



Study Profile of Presenting Complaints for Hospitalization Among Diabetics in A Tertiary Care Hospital, Tirupathi

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ABSTRACT

Diabetes Mellitus is one of the important non communicable diseases affecting the adult populations around the world. Incidence of diabetes increasing in South Asia. India is also experiencing increasing in diabetes disease burden. Diabetes mellitus is one of the important causes of hospital admission in the western world. In this study we evaluated the causes of hospital admission amongst diabetic population. Most common cause is of diagnosis is some forms of infections commonest (20%) being urinary tract infections and respiratory tract infections in middle age population. 2 patients out of 100 had sputum positive pulmonary tuberculosis 15 out of 100 patient presented with metabolic complications of diabetes i.e. diabetic ketoacidosis. Coronary artery disease with heart failure was present in 14 patients. Five patients had diabetic nephropathy and 4 had retinopathy. This shows that infections are the major cause of hospital admission for diabetics followed by heart failure. This study shows more male patients above age 50, and female above above 60 yrs. get admitted and amongst admitted patents glycemic control is poor. This signifies that men and women with long standing hypoglycemia with middle age with poor socioeconomic had more complications than other counter parts.

KEYWORDS

Diabetics, Ketoacidosis, infections.

INTRODUCTION

Recently WHO stated that diabetes, hypertension and obesity are one of the top five contributing risk factors for cardiovascular death in the world. In 2010, it is estimated that 6.4% of adults would have diabetes mellitus affecting 285million people in the world and it will probably increase to 7.7% by 2030, affecting 439 million adults. It is also estimated that there will be a 67% increase in the prevalence of diabetes mellitus in developing country. There is a markedly increase in prevalence of diabetes mellitus cases from 2010 to 20302.

MATERIALS AND METHODS

All the patients admitted in general medical ward in Sri Venkateswara medical college, SVRRGGHospital Tirupathi for a period of 3 months from February 2016 to April 2016 were enrolled in the study. Patients were selected for the study if they are already on any form on hyperglycemia treatment. They were followed up to discharge for the final diagnosis. All the patients were informed and taken consent to publish their data.

RESULTS

Mean age of admitted patient is 45 years minimum was 14 and maximum is 91 years old. Out of total 100 patients Female were 38 (38%) and male 62 (62 %). Most of the patients admitted were with complaints of fever(40) followed by altered sensorium and loss of consciousness (28) , swelling of body and bilateral pedal edema (15) and with polyuria polydipsia early fatigability (typical symptoms of hyper glycaemia (11), and vomiting and diarrhea(3) ,numbness and parasthesia of lower limbs (3) .

Table: 2 Age wise Male and Female ratio

S No	Age in years	No of Male patients	%	No of female patients	%
1	14-25	4	4	2	2
2	26-45	8	8	6	6
3	46-55	30	30	9	9
4	56-76	12	12	11	11
5	>76	8	8	10	10

Table: 3 Common presentations

Presenting complaints	%
Fever	40
Altered sensorium	28
Swellings of legs	15
Typical symptoms of hyperglycemia	11
Vomiting and diarrhea	3
Numbness and parasthesia	3

DURATION OF DIABETES

Duration of diabetes at the time of admissions. Most of the patients were in the group of 0-5 years duration (36%). (12 %) are 5 to 10 years of duration, (19%) was 10 to 15 years duration ,(12%) was 15 to 20 years duration, (9%) patient had diabetes more than 20 years.(12%) patients were deno-

vo diagnosed admitted with the symptoms of hyperglycemia for the first time.

Table: 3

S no	Duration in years	Number of patients	%
1	0 - 5	36	36
2	6 -10	12	12
3	11-15	19	19
4	16-20	12	12
5	>20	9	9
6	Denovo diagnosed	12	12

DRUGS AND BLOOD SUGAR CONTROL

Excluding 12 patients who were denovo diagnosed patients who total 26 patents were on insulin ,apart from this 10 patients using insulin and oral hypoglycemic both, 46 patients were on two Oral hypoglycemic agents mostly on metformin and glibenclamide or glimepiride and 15 patients were not using any treatment , and 12 members are irregular on treatment. Total 26 patients had good glycemic control (HbA1 C < 7%) 66 patients had uncontrolled diabetes and 8 were presented with hypoglycemia.

