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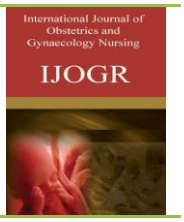

PRE PREGNANCY BMI AND RISK OF GESTATIONAL DIABETES

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ABSTRACT

Gestational Diabetes Mellitus (GDM) is defined as carbohydrate intolerance of variable severity, with onset or first recognition during the present pregnancy[1.] The prevalence of GDM ranges from 1 to 16% with India attributing upto 16%. Hence India can even be called the diabetic capital of the world with recent increase in the incidence level. To assess the pre pregnant BMI and risk of development of gestational diabetes. A retrospective hospital based study was carried out in the department of obstetrics & gynecology of Yenepoya medical college; a tertiary health care referral centre in Mangalore, Karnataka over a period of 5 years. Pregnant women. Pregnant women receiving steroids in any form, Multiple gestation, Known medical disorder**.** 500 pregnant women who met all the parameters in the inclusion and exclusion criteria were taken into consideration in this study.Mean age was 29±4.47 years. Mean pre-pregnancy BMI was 23.2±4.6 kg/m^2.GDM patients – 26%.GDM patients with BMI>24.9 – 24%. Overweight, obesity was the common GDM risk factors in this study.

INTRODUCTION

Gestational Diabetes Mellitus (GDM) is defined as carbohydrate intolerance of variable severity, with onset or first recognition during the present pregnancy [1]. The prevalence of GDM ranges from 1 to 16% with India attributing upto 16%. Hence India can even be called the diabetic capital of the world with recent increase in the incidence level [2].

OBJECTIVE

To assess the pre pregnant BMI and risk of development of gestational diabetes

MATERIAL & METHODS

A retrospective hospital based study was carried out in the department of obstetrics & gynecology of Yenepoya medical college; a tertiary health care referral centre in Mangalore, Karnataka over a period of 5 years from January 2009 to December 2013.

- Antenatal data obtained from the patients' medical records and hospital database included: age, parity, BMI, glucose evaluation for gestational diabetes
- GDM diagnose criteria - fasting blood sugar >95 mg/dL and the postprandial blood sugar levels >140 mg/dL or hba1c more than 6.5 [3-6].

Inclusion criteria

- pregnant women

Exclusion criteria

- Pregnant women receiving steroids in any form
- Multiple gestation
- Known medical disorder
- All selected outcome variables were recorded on a pre tested pro forma in the hospital & the data analyzed Statistical Package for Social Sciences Version 16. was used for analysis. Descriptive statistics was used to express the results.

RESULTS

- 500 pregnant women who met all the parameters in the inclusion and exclusion criteria were taken into consideration in this study
- Mean age was 29±4.47 years
- Mean pre-pregnancy BMI was 23.2±4.6 kg/m^2
- GDM patients – 26%
- GDM patients with BMI>24.9 – 24%
- Among the risk factors , family history of diabetes was found to be 15%
- HbA1c > 6.5% - 22.60%
- pre-pregnancy overweight 31.60%,
- multigravida 81.10%
- Pre-pregnancy obesity 16.30% .
- In our study, patients were reported to have co-existing complications like gestational hypertension (10.50%), polyhydraminos (8.4%) and PROM (7.40%) in patients with GDM
- The incidence of LSCS and delivery was 46.40 and 38.90 respectively, where operative interferrance was on the higher side

These values are indicative of uncontrolled diabetes, which in our study was mainly due to poor patient compliance reflecting poor educational back up

DISCUSSIONS

- GDM has been recognized as a clinical entity for the past 50 years.The purpose of screening, treatment and management of GDM is to prevent the adverse maternal outcome such as prom, hypertension, macrosomia, shoulder dystocia etc.
- The findings of the present study conform to those of other studies reported in the literature ,that high BMI is a risk factor for GDM
- In this study group GDM patients were older with mean age of 29+/- 4.47 years. Similar study done by sheshiah et al from south India, Tamil Nadu reported 25 years as a risk factor for GDM(2).
- In our study, 43.2% had family history of diabetes which was statistically comparable to 41.4% study done by patil et al in Indian subcontinent.
- In our study, a significant proportion with GDM were overweight(31.60%) and obese (16.3%). Similar results were reported by kalra et from Rajasthan having 66.67% over weight and 18.18% obese. (1)

CONCLUSION

Overweight, obesity were the common GDM risk factors in this study, In our study it was more commonly seen in multigravidas. Lifestyle interventions to reduce BMIs can lower the incidence of gdm among the population as BMI is a modifiable risk factor, GDM is associated with increased rates of adverse maternal outcomes.

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CONFLICT OF INTEREST:
The authors declare that they have no conflict of interest.

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