

**Prevalence of Newly Diagnosed Type 2 Diabetes Mellitus : A Hospital Based Study**

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**Abstract**

Diabetes Mellitus Type 2 is one of the metabolic syndromes which increases gradually worldwide. IN 2015, 415 million peoples were affected and the number will increase more in upcoming decade. In our present study, we included the people between 35 to 75 years of aged group and found that out of 25 positive patients, 17 patients are male and 8 are female patients who are newly diagnosed Diabetes mellitus type 2. The percentage of prevalence are 68 and 32 for male and female respectively. The prevalence of newly diagnosed T2DM in aged group between 56 to 65 years is higher than different other aged group and in urban region the prevalence is high. So, Proper steps should be taken to control the newly diagnosed T2DM and if it will happen then ultimately, we will control the range of T2DM.

**Keywords:** Diabetes Mellitus, Prevalence, Male, Female

**Introduction**

Diabetes mellitus (DM) is a chronic metabolic disorder characterized by persistent hyperglycaemia. It may be

due to impaired insulin secretion, resistance to peripheral actions of insulin, or both. By 2040, approximately 200 million new patients will affect from present scenario and in 2015, a total of 415 peoples were affected from T2DM.<sup>(1)</sup> The HbA1c is now recommended as a standard of care (SOC) for testing and monitoring diabetes, specifically the type 2 diabetes.<sup>(2)</sup> Historically, HbA1c was first isolated in 1958 and characterized in 1968, as a glycoprotein<sup>(3,4)</sup> The elevated levels of HbA1c in diabetic patients were reported in 1969.<sup>(5,6)</sup> identified the pathway leading to the formation of HbA1c in 1975. Using the HbA1c as a biomarker for monitoring the levels of glucose among diabetic patients.<sup>(7)</sup>

**Aim and Objective:** To determine the prevalence of T2DM according to gender.

**Material and Methods:** Our study was conducted between March 2023 to April 2023. And a total of 25 patients were detected who were newly diagnosed T2DM from the OPD of Department of Medicine and the test was performed in Department of Biochemistry, Index

Medical College and Hospital and Research Centre, Indore.

**Inclusion:** Patients aged between 35 to 75 years old who were newly diagnosed T2DM.

**Excluded:** Young Aged Patients, Patients underwent pancreatic surgery, Patients who were detected Carcinoma of Pancreas, etc.

**Method:** Estimation of HbA1c was done with the help of Photometric Method. (7-20)

**Observation and Results**

Table 1: Prevalence of Newly Diagnosed T2DM among gender

	Male	Female	Total
Number of patients	17	8	25
Percentage	68	32	100

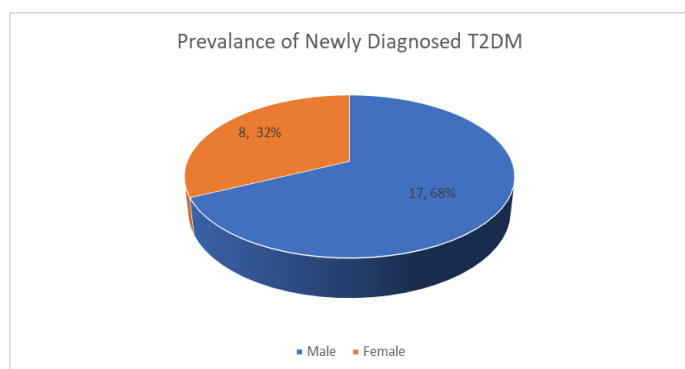


Figure 1: Prevalence of Newly Diagnosed T2DM

In Table 1 and Figure 1, the prevalence of newly diagnosed T2DM were shown and it state that a total of 17 patients belongs from male group and only 8 patients were female and the percentage was 68% and 32% respectively for male and female patients respectively.

