ORIGINAL RESEARCH

Prevalence Of Complications In Patients With Newly Etected Type-2 Diabetes Mellitus In Dr. B.R. Ambedkar Medical College And Hospital

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Abstract
Introduction: Diabetes mellitus is a common and serious disease with chronic complications and constitutes a substantial burden for both patients and the health care system. The latest estimates show a global prevalence of 382 million people with diabetes in 2013. In 2014, 8.5% of adults aged 18 years and older had diabetes, expected to rise to 592 million by 2035 [1]. In2019,diabeteswasthedirectcauseof1.5milliondeaths.
Aim: assessing the prevalence and to study the clinical profile of macrovascular complications in newly diagnosed T2DM patients.
Method: The present study was a single-center, cross-sectional study conducted on patients with newly detected T2DM in the department of General Medicine, Dr. B. R. Ambedkar Medical College, Kadugondanahalli, and Bangalore from November 2020 to May 2022(18 months) .
Results: In this present study, 56 % and 44% comprised males and females respectively and male: female ratio was 1.2:1. Body mass index is a profound parameter for the onset of diabetes and its complications. Study results showed that (3%) were malnourished, (52%) were normal, (23%) overweight,(22%) were obese grade 1,(and 7%) were obese grade 2. Macroscopic complications include 38.7%, 32.7%, 27.3% , polyuria, polydipsia and polyphagia, respectively.
Conclusion: In our study, the prevalence of diabetes rises with age and the predominance ofmale participants.
Keywords: Diabetes mellitus, macroscopic complication, polyuria, polydipsia, polyphagia

Introduction:
Diabetes mellitus is a common and serious disease with chronic complications and constitutes a substantial burden for both patients and the health care system. The latest estimates show a global prevalence of 382 million people with diabetes in 2013. In 2014, 8.5% of adults aged 18 years and older had diabetes, expected to rise to 592millionby2035[1].In2019,diabeteswasthedirectcauseof1.5milliondeaths.Topresentamoreaccuratepictureofthe deaths caused by diabetes, however, deaths due to higher-than-optimal blood glucose through cardiovascular disease, chronic kidney disease, and Hyperlipidemia should beadded.[1-5] This study aims in assessing the prevalence and to study the clinical profile of macrovascular complications in newly diagnosed T2DM patients.

Methodology:
The present study was a single-center, cross-sectional study conducted on patients with newly detected T2DM in the department of General Medicine, Dr.B.R.Ambedkar Medical College, Kadugondanahalli, and Bangalore from November 2020 to May 2022(18 months) .Before initiation of the study obtained Ethical and Research Committee clearance from Dr. B. R. Ambedkar Medical College, Kadugondanahalli, Bangalore (Annexure B). During the present study, a

total of 180 Patients were reviewed in OPD, 150 patients were enrolled in the study according to the present study inclusion criteria and 37 patients were excluded according to the exclusion criteria. Patients were included in the study based on the inclusion and exclusion criteria mentioned below.

Inclusion Criteria

- Age group >18 years
- Patients with a diagnosis of type 2 DM for less than 3 months based on ADA criteria as follows- (FBS - 126mg/dl, PPBS-200mg/dl, HbA1c of 6.5% or higher

Exclusion criteria

- Patients on any drug therapy
- Gestational diabetes
- Type 1 DM
- Steroid induced diabetes 42
- Newly detected diabetes after COVID infection

A total of 150 patients with new onset T2DM, who are admitted or visited, were chosen for the study after satisfying the inclusion and exclusion criteria. Statistical analysis was done using SPSS 24 version.
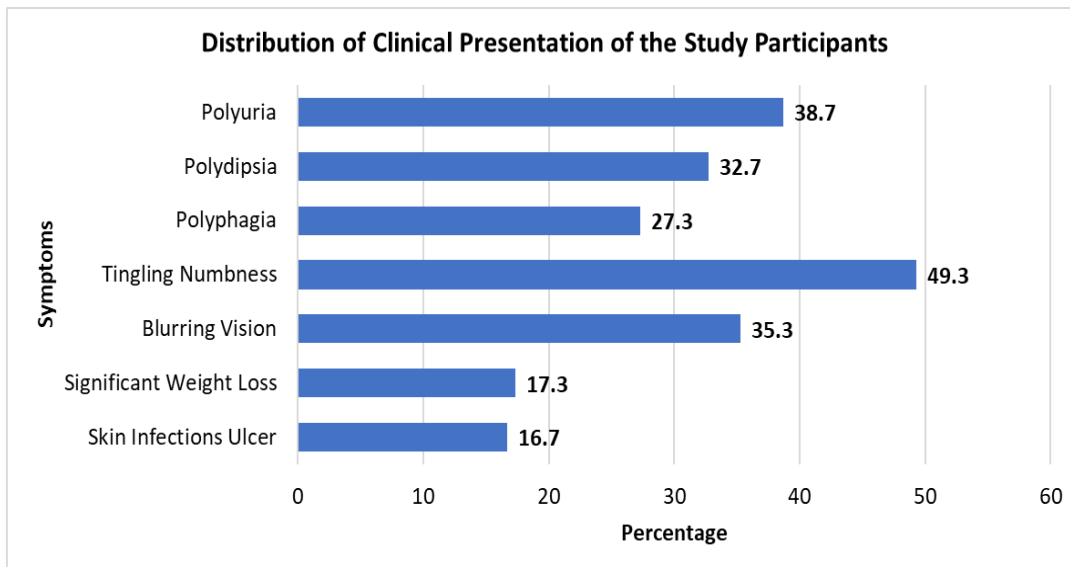
Results:

