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Original Research Article

A Study to Enumerate the Medical Emergencies and Complications among Diabetic and Non-Diabetic Patients

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ABSTRACT

Background: To enumerate medical emergencies and complications among diabetic and non-diabetic patients.

Materials & Methods: A prospective study along with visit of participators using semi-structured interrogatory was carried out at medicine department, for period of 3 months. All 847 patients (age >20 years) admitted in hospital during study period were included.

Results: Among the total 1000 study participants about 98(9.8%) were diabetic. The ratio of occurrence of medical emergencies among diabetic and non-diabetic patients was found statistically significant While occurrence of complications among diabetic & nondiabetic patients were Neuropathy (17.66% & 4.27%), Cataract (9.33% & 6.63%), Peripheral vascular disease (6.95% & 4.80%), Retinopathy (6.95% & 3.22%) and Renal failure (3.38% & 3.22%) respectively. Occurrence of complications among the diabetic patients was found to be more which was supported by statistical analysis.

Conclusion: The occurrence of medical emergencies and complications was higher among diabetic individual as compared to non-diabetics in study population in Ahmedabad. All the diabetic complications observed need to be addressed in prevention and control strategies. Also, community awareness programmes need to be implemented to percolate the knowledge about the diabetic complications, the available screening facilities for their early detection, treatment and care.

Keywords: Diabetic, Non-diabetic, Medical emergencies, Neuropathy.

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INTRODUCTION

Diabetes Mellitus is a major public health problem with arising prevalence worldwide.[1] At present India is considered as a diabetes capital of the world. There are 3.5 crore diabetics in India, and this figure is expected to rise up to 5 crore by 2025.[2] Diabetes is proved to be a growing cause of disability and premature death, mainly through cardiovascular disease and other chronic complication.[3] A substantial body of evidence suggests that it could reach epidemic proportion particularly in developing and newly industrialized countries.[4] Diabetes mellitus basically produces changes in the blood vessels and hence can affect almost every part of the body. It is known that diabetes mellitus is a leading cause of acquired blindness. It carries 2-3 times higher risk of heart attacks and an even higher risk for stroke. Diabetics are at 5 times higher risk to develop nephropathy and an estimated 25% of all new cases of end stage renal diseases are the result of diabetes. Diabetic patients are five times more prone to gangrene and diabetes accounts for 50% of all non-traumatic complications.[5]

Type 2 diabetes is a common condition with high morbidity and mortality. Its diagnosis appears to be increasing[6-8], probably reflecting an underlying rise in prevalence. In many countries, guidelines for its management have been issued[9-11], and in the United Kingdom (UK), these are reflected in the National Service Framework for Diabetes, which sets national standards and defines service models for the condition.[12] UK Family Practitioners' remuneration will increasingly depend on hitting targets which encompass both process of care and health related outcomes.[13] In this context, process includes monitoring of the

disease and of modifiable risk factors that might lead to complications. In particular, it is important to manage cardiovascular risk in diabetics because diabetes accelerates vascular occlusion and much of the excess mortality is due to cardiovascular mortality.[14]

Practitioners will be judged largely on the achievement of target levels for the process measures monitored. Achieving such targets requires pharmacotherapy in most cases. In recent years a number of new drugs for the management of diabetes have appeared and research evidence suggests that these should replace some older drugs and supplement others, whilst some drugs, such as metformin, should be used more frequently.[15-17]

MATERIALS AND METHODS

Study design: A prospective study along with visit of participators in the hospital.

Study setting: In Medicine department

Sample size: 1000 patients.

Study period: 21/09/2012 to 31/12/2014 (Apprx. 3 months).

Study method: All 1000 patients (age >20 years) admitted in hospital during study period were included. The participants were interviewed using semi-structured questionnaire as well as their records were observed. Data analysis: Data was compiled and analysed in MS Excel, using chi-square test, proportions and percentage.

Table 1: Occurrence of positive diabetic patients from total patients.

Total No. Of Patients	Positive Patients	%
1000	98	9.8%

Table 2: Distribution of Diabetic patients, on the basis of age group and gender.

