

The Prevalence of Gestational Diabetes Mellitus In Sheikh Zayed Hospital, Rahim Yar Khan.

Dr. Muhammad Ramzan Aziz ; Dr. Aiman Shahid ; Dr. Noman Ali ; Dr. Altaf Hussain.

¹Department of Anesthesia, Sheikh Zayed Medical College , Rahim Yar Khan, Pakistan.

²⁻³⁻⁴ Department of Anesthesia Sheikh Zayed Hospital Rahim Yar Khan, University of Health Sciences Lahore, Pakistan.

Email: ramxan574@gmail.com

Abstract:

BACKGROUND: The gestational diabetes mellitus is poorly understood due to socioeconomic dynamics among pregnant ladies of Rahim yar khan. **OBJECTIVE:** To assess the prevalence of gestational diabetes mellitus among pregnant ladies of Rahim yar khan admitted to gynecological wards of sheikh zayed hospital Rahim yar khan. **STUDY DESIGN:** Cross sectional study. **DURATION:** The data was collected in four months from 03-02-2017 to 05-06-2017'. **SETTING:** Data was collected in labour room and wards of gynecology of sheikh zayed hospital Rahim yar khan. **METHOD:** A sample of 160 patients pregnant women who were admitted in labour room and gynecological wards of SZH RYK. A predesigned questionnaire was filled by interviewing these women having variables of Name, Age, Education, Residence, Working status, BMI, Family monthly income, Total number of children, Total number of normal deliveries, Number of C-sections, Knowledge of GDM, Family history of GDM, Any addiction and any previous maternal and fetal complications. **RESULTS:** Total number of women delivered was 160. the frequency of

patients diagnosed as GDM was 15.6%. The frequency of GDM in this study was significantly associated with late age group (72.8%), illiteracy in mothers (53.8%), from rural areas (57.5%), housewives (80%), cousin marriages (72.5%), BMI above 25 (86%), addiction (smoking 12.5%), not diagnosed as GDM in previous pregnancies (94%). **CONCLUSION:** It was concluded that early detection, constant supervision, delivery with intensive intrapartum monitoring, facilities of expert neonatologists, proper health care education to pregnant mothers can result in good maternal and fetal outcome without much morbidity. **KEY WORDS:** Gestational Diabetes Mellitus, Multiparous, Obesity

INTRODUCTION

Gestational Diabetes Mellitus refers to any degree of glucose intolerance with the onset of first recognition during pregnancy. Gestational Diabetes Mellitus poses a threat to the adverse maternal & prenatal outcome as a result of maternal hyperglycemia. Women with GDM have a high risk of progression to type 2 Diabetes Mellitus.¹

• **Gestational Diabetes Mellitus:**

“Gestational diabetes is a condition in which a women develops high blood sugar level during pregnancy without having a diabetes mellitus”
OR

“Gestational Diabetes Mellitus is a metabolic disorder defined as glucose intolerance with onset of first recognition during pregnancy”.

The WHO 1999 criteria defined Gestational Diabetes Mellitus by fasting plasma glucose > 7mmol/L (126 mg/dl) or 2 hour plasma glucose level after a 75g OGTT (oral glucose tolerance test > 7.8 mmol/ (140mg/dl).

• **Effects of diabetes on pregnancy:**

- Increased risk of miscarriage
- Risk of congenital malformation
- Risk of macrosomia
- Increased risk of pre-eclampsia
- Increased risk of stillbirth
- Increased risk of infection.

• **Maternal and fetal complications of diabetes:**

- Congenital abnormality- 3 fold increased risk of cardiac and neural tube defects.
- Fetal macrosomia
- Accelerated growth patterns.
- Late stillbirth

- Poly hydramnios
- Risk of pre-eclampsia
- Diabetic retinopathy
- Increased incidence of infections
- Severe hyperglycemia or hypoglycemia.
- Diabetes keto-acidosis
- Risk of increased operative delivery.

Risk factors of Gestational Diabetes Mellitus:

- Older age
- Pre pregnancy obesity
- Past history of Gestational Diabetes Mellitus
- Excessive weight gain in pregnancy
- General low level of healthy physical activity
- Unhealthiest diet
- Low B12 or folate-imbalance
- Increased pollution
- Family history of diabetes
- Illiteracy
- **Older age:-**

1% Gestational Diabetes Mellitus in < 20 years of age

13% Gestational Diabetes Mellitus in >44 years of age

• **S/S of Gestational Diabetes Mellitus:**

- Polyuria
- Polydipsia
- Polyphagia
- Weight loss.

