PREVALENCE OF DIABESITY IN ADULTS : A CROSS SECTIONAL STUDY IN RURAL FIELD PRACTICE AREA OF A TERTIARY HEALTH CARE CENTRE

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Abstract

"Diabetes" is a metabolic disorder where the body either produces little insulin or becomes progressively resistant to its action which consequently results in high blood sugar. The excessive accumulation of body fat referred to as obese results from a long-lasting imbalance between food intake and energy outlay. It is a complex condition affecting nearly all persons of diverse ages and socioeconomic groups with serious psychological problems. The prevalence of diabetes and obesity in India was 10% and 13%, respectively. This study was conducted to determine prevalence of Diabesity in rural field practice area of tertiary health care centre.

A Cross sectional study was conducted for a period of six month (July 2023 to December 2023) in rural field practice area of tertiary health care centre. 192 patients of rural field practice area of tertiary health care centre. Appropriate statistical test is used.

In the present study all the participants were in the age group of 18-60 years. 9.89% patients were having FBS more than 125mg/dL are classified as Diabetics and 10.41% of the patients were obese having BMI more than 25 Kg/m2. 5.2% patients were having Diabesity means having both Diabetes and Obesity.

The association of diabesity with other NCDs has increased multimorbidity, Preventive services, including lifestyle changes at an early age are necessary. Rather than focusing on individual conditions, an approach to multimorbidity is required. Further studies are warranted to investigate the trends in diabesity

Keywords: Diabetes, Obesity, Diabesity

INTRODUCTION:

"Diabetes" is a metabolic disorder, where the body either produces little insulin or becomes progressively resistant to its action, consequently resulting in a high blood sugar. The excessive accumulation of body fat referred to as obese results from a long-lasting imbalance between food intake and energy outlay. It is a complex condition affecting nearly all persons of diverse

ages and socioeconomic groups with serious psychological problems.(1) The prevalence of diabetes and obesity in India was 10% and 13%, respectively, in 2017(2) It is estimated that global diabetes-related medical expenditure will be at least 2.1 trillion US dollars by 2030 . The complications of diabetes seriously affect people's health, such as diabetic retinopathy, cardiovascular accidents, and diabetic nephropathy . Given the economic burden and health hazards brought by diabetes, the screening of high-risk populations for diabetes should be emphasized for early intervention. Therefore, it is vital to have some available and straightforward indicators to assess the risk of diabetes(3) Adipose tissue is not only an energy storage area, but also acts as an endocrine and immune organ. Excessive accumulation of adipose tissue could affect metabolic function. Obesity has been considered a risk factor for DM(3)

Method:

Study Design: A community based cross sectional Study

Study Setting: Adults residing in rural Field Practice area of Tertiary

Health care centre.

Sample size: Sample size was calculated as below n= z2 pq/d2

Where, Z is level of significance, (which is 1.96 at 95% CI)

 The prevalence of diabetes and obesity in India was 10% and 13%,

respectively, in 2017(2)

So,

p= Prevalence=13%

q=1-p,

d = allowable error 0.05.

so, the calculation comes to

n=1.96* 1.96*0.13*0.87/ 0.05*0.05 = 174 + 10% Non respondent trait

= 192

=192 Sample size

Inclusion criteria: 1. All Adults of age group above 18yrs – 60yrs

Exclusion criteria: 1. Individuals not willing to participate in study.

                          2. People Below 18yrs of Age and more than 60yrs of age

Operational definition: Diabesity: Diabesity refers to the complicated conditions of diabetes and obesity occurring simultaneously within a single individual.(1)

Person having FBS more than 125mg/dL are classified as Diabetics.(4)

Person having BMI more than 25 Kg/m2 are Obese. (5)

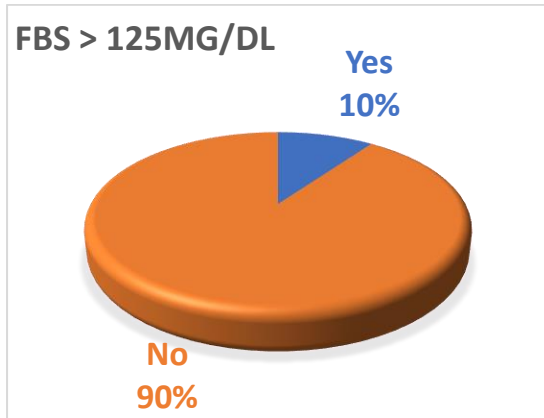Person having Diabesity means having both Diabetes and Obesity. (1)

Result:

In the present study all the participants were in the age group of 18-60 years.

9.89% patients were having FBS more than 125mg/dL (19 patients)
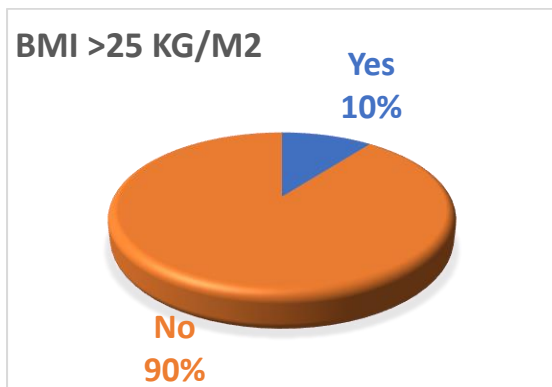
FBS more than 125mg/dL are classified as Diabetics [4]

Figure1: Prevalence of Diabetes

FBS > 125MG/DL — Yes 10%, No 90%
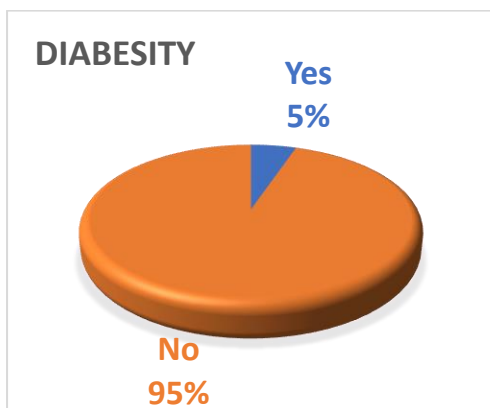
10.41% of the patients were having BMI more than 25 Kg/m2. (20 patients)

BMI > 25Kg/m2 are classified as obese according to WHO Asia- BMI Classification. [5]

Figure 2 : Prevalence of Obesity

BMI >25 KG/M2 — Yes 10%, No 90%

5.2% patients were having Diabesity means having both Diabetes and Obesity. (10 patients)

Figure 3 : Prevalence of Diabesity

DIABESITY — Yes 5%, No 95%

Discussion:

In a cross sectional study done by Rehman T et al in Urban Puducherry of Prevalence and Factors Influencing Diabesity among Persons with Type 2 Diabetes Mellitus in 2020 A total of 151 eligible T2DM patients were included. Of 151patients, 66.9%(n=101, 95% CI: 58.8–74.3) had diabesity. (2)

The burden of obesity among T2DM patients was comparable to the finding in another study by Mohan where it was 54.1%. (6)

Conclusion:

The association of diabesity with other NCDs has increased multimorbidity,

Preventive services, including lifestyle changes at an early age are necessary.

Rather than focusing on individual conditions, an approach to multimorbidity is required.

Further studies are warranted to investigate the trends in diabesity like relation with other co morbidities like hypertension

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