Age Group	Male	Female	Total
50-60	28	12	40
60-70	17	13	30
70-80	10	18	28

Table 3: Distribution of diabetic patients on the basis of study profile.

Stydy profile	Diabetic	%
Unemployed person	35	35.7
Employed person	23	23.4
Businessman person	40	40.8

Table 4: Occurrence of medical emergencies among diabetic and non-diabetic patients

Disease	Diabetic	Non-Diabetic
Coronary heart disease	24	9
Cerebrovascular accidents	12	8

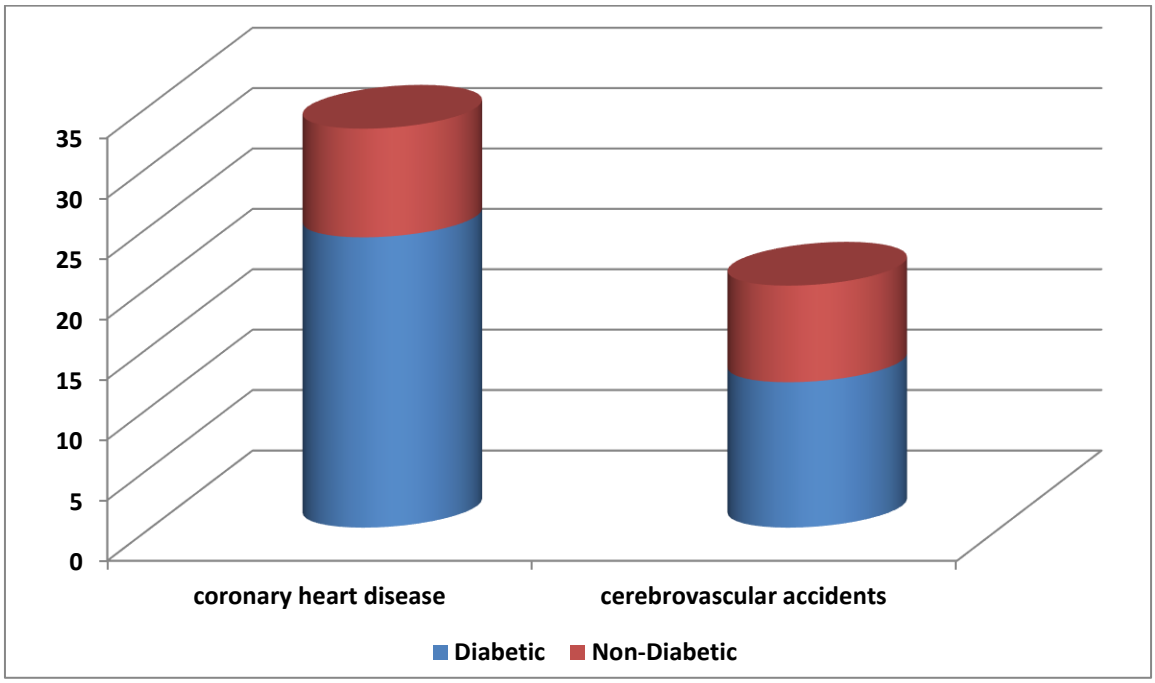
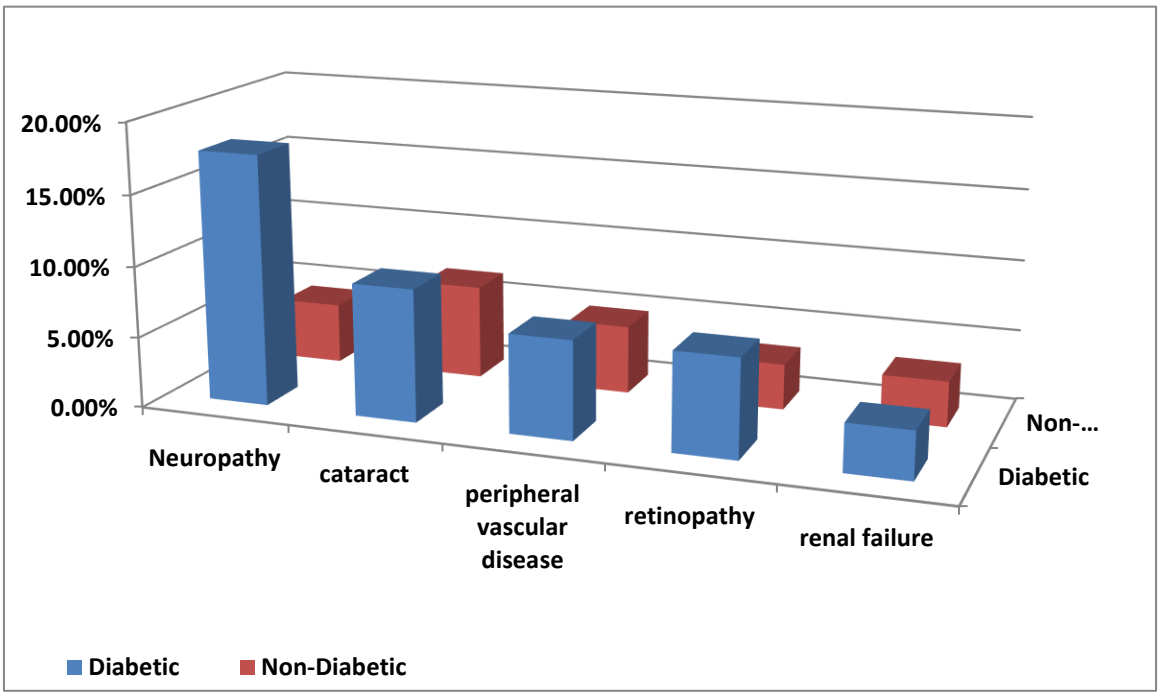