In this present study, 56 % and 44% comprised males and females respectively and male: female ratio was 1.2:1. Body mass index is a profound parameter for the onset of diabetes and its complications. In India, 65% of the patients suffered from diabetes with associated risk factors. The present study documented that, BMI was considered one of the predictors for the diagnosis of diabetics. Elevated BMI is more associated with diabetic complications. Study results showed that (3%) were malnourished, (52%) were normal, (23%) overweight,(22%) were obese grade 1,(and 7%) were obese grade 2. Macroscopic complications include 38.7%, 32.7%, 27.3% , polyuria, polydipsia and polyphagia, respectively.
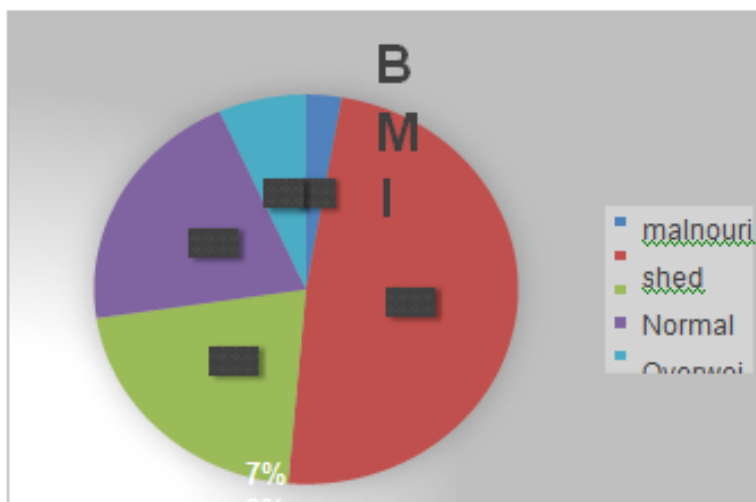
The distribution of clinical presentation of the study participants:

Items	Sub Group	Frequency (%)
Polyuria	Present	58 (38.7)
	Absent	92 (61.3)
Polydipsia	Present	49 (32.7)
	Absent	100 (66.7)
Polyphagia	Present	41 (27.3)
	Absent	109 (72.7)
Significant Weight Loss	Present	26 (17.3)
	Absent	124 (82.7)
Tingling Numbness	Present	74 (49.3)
	Absent	76 (50.7)
Blurring Vision	Present	53 (35.3)
	Absent	97 (64.7)

Distribution of Clinical Presentation of the Study Participants

Symptoms	Percentage
Polyuria	38.7
Polydipsia	32.7
Polyphagia	27.3
Tingling Numbness	49.3
Blurring Vision	35.3
Significant Weight Loss	17.3
Skin Infections Ulcer	16.7

Table (14): Comparison of sex with other studies

	Drivsholm et al[6]	Present study
Men	589	84
Women	548	66
Total	1137	150
Ratio	1.07	1.5

Family history: Family history of Diabetes in our study was 19% and in Nambuya AP et al study was 16%. This variation is probably due to high illiteracy and lack of awareness of diabetes among the people.

Symptoms: On routine checkups (32%) had symptoms of polydipsia, (38%) had polyuria and polyphagia(27%), tingling and numbness (49%) were incidentally detected when they attended the hospital for other illnesses, and the rest of them presented with multiple complications due t0 diabetes

Table 15: Comparison of symptoms

Symptoms	Drivsholm et al (%)[6]	Present study(%)
polyuria	53	38
Polydipsia	63	32
Polyphagia	40	27
Significant weight loss	-	17
Tingling and numbness	-	49
Blurring vision	24.9	35

Discussion:

This study was conducted on patients with newly diagnosed type 2 diabetes mellitus attending the npatient and outpatient departments of Dr. B.R. Ambedkar Medical College and hospital over 18 months. The maximum incidence of diabetes was seen between 46-60 years. In our study, 84 were males and 66 females with a male: female ratio of 1.5:1. In a western study, the ratio is 1.07:1. This difference noted is probably due to illiteracy and decreased turnover of females to hospital for routine and treatment purposes.

Conclusion:

In our study, the prevalence of diabetes rises with age and the predominance ofmale participants.

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