• **Objective**

The present study was designed to determine the frequency of pregnant mothers with Gestational Diabetes Mellitus in Sheikh Zayed Hospital, Rahim Yar Khan.

4. Methodology

1. Study Design:

Cross sectional.

2. Study Setting:

Labour room and wards of Gynaecology Sheikh Zayed Hospital RYK.

3. Study Subject:

Prevalence of Gestational Diabetes Mellitus in pregnant ladies in Sheikh Zayed Hospital RYK.

4. Sample Size:

A total of 160 pregnant ladies were included in this study.

5. Sampling Technique:

Convenient sampling technique was used.

6. Duration:

Data was collected in 4 months from 03-02-17 to 05-06-17.

7. Inclusion Criteria:

Pregnant ladies and post partum mothers (just undergone delivery) were included.

8. Exclusion Criteria:

- Absolutely Non Co-operative
- Mothers giving incomplete data

9. Data Collection Method:

The data was collected from pregnant ladies at post partum mothers (just undergone delivery) in labor room and wards of gynecology Sheikh Zayed Hospital Rahim Yar Khan, using a predesigned and pretested questionnaire. All the data was collected after getting verbal consent from the subjects.

10. Data Analysis:

Data was entered and analyzed by using Computer programme (SPSS version 16). The frequencies and percentages were calculated on categorial variables. Means and standard deviation were calculated on numerical variables.

• Results

Table No. 1

Distribution of pregnant women according to the age.

| Measures of dispersion | Age of the Pregnant Mother |
|------------------------|----------------------------|
| Mean | 27.54 |
| Median | 26.00 |
| Mode | 25 |
| Std. Deviation | 5.569 |
| | |

This table shows that mean age is 27.54 , mode is 25 while median is 26.0

Chart No. 1:

Distribution of pregnant women according to their education status.

This shows 53.8 percent of women were illiterate while 7.5 have education upto middle class.

Education of pregnant Mother

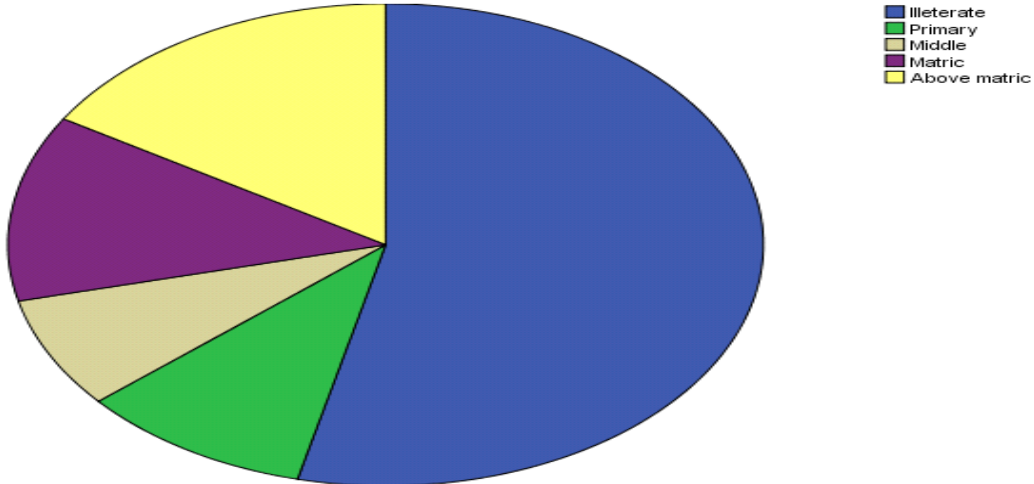


Table No. 2:

Distribution of pregnant mothers according to their BMI

| Measures of dispersion | BMI of pregnant mother |
|------------------------|------------------------|
| Mean | 22.170 |
| Median | 21.500 |
| Mode | 25.0 |
| Std. Deviation | 3.9748 |
| | |
| | |

This table shows that mean of BMI of pregnant women is 22.170, median is 21.500 while mode is 25.0

Chart No. 2:

Distribution of pregnant mothers according to family monthly income.