Table 5: Occurrence of complications.

Complications	Diabetic	Non-Diabetic
Neuropathy	17.66%	4.27%
Cataract	9.33%	6.63%
Peripheral vascular disease	6.95%	4.80%
Retinopathy	6.95%	3.22%
Renal failure	3.38%	3.22%



RESULTS & DISCUSSION

Present study has demonstrated very high disruption (9.8%) of diabetes amongst study population. Analogous findings was shown in a study conducted in Maharashtra, Deo SS et al[18] which shown 8.9% of occurrence of diabetes. Still in another study in rural area of India in year 2004, Yagnik CS et al[19] reported occurrence of 6.3%.Same findings was demonstrated in the year of july 2014 by Nirmal Brahmbhatt.[20]

The ratio of occurrence of medical emergencies among diabetic and non-diabetic patients was found significant with coronary heart disease 24 (24.4%): 9(0.9%) and cerebrovascular accidents 12 (1.2%): 8 (0.8%). While study of N. Brahmbhatt (july 2014) showed coronary heart disease 20 (23.80%): 64 (8.38%) and cerebrovascular accidents 10 (11.90%): 61 (7.99%), which is not similar to our study.[20]

While occurrence of complications among diabetic & non-diabetic patients include Neuropathy (17.66% & 4.27%), Cataract (9.33% & 6.63%), Peripheral vascular disease (6.95% & 4.80%), Retinopathy (6.95% & 3.22%) and Renal failure (3.38% & 3.22%) respectively. These findings are in favour of very higher occurrence of complications among diabetics as compared to non-diabetics in study population, which were slightly higher to another study.[20] In South Indian population, a similar high occurrence of CHD (30.3%) among the diabetics was revealed by Ramachandran et al.[21] Yet in another study Ramachandran et al[22] reported occurrence of 0.9% and 61.9% for stroke and neuropathy respectively among the diabetes subjects while the occurrence of PVD was 4.1%. Around 17.2% of diabetics had cataract as a complication in a study (Mohan V et al) carried out in Southern India.[23] Rema M et al[24] reported a retinopathy occurrence of 34.1% among diabetics, in South India.

CONCLUSION

The occurrence of medical emergencies and complications was higher among diabetic individual as compared to non-diabetics in study population in Ahmedabad. All the diabetic complications observed need to be addressed in prevention and control strategies. Also, community awareness programmes need to be implemented to percolate the knowledge about the diabetic complications, the available screening facilities for their early detection, treatment and care.

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