

## Prevalence of Gestational Diabetes Mellitus and associated risk factors in pregnant women

**Aarushi Gupta**

Vardhman Mahavir Medical College & Safdarjung Hospital, New Delhi.

Email : guptaarushi27@gmail.com

### Abstract

### Introduction

Gestational diabetes mellitus (GDM) is a condition in which women without previously diagnosed diabetes exhibit high blood glucose levels during pregnancy. It is a common medical condition complicating pregnancy. Lifestyle changes are leading to higher prevalence of obesity in women. There is a rise in metabolic disorders and diabetes in the general population, which may reflect on the prevalence of gestational diabetes. GDM affects 3-10% of pregnancies depending on the population studied. In India its occurrence is high and can reach up to 17%. During pregnancy, there is an increase in oestrogen and progesterone leading to B cell hyperplasia and increased insulin secretion. Human Placental Lactogen stimulates lipolysis and decreases insulin sensitivity. Catalano et al showed that there is a 44% decline in insulin sensitivity in normal pregnancy as compared to 56% decline in GDM pregnancies. GDM results in increased maternal and foetal morbidity. Macrosomia and delivery of infants weighing greater than 4000gm occur 10 times more often in diabetic women [6]. Frequency of Neonatal Hypoglycaemia in GDM cases is 18% to 49%. Women with GDM are at increased risk for pre-eclampsia and caesarean delivery. Gestational diabetes has few symptoms and screening during pregnancy is done by Glucose Challenge Test. Risk factors for gestational diabetes are a previous history of gestational diabetes, family history of diabetes, maternal age >35 years, obesity (risk factor increases by factor of 2.1, 3.6 and 8.1), previous history of big baby, poor obstetric history, polycystic ovarian syndrome[15], UTIs, cigarette smoking and multiple pregnancies. There are very few studies on the prevalence of Gestational Diabetes and analysis of risk factors in the Indian population. This study is planned

for identifying important risk factors in pregnant women which may help in reduction of foetal and maternal morbidity. Aims & Objectives: To determine the prevalence of GDM, prevalence of its risk factors and association between GDM and different risk factors in pregnant women. Methodology: A cross sectional study was done in Safdarjung Hospital Antenatal OPD on 500 women in 3rd trimester of pregnancy for 2 months. Women who were known case of Diabetes Mellitus were excluded from the study. A woman was considered to have GDM if she meets 1 of the following criteria:

1) If two or more venous blood glucose values on the 100-g oral glucose tolerance test done during pregnancy meets or exceeds the thresholds recommended by the National Diabetes Data Group:

Fasting	1 hour
2 hour	3 hour NDDG
105 mg/dl	190 mg/dl
165 mg/dl	145 mg/dl2)

If a fasting blood sugar value exceeded 126 mg/dl or a random blood sugar value exceeded 200 mg/dl. 3) If highly abnormal blood glucose values were observed in women who were not known to have pre-pregnancy diabetes and who required treatment with insulin or diet. Prevalence of Gestational Diabetes was calculated accordingly. All the women screened were asked to fill a consent form and Risk factor questionnaire. Information was also obtained from the obstetrical unit logbook, medical records databases, and hospital charts. Data was assembled in Microsoft Excel and Data analysis was done by SPSS 12. Ethical Clearance certificate has already been obtained. Results: A prevalence of 3% of GDM was seen in pregnant women. A strong association was also calculated between family history of diabetes, abnormal BMI, previous history of spontaneous abortions, previous history of Macrosomia, history of burning micturation during pregnancy, history of decreased physical activity and occurrence of GDM.