INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

A STUDY OF 100 CASES OF CLINICAL FEATURES OF FIRST TIME DETECTED DIABETES MELLITUS

General Medicine

Dr Manisha Panchal — MD Medicine professor,

Dr Rajvi Thakkar* — Second Year Medicine Resident, *Corresponding Author

ABSTRACT

Through study of clinical features of 100 patient of diabetes mellitus we can detect diabetes mellitus at early stage and manage properly through early intervention prevent its further complications .Patient present with various clinical feature from mild to severe complication of diabetes mellitus which is discuss in this publication .

Aims-Through this study we can know the various manifestation of diabetes mellitus and detect at early stage and prevent its complication .

KEYWORDS

INTRODUCTION

Diabetes mellitus (**DM**), commonly known as **diabetes**, is a group of metabolic disorders characterized by a high blood sugar level over a prolonged period of time.

Symptoms often include frequent urination, increased thirst, and increased appetite. If left untreated, diabetes can cause many complications. Acute complications can include diabetic ketoacidosis, hyperosmolar hyperglycemic state, or death Serious long-term complications include cardiovascular disease, stroke, chronic kidney disease, foot ulcers, damage to the nerves, damage to the eyes and cognitive impairment.

Clinical diagnosis of diabetes is made if a person has the symptoms, viz. polyuria, polydipsia, polyphagia, recurrent infections, unexplained weight loss and in severe cases drowsiness, coma and a casual plasma glucose concentration of $\geq$ 200 mg/dL or a fasting plasma glucose (FPG) of $\geq$ 126 mg/dL or a two hours post-glucose (2hPG) (75g load) of $\geq$ 200 mg/dL during an oral glucose tolerance test (OGTT). For clinical purposes, the diagnosis should always be confirmed by a repeat blood test on another day, unless there is unequivocal hyperglycaemia with acute decompensation or obvious symptoms.

The global burden due to diabetes is mostly contributed by type 2 diabetes which constitutes 80% to 95% of the total diabetic population. Diabetes mellitus is the most common metabolic disease which is prevalent in every part of the world and is a major public health challenge of the twenty-first century.

India which has a large pool of pre-diabetic subjects (IGT and IFG) shows a rapid conversion of these high-risk subjects to diabetes. The Indian Diabetes Prevention Programme-1 (IDPP-1) has shown an annual incidence of approximately 18% among subjects with IGT. National studies or population based studies on diabetic complications are sparse in India. A few population based studies indicate the prevalence of retinopathy to be 18% to 27.0% and overt nephropathy to be about 2.2% with a large percentage (27%) having microalbuminuria. Peripheral vascular disease is prevalent in 6.3%, peripheral neuropathy in 26%, and coronary artery disease (CAD) is detected in 21%. The major contributory factors for the high prevalence of the complications are; delayed diagnosis of diabetes, inadequate control of glycaemia, hypertension, and lack of awareness about the disease among majority of the public.

Table 1: Values for Diagnosis of Diabetes – (WHO 1999)

	Venous Plasma	Whole Blood Venous	Whole Blood Capillary
	Glucose Concentration in mg/dL		
Diabetes Mellitus:			
Fasting	≥126	≥110	≥110
2-hour PG	≥200	≥180	≥200
Impaired glucose tolerance (IGT):			
Fasting (if measured)	<126	<110	<110
2-hour PG	≥140 to <200	≥120 to <180	≥140 to <200
Impaired fasting glucose (IFG):			
Fasting	≥110 to <126	≥100 to <110	100 to <110
2-hour PG (if measured)	<140	<120	<140
To convert mg/dL to mmol/L, divide mg/dL by 18.			

MATERIALS AND METHOD

In this study we examine 100 outdoor patient case of clinical features of diabetes mellitus in PDU MEDICAL COLLEGE Rajkot in duration of November 2020 to January 2021 .

Type of study -cross sectional study

Patient was randomly selected who has first time high random blood sugar and urine routine micro suggestive of sugar in urine and albumin in urine .In this study we include all routine investigations complete blood count ,Renal function test , random blood sugar ,urine routine micro , chest XRAY , electrocardiography , HbA1C, ophthal examination for retina .

