Original Research Article

A study of the prevalence of complications of diabetes at tertiary health care centre

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Abstract

Background: Diabetes mellitus is one of the most important non-communicable disease of public health concern today **Aims and Objectives:** To Study the prevalence of complications of diabetes at tertiary health care centre. **Methodology:** This was a cross-sectional study carried out in the diabetic patients at tertiary health care centre during the period from October 2018 to March 2019. During the one year period any diabetic patients showing the complications directly or indirectly related to Diabetes were included into study by written and explained consent, so there were 76 diabetic patients who showed the complications were included. The data was entered to excel sheets and analyzed by windows excel software. **Result :** In our study we have seen that The majority of the patients were in the age group of >60 were 32.89%, followed by 50-60 were 30.26%, 40-50 were 19.74%, 30-40 were 11.84%, 20-30 were 5.26%. The majority of the patients were Male i.e. 55.26% and Female were 44.74%. The most common complications were Hypertension in 59.21%, followed by Neuropathy in 42.11% Foot ulceration in 32.89%, Nephropathy in 27.63%, erectile dysfunction in 17.11%, Depression in 13.16, CAN (Cardiac Autonomic Neuropathy) in 9.21%. **Conclusion:** It can be concluded from our study the most common complications were Hypertension Neuropathy, Foot ulceration, Nephropathy, erectile dysfunction, Depression, CAN etc.

Key words: Diabetes, Complications of Diabetes, CAN (Cardiac Autonomic Neuropathy).

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INTRODUCTION

Diabetes mellitus is one of the most important non-communicable disease of public health concern today [1]. According to the International Diabetes Federation (IDF), the estimates of diabetics in India in the 2015 was 69.2 million, which is predicted to rise to 123.5 million by 2040, next only to China. The same atlas also reported national prevalence as 8.7% (7.0 - 10.6) and 1,027,911.6 diabetes related deaths in the 20-79 year age group.[2] There are 350 million people with diabetes worldwide and the numbers are expected to double in the next 20 years. It is with this in mind that the World Health Organization has declared 'beat diabetes' as the central theme for World Health Day 2016 [3]. Diabetes mellitus (DM) is a group of common metabolic disorders that share the phenotype of hyperglycemia, which are caused by a complex interaction of genetics and environmental factors. It is the leading cause of end-stage renal disease (ESRD), traumatic lower extremity amputations, and adult blindness. It also predisposes to cardiovascular diseases. With an increasing incidence worldwide, DM will be a leading cause of morbidity and mortality in the foreseeable future. The goal of treatment for DM is to prevent mortality and complications by normalizing blood glucose level. But blood glucose level might be increased despite appropriate therapy resulting in complications, such as disturbances in fat metabolism, nerve damage, and eye disease etc. [4–8].So we have studied the prevalence of various complications in the diabetic patients at tertiary health care centre.

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METHODOLOGY

This was a cross-sectional study carried out in the diabetic patients at tertiary health care centre during the period from October 2018 to March 2019. During the one year period any diabetic patients showing the complications directly or indirectly related to Diabetes were included into study by written and explained consent, so there were 76 diabetic patients who showed the complications were included. All details of the patients like age, sex, Complications were confirmed by through clinical examination and necessary investigations like CBC, BSL (Fasting and PP), KFT, ECG and USG etc. The data was entered to excel sheets and analyzed by windows excel software.

RESULT

Table 1: Distribution of the patients as per the age

Age	No.	Percentage (%)
20-30	4	5.26
30-40	9	11.84
40-50	15	19.74
50-60	23	30.26
>60	25	32.89
Total	76	100.00

The majority of the patients were in the age group of >60 were 32.89%, followed by 50-60 were 30.26%, 40-50 were 19.74%, 30-40 were 11.84%, 20-30 were 5.26%.

Table 2: Distribution of the patients as per the sex

Sex	No.	Percentage (%)
Male	42	55.26
Female	34	44.74
Total	76	100.00

The majority of the patients were Male i.e. 55.26% and Female were 44.74%

Table 3: Distribution of the patients as per the various complications

Complications	No. *	Percentage (%)
Hypertension	45	59.21
Neuropathy	32	42.11
Foot ulceration	25	32.89
Nephropathy	21	27.63
Erectile dysfunction	13	17.11
Depression	10	13.16
CAN (Cardiac Autonomic Neuropathy)	7	9.21

(*More than one complications present in the one patient so total may be more than 76)

The most common complications were Hypertension in 59.21%, followed by Neuropathy in 42.11% .Foot ulceration in 32.89%, Nephropathy in 27.63%, erectile dysfunction in 17.11%, Depression in 13.16, CAN (Cardiac Autonomic Neuropathy) in 9.21%.

DISCUSSION

Data from prospective and cross-sectional studies consistently point to the fact that diabetic patients are more likely to develop micro- as well as macro-vascular conditions[8-10]. Prior to the onset of diabetes, many patients already show metabolic abnormalities, such as dyslipidemia, further contributing to the development of complications[9]. About 50% of the subjects of UKPDS had substantial macro- or micro-vascular abnormalities at the time of T2DM diagnosis[10]. It is well known that chronic complications are the major outcome of T2DM progress, which reduce the quality of life of patients, incur heavy burdens to the health care system, and increase diabetic mortality [11-13]. After adjusting for age, the death rate of people with T2DM is about twice as high as their non-diabetic peers [14]. About 50-80% of all individuals with diabetes die of cardiovascular disease, with cerebrovascular disease, and kidney failure also among the leading causes of death[14]. Permanent disability is a common outcome of diabetes, with late complications of diabetes being major determinants for disability. Diabetic eye disease, particularly retinopathy, has become a major cause of blindness throughout the world[15]. Moreover, clinical epidemiologic studies suggest that foot ulcers precede more than 85% of non-traumatic lower extremity amputations (LEAs) in diabetic individuals [16, 17]. In our study we have seen that The majority of the patients were in the age group of >60 were 32.89%, followed by 50-60 were 30.26%, 40-50 were 19.74%, 30-40 were 11.84%, 20-30 were 5.26%. The majority of the patients were Male i.e. 55.26% and Female were 44.74% .The most common complications were Hypertension in 59.21%, followed by Neuropathy in 42.11% Foot ulceration in 32.89%, Nephropathy in 27.63%, erectile dysfunction in 17.11%, Depression in 13.16, CAN (Cardiac Autonomic Neuropathy) in 9.21%. These findings are similar to Asrat Agalu Abejew they found the complications were Hypertension, Neuropathy, Nephropathy, Foot ulceration, impotence respectively etc.

CONCLUSION

It can be concluded from our study the most common complications were Hypertension, Neuropathy, Foot ulceration, Nephropathy, erectile dysfunction, Depression, CAN etc.

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