



A STUDY ON CLINICAL PROFILE OF 50 CASES OF FIRST TIME DIAGNOSED DIABETES MELLITUS

General Medicine

Dr. Manisha Panchal

Associate Professor, Department Of Medicine, P.D.U. Civil Hospital, Rajkot

Dr. Nilay Machhar*

3rd Year Resident, Department of Medicine, P.D.U. Civil Hospital, Rajkot *Corresponding Author

ABSTRACT

Background: We Describe The Clinical Characteristics Of Patients Diagnosed First Time With Diabetes Mellitus In P.D.U. Civil Hospital, Rajkot. Diabetes has emerged as a major healthcare problem. According to Diabetes Atlas published by the International Diabetes Federation (IDF), It was estimated that in 2017 there are 451 million (age 18–99 years) people with diabetes worldwide. These figures were expected to increase to 693 million by 2045. It was estimated that almost half of all people (49.7%) living with diabetes are undiagnosed. In 2017, approximately 5 million deaths worldwide were attributable to diabetes. Prevalence for diabetes (20–79 years) in India is estimated to be 8.8%. Hence it is of vital importance to early diagnose from presenting symptoms and timely treat DM to prevent its acute and remote complications and reduce further morbidity and mortality.

Material And Methods: From January 2019, We Observed 50 Of 1st time diagnosed Diabetes Mellitus patients in P.D.U. Civil Hospital, Rajkot And Clinical Profile And Laboratory Parameters were monitored

Result: Of total 50 cases Diabetes Mellitus was distributed in both sexes equally of generally adult age group (most common being 40–49 Years). More than half (76%) of patients are having abnormal BMI. Obesity and Sedentary lifestyle are documented in majority (42%) of cases. Risk of infections are higher as most common being UTI (69.23%) followed by Pneumonitis (30.76%). Hypertension is found to be a most common comorbidity (28%). Acute complications were evident as 6% cases of DKA 26% as septicemia 6% as septic ARF. Remote complication noted in 6% as Diabetic Retinopathy.

Conclusion: Diabetes can affect both sexes equally and commonly adult age group more than 40 years with most common comorbidity being hypertension with acute complication commonly of septicemia mostly due to UTI > Pneumonitis followed by DKA and remote complication of diabetic retinopathy in persons having sedentary lifestyle and abnormal BMI.

KEYWORDS

Diabetes, Presenting Symptoms, Acute and remote complications

INTRODUCTION-

Diabetes Mellitus comprises a group of common metabolic disorders that share the phenotype of Hyperglycemia. Several different type of DM exists & is caused by a complex interaction of genetics, environmental factors. Depending on the etiology of the DM, factors contributing to hyperglycemia include reduced insulin secretion, decreased glucose utilization, and increased glucose production. The metabolic dysregulation associated with DM causes secondary pathophysiologic changes in multiple organ systems that impose a tremendous burden on the individual with diabetes and on the health care system. Diabetes Mellitus is leading cause of End Stage Renal Disease (ESRD), Nontraumatic lower extremity amputation and adult blindness. It also predisposes to cardiovascular disease. The countries with the largest number of diabetic people will be India, China and USA by 2030. It is estimated that every fifth person with diabetes will be an Indian. About one in four people with diabetes don't know they have the disease.

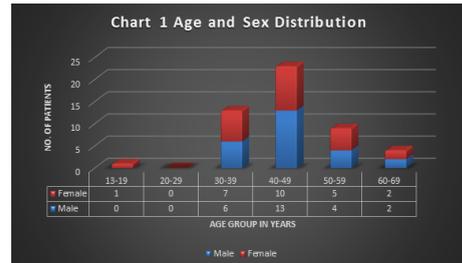
MATERIAL AND METHODS:

Study subjects were selected on the basis of age (subject must be of >13 years of age), subjects full filling the criteria of American Diabetes Association. Study was carried out during January-2019 to August-2019 in P.D.U. Civil Hospital Rajkot. Pre tested semi structured questionnaire was prepared to collect data. Each subject was asked about socio demographic profile, past and family history of disease and associated morbidity. Each subject underwent General, systemic examination and different diagnostic tests like Hb, TC, DC, RBS, FBS, PP2BS, Serum Na and K level, Urine routine/micro, Urine sugar, Urine albumin, Urine acetone and Chest X ray, ECG, MRI (if indicated) etc. Associated morbidity and acute complications were diagnosed on the basis of reports of the diagnostic tests. Data were analysed using Microsoft Excel Software. Citation and bibliography done using Mendeley.

RESULTS:

Total of 50 cases with first time diagnosed Diabetes were included in study. Majority of patients belonged to Age Group of 40–49 Years (46%). Both the Genders are equally affected with slight Male Preponderance (Male=56.52, Female=43.47%). Although Both the Genders are equally affected overall. (Male=50% Female=50%). 1 Female patient was having Age of 18 Years at the time of Diagnosis.

Age and Sex Distribution is listed in Chart 1.



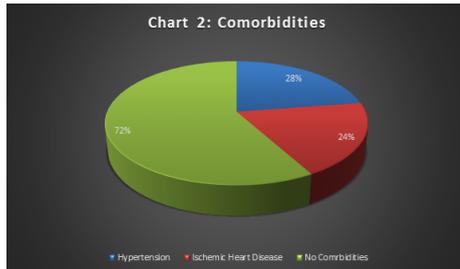
The Predominant symptoms at presentation were Numbness in Hand and Feet (64%), PolyDipsia Polyphagia (64%), Polyuria and Increased Frequency of Urination (64%), Burning Micturition was the second most common presenting complaint in 20% of patients with Females having more (70%) as compared to Male (30%). Other Symptoms have been listed in the Table 1.