Table 2: Prevalence of Newly Diagnosed T2DM in different aged group

Aged Group (in Year)	Male Patients	Female Patients
36-45	2	1
46-55	2	2

56-65	7	3
66-75	6	2

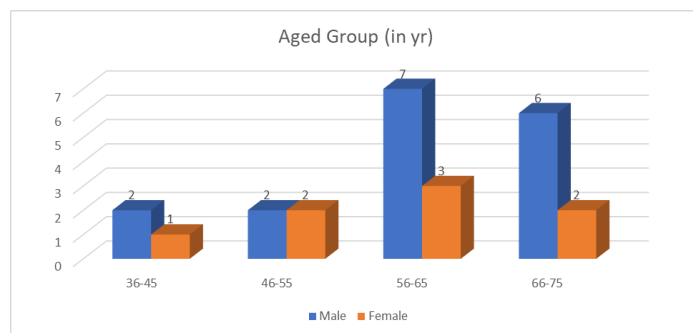


Figure 2: Prevalence of Newly Diagnosed T2DM in different aged group

Table and Figure no. 2, indicate the prevalence of newly diagnosed T2DM according to different aged group and found that the prevalence to detect T2DM in both male and female category are much higher in aged group between 56 to 65 years and the number of newly patients is 7 and 3 for male and female patients respectively. The number of patients between 36 to 45 years is 2 and 1 respectively for male and female patients. Equal number of patients for the aged group between 46 to 55 years and the number is 2. The prevalence of newly diagnosed T2DM between 66 to 75 years aged group is 6 and 2 for male and female respectively.

Table 3: Prevalence according to different region

Region	Male	Female
Urban	12	6
Rural	5	2

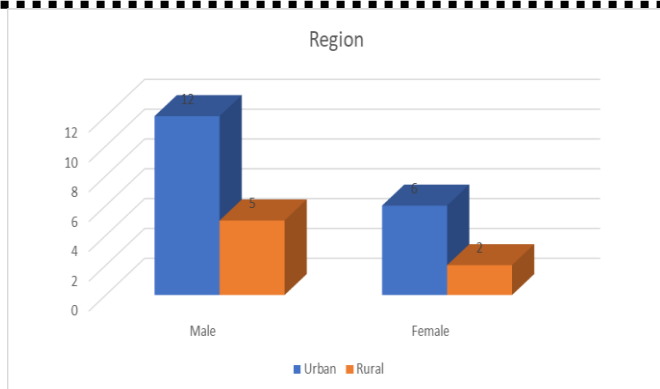


Figure 3: Prevalence of Newly Diagnosed T2DM in different Region

Table and Figure no. 3, show the prevalence of newly diagnosed T2DM in different region either Urban or Rural and the prevalence is higher in Urban region and the number of patients are 12 and 5 for male patients and female patients respectively in urban and rural region respectively whereas in case rural region, the number of male and female patients are 6 and 2 respectively and total of 8 patients are comes under rural region.

### Discussion

The prevalence of male and female patients is 17 and 8 respectively and the percentage is 68% and 32% respectively. So, the prevalence of newly diagnosed T2DM is higher in female than male and study conducted by **Stogianni A et al in 2023**<sup>(21)</sup> closely resemble with our study and study conducted by **Hariri S. in 2021**<sup>(22)</sup> opposed with our study. The prevalence of Newly Diagnosed T2DM is higher between 54 to 65 years old patients and the number 10. But our study is opposed with the study conducted by **Srikant Bellary et al. in 2021**<sup>(23)</sup> and closely resemble with the study conducted by **Alan C Tsai and Shu-Hui Leu in 2015**<sup>(24)</sup>. Also, in the present study, the prevalence of Newly Diagnosed T2DM is higher in Urban region as compared with Rural region and our study also resemble with **Tara P. McAlexander et al. in 2002**<sup>(25)</sup> and **Schwartz B.S. et al. in 2021**<sup>(26)</sup>.

### Conclusion

Diabetes Mellitus type 2 is one of common metabolic syndrome and in present time due to change in the lifestyle of the peoples, the prevalence of T2DM also increased and if appropriate steps do not be taken in right time, then the prevalence will increase. So, proper steps should be taken to detect the newly patients and educate them to control Diabetes mellitus by taking balance diet and do proper exercise.

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