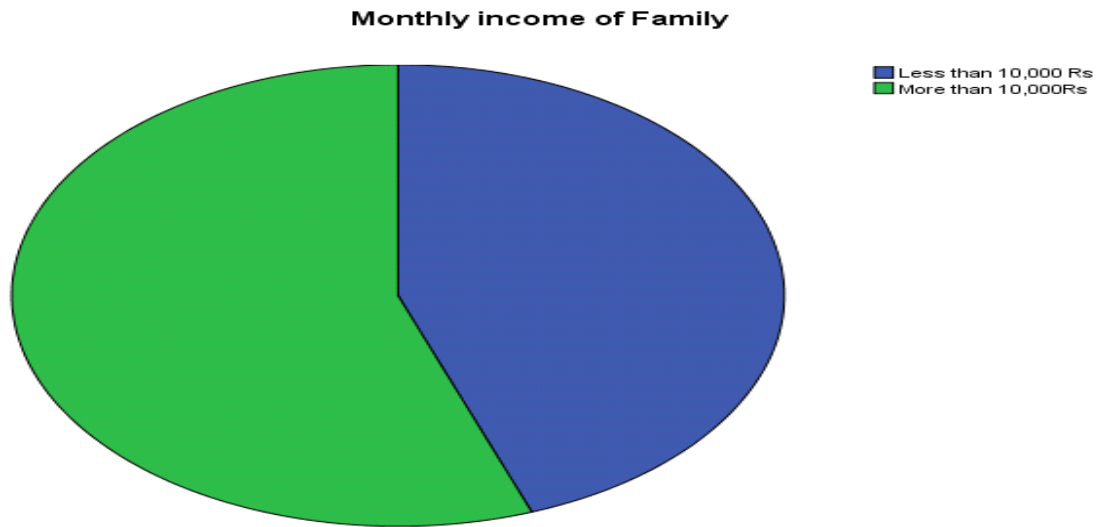


Table No. 3:

Distribution of pregnant women who are diagnosed with GDM

| GDM diagnosed in pregnant women | | Frequency | Percentage |
|---------------------------------|--------------|------------|--------------|
| | No | 135 | 84.4 |
| | Yes | 25 | 15.6 |
| | Total | 160 | 100.0 |

This table shows that 15.6 percent of pregnant women were diagnosed with GDM .

Table No. 4:

Distribution of pregnant mothers with Fetal complications in infants

| Fetal complication present | Frequency | Percentage |
|----------------------------|------------|--------------|
| Still birth | 16 | 10.0 |
| Preterm baby | 12 | 7.5 |
| Macrosomic | 1 | 0.6 |
| Normal | 131 | 81.9 |
| Total | 160 | 100.0 |

This table shows that 82 percent infants have no complications.

Discussion:

In this study frequency of GDM is 25(15.6%) and of Non-GDM is 135(84.4%) as compared to Bahawalpur study where prevalence of GDM among 124 studied women was 14.51% in 2010. It is worth mentioning that a study for Louisiana reported 29% incidence in GDM in 2009. Our study shows the similar results.

According to study conducted at Khyber teaching hospital Peshawar, more GDM cases were seen in women of age greater than 35. The obesity was the risk factor for development of GDM as in Khyber teaching hospital Peshawar showed that overweight and obese women are more prone to develop GDM.

In Bahawalpur study also were large number of patients with GDM were obese. i.e 98.8% are prevalent with GDM. An Indian study showed that history of polycystic ovarian disease is closely related to GDM. In another of Khyber teaching hospital, half of patients were with PCOD. But our study described those which would we left as undiagnosed ovarian disease.

The study was done at Bakai Medical University showed majority of the patients having previous history of GDM. In Khyber teaching hospital, a study proved that patient having previous history of GDM are 2 fold more at a risk of future GDM. This factor is non-relevant to our study i.e. 94.4% with no previous GDM. Family history of type 2 Diabetes Mellitus was also an associated risk factor as study at Khyber teaching hospital.

The study done at Bakai Medical university showed large

number of patients with GDM were having family history of Diabetes Mellitus type 2. In this study, approximately half of the patients were having family history of Diabetes Mellitus type 2 .

Other studies have previously found indications of a low social class and poverty being associated with increased risk of developing GDM. In this study, 51.9% of those were illiterate and 58.8% of those who live in rural areas. The study conducted to analyze various parameter causing and affecting GDM reached to various factors such as consanguineous marriage were mainly associated with GDM 58% of patients were associated with cousin marriage.

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