TABLE 1 SYMPTOMS

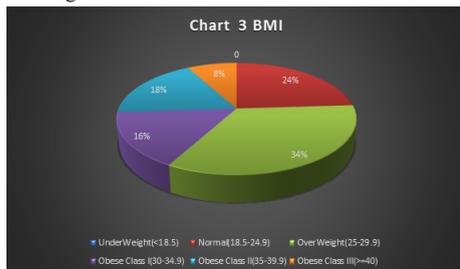
No.	Symptoms	Number of Patients (%)
1	Tingling and Numbness in Hand and Feet	64%
2	Non Healing Ulcer	4%
3	PolyDipsia Polyphagia	64%
4	Polyuria and Increased Frequency of Urination	64%
5	Burning Micturition	20%
6	Abdominal pain Nausea Vomiting Breathlessness	6%
7	Weakness in Hand and Feet	4%
8	Chest Pain Restlessness Perspiration	8%
9	Fever Cough	8%

The Most common acute complication was Diabetic ketoacidosis affecting 3 patients (4% Males and 2% Females). 26% of patients were having infection out of which most common was Urinary Tract Infection (69.23%) (Females 70% > Males 30%) and 30.76% were pneumonitis (Males 75% > Females 25%).

The Most common associated morbidity, amongst diabetics, observed was Hypertension in 28% of patients followed by Ischemic Heart Disease in 24% of patients. 4% patients presented with Ischemic CV stroke. 8% patients presented with Myocardial Infarction.



Out of these 50 cases 76% patients were having abnormal BMI while 24% were having normal BMI. 34% patients were overweight while majority (42%) patients were obese having sedentary lifestyle. BMI of all patients are given in Chart3



All 50 patients were having their HbA1c in diabetic range (>6.5) at the time of diagnosis. 3 patients (6%) were found to have developed remote complication of Diabetic Retinopathy suggesting long time undiagnosed uncontrolled DM in them. 26% patients shown septicemia due to various infections and 6% demonstrated septic ARF.

DISCUSSION:

This study included total 50 patients with 1st time diagnosed DM in P.D.U. civil hospital, Rajkot from 1st January, 2019. The cases were almost equally distributed in both the genders Male=50% Female=50%. This was contradictory to previous Indian study [6] which showed male predominance. DM can manifest in population of any age but most commonly, people of age group of 40 to 49 years were affected. This was similar to the previous studies [6] [8] Only one female patient being less than 30 Years of age (18 Years) at the time of diagnosis. The most common Presenting Symptoms were tingling and numbness in hands and feet with increased frequency of urination, polyuria, polyphagia, polydipsia in 64% of patients followed by burning micturition in 20% of patients due to infection of urinary tract. As diabetics are prone to develop infections, in this study, 26% of patients were having infection out of which most common was Urinary Tract Infection (69.23%) (Females 70% > Males 30%) and 30.76% were pneumonitis (Males 75% > Females 25%). Incidentally diagnosed patients presented with Myocardial infarction with complain of chest pain, restlessness, excessive perspiration in 8% of patients, while 4% presented with weakness in hand and feet along with slurring of speech, whereas 4% were having long standing non healing ulcers on right and/or left foot. DKA was the presenting complication in 6% cases having breathlessness, abdominal pain, nausea and vomiting. Out of these one patient was in altered sensorium during presentation and her ABG was suggestive of severe metabolic acidosis. Among these 50 cases most common morbidity discovered was Hypertension in 28% of cases. Out of which 5 were already diagnosed case of Hypertension and others were freshly diagnosed. 24% were having Ischemic heart disease. Among these 4 cases were presented with myocardial infarction while others were diagnosed incidentally on routine ECG screening. Acute complications directly or indirectly due to DM were noted as 26% cases having septicemia whereas 6% were having septic ARF. DKA was documented in 6% cases. Remote complication of Diabetic Retinopathy suggesting an uncontrolled long term undiagnosed diabetes was demonstrated in 6% of cases. All cases had their HbA1c in diabetic range that is >6.5. 76% patients were having abnormal BMI while 24% were having normal BMI. 34% patients were overweight while majority (42%) patients were obese having sedentary lifestyle.

LIMITATIONS:

The data was collected only from the patients consulting P.D.U. Civil Hospital OPD or admitted in the same. All findings were from clinical experience. Despite the use of standardized data collection, not all the information collected from all the patients. Further, such large community-based studies are required to analyse the actual profile of the disease.

CONCLUSIONS

We have demonstrated that Diabetes Mellitus can affect persons of both the sexes equally of generally adult age group (most common being 40-49 Years). Hypertension is found to be a most common comorbidity. Risk of infections are higher as most common being UTI followed by Pneumonitis. More than half (76%) of patients are having abnormal BMI. Obesity and Sedentary lifestyle are documented in majority (42%) of cases. Acute complications due to direct or indirect effect of diabetes are septicemia 20%, septic ARF 6%, DKA 6%. Diabetic Retinopathy is discovered as a remote complication in 6% of patients

ACKNOWLEDGMENT

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