Most common cause among patients with fever presentation is mainly due to infections like urinary tract infections 16 out of 40 patients, 14 are respiratory infections ,5 are common viral fever ,2 are enteric fever 2 are pulmonary tuberculosis(sputum Positive) and 1 was diagnosed as FUO. Among patients presented with altered sensorium 8 patients presented with altered sensorium is due hypoglycemia and 12 patients with altered sensorium were diagnosed as diabetic ketoacidosis others are due to cerebrovascular accidents. only one patient presented with herpes zoster . In Others diagnosed as 6 patients were Coronary artery disease with heart failure symptoms. 12 patients had diabetic nephropathy out of this 3 patients are presented with end stage renal disease and 5 had retinopathy. 36 patients had more than one diagnosis. 18 patients admitted for the control blood sugar by initiation of insulin. 3 of them were new patients who had very high blood sugar (HbA1c >10%).

Table: 4 Diagnosis percentages wide

S.NO.	Diagnosis	%
1.	Cerebrovascular accidents	12
2.	Urinary tract infections	16
3.	Lower respiratory tract infections	14
4.	Admitted for control of blood sugar	18
5.	Diabetic nephropathy	12
6.	Diabetic ketoacidosis	12
7.	hypoglycemia	8
8.	Pulmonary tuberculosis	2
9.	Enteric fever	2
10.	Peripheral neuropathy	3
11.	Acute gastro enteritis	3
12.	Herpes zoster	1

DISCUSSION

Diabetes mellitus is a group of metabolic disease characterized by hyperglycemia resulting from defects in insulin secretion, insulin action, or both. Diabetes causes about 5% of all deaths globally each year. The chronic hyperglycemia of diabetes is associated with long-term damage, dysfunction, and failure of various organs, especially the eyes, kidneys, nerves, heart, and blood vessels.50% of people with diabetes die of cardiovascular disease.3 According to the Centers for Disease Control and Prevention, 25.8 million persons in the United States (or 8.3% of the population) have the disease, which is diagnosed in approximately 2 million persons each year. Dia-

betes is usually silent in its initial stages, and irreversible complications may develop before treatment is begun.4 The prevalence of diabetes is much higher among South. South Asians are 3 to 5 times more likely to develop type 2 diabetes.

The prevalence of diabetes among South Asians living in the United Kingdom, the United States and Canada has been found to be as high as 12 to 15%, compared with 3 to 5% in white people.4 Lifestyle factors may be an important determinant in the increased risk of type 2 diabetes amongst South Asians. It has found that Indians, Pakistanis and Bangladeshis are respectively 14%, 30% and 45% less likely to meet current guidelines for physical activity than the general population. Qualitative study of South Asian women has shown that many barriers exist to increasing physical activity, including other physical ailments, cultural norms, and socialexpectations5 Type 2 diabetes presents around a decade earlier in South Asians than indigenous Chinese, Japanese and UK populations.5 Cardiovascular complications of diabetes are more common amongst South Asians, with a 50% higher mortality compared to Europe's. Similarly, renal disease is three times more common amongst South Asian diabetic subjects than Euripides.6

The five most frequent specific causes for hospitalizations in patients with medical history of diabetes as a secondary diagnosis were acute coronary syndrome (27.2%), pneumonia (14.3%), heart failure (11.2%), cerebrovascular accident (10.3%), and chronic obstructive airway disease (3.6%) ,heart failure (11.2%), cerebrovascular accident (10.3%)7 .In our study fever was most common cause of admission(40%)among fever patients they have higher incidence of Urinary tract infections(16%) and LRTI and pneumonia (14%) ,viral fever 6%, 2 are enteric fever. Despite the increased prevalence of diabetes among South Asians, a majority of cases goes undiagnosed and, as a result, poorly controlled. Several studies have shown that many South Asians have diabetes-related complications at the time of diagnosis, indicating a prolonged latent phase of undiagnosed diabetes.8 In our study we found diabetic Keto acidosis is one of major contributing for admission, mostly insulin using patients are affected, this is only because of irregular in treatment and poor drug compliance, mostly affected 55 to 60 years age people are affected.

In this study we noticed Cerebrovascular accident cases are also more common among diabetic patients. But the cause of CVA is multifactorial, the affected patients are male predominant age above 60 years, they have other risk factors like alcoholism, obesity, smoking and known hypertension.

Diabetes is one of the important diagnoses in patients in our hospitals also. People with diabetes are in increased risk of infections and other complications. Glycemic control is usually poor.9 Though incidence and prevalence of diabetes in male is higher but morbidity with diabetes is more with female signifying poor management of this disease in female populations Increasing incidence of diabetes are exposing our system to various other problems like increased need of hospital beds 10, need for management of more cases of ischemic heart disease and chronic kidney disease and increased demand for tuberculosis management and more need for intensive care management for septicemia and other life threatening complications.

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