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Original Research Article

Demographic Profile of Women with Gestational Diabetes Mellitus

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Abstract:

Background and Objectives: The magnitude of GDM varies according to the country andthe ethical groups. The life style, educational status, familyhistory of diabetes and other factors play an important role. Based on National Diabetes Data Group criteria, the percentage of women who develop GDM was 4%. However, the fourth international workshop conference onGestational Diabetes showed that the percentage ofpregnant women developing GDM increased to 7% resulting in more than 200,000 cases annually. The present study aimed to study the demographic profile women with gestational diabetes mellitus.

Methods: This hospital based cross-sectional study Department of Obstetrics and Gynaecology, DMCH Laheriasarai, Darbhanga.

Results: Mean age of patients was 27.68 ± 4.4 Yrs. Most of the study subjects in GDM group (54.7%) were Hindu. Study subjects in GDM group were almost equally from rural (50.7%). Most of the study subjects in both GDM group (88%) were housewives. Habit of smoking was found in only 6.7% females in GDM group. Habit of alcohol was found in 4% females in GDM group. Family history of diabetes was seen more in females with GDM (17.3%).

Conclusion: This study concluded that the socio demographic factors influence the occurrence of GDM.

Keywords: GDM, Age, Gravida.

Introduction

Gestational diabetes mellitus (GDM) is defined as anydegree of glucose intolerance with the onset or first time recognized during pregnancy with or without remission after the end of pregnancy. [1] Women with gestational diabetes are characterized to havea relatively diminished insulin secretion and pregnancy induced insulin resistance primarily present in the skeletal muscle tissue. Normal pregnancy is considered to be a diabetogenic state characterized by exaggerated amount of insulin release, associated with decreased sensitivity to insulin at cellular levels. These changes are results of the progressive rise in the levels of estrogen, progesterone, human placental lactogen, cortisol and prolactin as pregnancy advances. Many of these hormones are insulin antagonists which causes insulin resistance in the mother and cause abnormal glucose tolerance in some women rendering them to develop gestational diabetes. [2] The magnitude of GDM varies according to the country andthe ethical groups. The life style, educational status, family history of diabetes and other factors play an important role.Based on National Diabetes Data Group criteria, the percentage of women who develop GDM was 4%. However, the fourth international workshop conference onGestational Diabetes showed that the percentage ofpregnant women developing GDM increased to 7% resulting in more than 200,000 cases annually. [3] Maternal complications in GDM include increased incidence of asymptomatic bacteriuria, urinary tract infections, increased incidence of pre- eclampsia,polyhydramnios which may increase the incidence of preterm labor, placental abruption and post-partum hemorrhage and increased risk of operative delivery. The various fetal complications include intra uterine death, macrosomia, shoulder dystocia, increase incidence of respiratory distress syndrome, hypoglycemia, hypocalcemia, congenital malformations, polycythemia, hyperbilirubinemia. Long term complications includeobesity, development of type 2 diabetes mellitus during childhood, impaired motor functions and higher rates of inattention deficit syndrome. [4]

Material and Methods

Hospital based descriptive study. Cross Sectional Study. This study will be conducted Department of Obstetrics and Gynaecology, at Darbhanga medical college and Hospital Laheriasarai, Darbhanga, Bihar.

Study Duration is One Year, till desired sample size was achieved and compilation of two month for data collection and analysis for study.

Study Participants – All Pregnant Females in Gestational age of 16 to 32 weeks presenting to the Ante natal clinic of Department of Obstetrics and Gynaecology, DMCH, Laheriasarai, Darbhanga.

Inclusion Criteria

- Pregnant women in gestational age 16 to 32 weeks withviable pregnancy.
- Pregnant Women willing to participate in this study.

Exclusion Criteria

Pregnant women with

- Iron deficiency anaemia.
- Previous History of Diabetes Mellitus (Type 1 and type 2diabetes).
- H/o medical disorders of pregnancy.

Results

Table 1: Demographic profile of patients

Mean age	**27.68 ± 4.4 Yrs**
Hindu : Muslim	41 : 34
Rural : Urban	38 : 37
Illiterate : literate	22 : 53
House wife : working	66 : 9
Smoking	5(6.70%)
Alcoholic	3(4.00%)
Family history	13(17.30%)

Mean age of patients was 27.68 ± 4.4 Yrs. Most of the study subjects in GDM group (54.7%) were Hindu. Study subjects in GDM group were almost equally from rural (50.7%).Most of the study subjects in both GDM group (88%) were housewives. Habit of smoking was found in only 6.7% females in GDM group. Habit of alcohol was found in 4% females in GDM group. Family history of diabetes was seen more in females with GDM (17.3%).

Discussion

Gestational Diabetes Mellitus includes women, whose glucose tolerance, is normal after pregnancy and those with type 2 diabetes with persistent glucose intolerance developed later. The GDM incidence is nowadays increasing due to life style changes, increased obesity and metabolic syndrome prevalence. The trend towards modern life style, older age at child birth, changing eating habits and reduced physical activity has now lead to increased GDM incidence. GDM arises because there is relative insulin deficiency (insulin resistance) due to hormone production by the placenta. [5] Other risk factors for GDM include older EG age, overweight or obesity, excessive weight gain during pregnancy, a family history of diabetes and a history of stillbirth or giving birth to an infant with a congenital abnormality. [6] GDM usually exists as a transient disorder during pregnancy and resolves once the pregnancy ends. However, pregnant women with hyperglycaemia are at higher risk of developing GDM in subsequent pregnancies and about half of women with a history of GDM will develop type II Diabetes within five to ten years after delivery. GDM also results in various complications in the babies including a higher lifetime risk of obesity, type 2 diabetes and other non-communicable diseases (NCD). Identification of hyperglycaemia in pregnancy combined with good control of blood glucose during pregnancy can reduce these risks. Simple initiatives including healthy diet, gentle exercise and blood glucose monitoring coupled with insulin therapy are the mainstay in management of hyperglycemia in pregnancy. In a country like India, the population of GDMis diverse, spread across the urban, sub-urban and rural areas. There are several challenges faced by the rural and suburban population in accessing optimal health care service. This review explores the various challenges and issues pertaining to GDM management in the rural and suburban areas of India. [7]

Conclusion

This study concluded that the socio demographic factorsinfluence the occurrence of GDM.

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