showed that less than 30% patients were aware of complications of diabetes which was poor compared to our study subjects [11].

Though overall knowledge of diabetes was good, many patients were unaware about the symptoms and complications associated with diabetes. There is a need to improve the knowledge level of patients regarding symptoms and complications of diabetes, which they suffer from.

The study also conclude that there is an urgent need for cost effective, new strategies like shared care approach in health promotion programs, which will have a significant benefit with regard to disease prevention, detection, patient compliance to the treatment and prevention & management of complications. The health education program is the need of the time, which aids self-care and improve the quality of life and life span of diabetic patients.

There may be various others factors associated poor knowledge about disease. There is a need to understand the determinants of poor awareness level. This may help us to improve the quality of life of diabetic patients and in turn improve the management of co morbidities associated with diabetes mellitus.

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