DISCUSSION & RESULT

Type 1 diabetes constitutes less than 2% of total diabetic population in India. In majority of type 1 diabetes patients; there is rapid destruction of β-cells of pancreas; in a susceptible subject due to viral mediated autoimmune process. A typical type 1 diabetes patient is below 30 years, is underweight and present with frank symptoms, e.g. polyuria, polydipsia, polyphagia, weakness, weight loss, restlessness and if continued for some period, may lead to diabetic ketoacidosis with altered sensorium and severe dehydration. Occasionally a child with similar clinical presentation in a remote area may die before the diagnosis is made. Any comatose child presenting with severe dehydration without diarrhea; a diagnosis of type 1 diabetes should be in the list of diagnostic consideration. In some type 1 diabetic subjects; β-cell destruction is slower and may mimic a type 2 diabetes in clinical presentation (latent autoimmune diabetes in adult; (LADA). After initial treatment with insulin, a type 1 diabetic may recover some residual β-cell function (the so-called 'honeymoon phase') when they can be maintained with a small daily dose of insulin; rarely, they do not even need insulin for some period of time. However, this phase of recovery of residual β-cell function is temporary and the autoimmune process ultimately destroys the remaining β-cells and the subject becomes completely insulin deficient and require insulin for survival.

Type 2 diabetes constitutes almost 98% of diabetic population in India. Age, obesity, lack of physical activity, and family history of diabetes are the predisposing factors for type 2 diabetes. Other risk factors are – hypertension, dyslipidemia, and past history of gestational diabetes mellitus (GDM). Some may present with the characteristic symptoms of polyuria, polydipsia and polyphagia with weakness and weight loss,many type 2 diabetics are asymptomatic and remain silent for many years and at diagnosis may have features of long-term complications like neuropathy (tingling, numbness,paraesthesia of lower limbs), retinopathy or even nephropathy. A middle-aged female often consult gynecologist for pruritus vulva, a male subject may consult physician for balanitis; because chronic hyperglycemia makes a subject prone to several type of bacterial or fungal infections. Asymptomatic patients are diagnosed during routine health check-up for LICpolicy, or job recruitment or before surgery. In spite of this,about half of the type 2 diabetic population in India remain undiagnosed.

	Type 1 DM	Type 2 DM
Male	18	40
Female	13	29

Clinical features	Percentage of presentation
Asymptomatic	31
Polyuria	11
Polyphagia	8
Obesity	14
Weight loss	10
Burning micturition	12
Breathlessness	10
Weakness	4

Syndrome first time detected dm2

Cerebrovascular accident	**50**
Myocardial infarction	**30**
Covid 19 pneumonitis	**70**
Urinary tract infection	**30**
Retinopathy	**10**
Hypertension	**28**

Patient with first time diabetes 31 percentage of patient asymptomatic at presentation ,11 % of patient present with polyuria ,8%of patient present with polyphagia ,14%patient having obesity ,10%having weight loss ,12 %having burning micturition ,10 %having breathlessness ,4% having weakness .

Some disease first time associated with diabetes mellitus .patient with cerebrovascular accident 50%case having diabetes at onset ,myocardial infarction having 30 %case dm2at onset ,covid 19pneumontis 70% case dm2 at onset ,urinary tract infection 30% cases dm2 at onset , 10 % case having retinopathy at onset ,hypertension having 28percentage case dm2at onset

CONCLUSION

diabetes is a heterogeneous metabolic disorder with varied manifestation. Prevention, timely diagnosis, and early initiation of treatment are important in patients with diabetes mellitus. Many of the complications associated with diabetes such as nephropathy, retinopathy, neuropathy, cardiovascular disease, stroke, and death can be delayed or prevented with early and appropriate treatment of elevated blood sugar, blood pressure, and blood lipids. Based on aetiology, diabetes is presently classified as type 1 diabetes, type 2 diabetes, diabetes due to other illness and gestational diabetes. At present there has been wide acceptance of the WHO criteria (1997) for the diagnosis of diabetes on the basis of fasting plasma glucose and modified oral glucose tolerance test. Of late; estimation of HbA1c has been proposed by experts to diagnose and screen diabetes. The lack of availability of HbA1c testing in more remote or underserved areas, the cost of the test and lack of standardization of the test are of legitimate concern. There is uniform agreement that earlier the diabetes is diagnosed and measures taken, the greater is the benefit of the patient.

REFERENCES
1) Harrison principle of internal of medicine
2) API Textbook of medicine
3) American Diabetic Association: Diagnosis and classification of diabetes mellitus.
4) National Diabetes Date Group: Classification and diagnosis of diabetes mellitus and other categories of glucose intolerance
5) Allison Macerollo. Diabetes Mellitus: Diagnosis and screening.
6) WILLIAMS textbook of endocrinology