

Gestational diabetes mellitus is defined as glucose intolerance of any degree with onset or first recognition during pregnancy. MoHFW Government of India recommends universal screening policy. The potency of HbA1C level in the first trimester as a novel predictor of gestational diabetes mellitus in pregnant patients. Thus it is necessary to integrate the use of HbA1C level screening as a part of antenatal care in the first trimester of pregnancy. This helps in preventing long term sequelae of GDM and adverse pregnancy as well as perinatal outcome.

AIM & OBJECTIVES

The objective of this study is to investigate :-

The sensitivity, specificity, positive predictive value and negative predictive value of HbA1c test value in first trimester of pregnancy to predict GDM.

STUDY DESIGN : Prospective Cohort Study

PLACE OF STUDY: Dept. of O & G, SCB Medical College & Hospital.

DURATION OF STUDY : 1 years (from JUNE 2023 to JUNE 2024).

STUDY POPULATION : All the pregnant women of gestational less than 12 weeks (first trimester) who attended antenatal care in OPD and labor room in dept. of Obstetrics and Gynecology, SCB MEDICAL COLLEGE AND HOSPITAL.

METHOD: Venous blood of all antenatal women for fasting blood glucose, HbA1c and all routine investigation hb, DC, TLC in first trimester are taken. They were enrolled and followed till delivery for outcome. Subject will undergo screening test for GDM by DIPSI at gestational age 24-28 weeks and if negative then finally around 32-34 weeks. All the patients were given 75 gm anhydrous glucose in 250-300 ml of water irrespective of time of previous meal and venous sample will be drawn after two hours. Result will be interpreted by using DIPSI criteria. The recommended cut-off value of this test will be ≥ 140 mg/dl.

RESULT: The cut off point first trimester HbA1C for predicting GDM is 5.75. Its sensitivity is 67.7% and specificity is 97.7%. The mother whose first trimester HbA1C value is > 5.75 have (82%) chance of developing GDM whereas only 40% chance of developing GDM in mother who have HbA1C < 5.75 . The chance of developing GDM in mothers having HbA1C value in between (4.5-5.0), (5.1-5.5), (5.6-6.0) and (6.1-6.4) are 8%, 22%, 57%, 90% respectively.

CONCLUSION: Prediction of GDM in first trimester by HbA1C is a very much useful method. By this we can prevent many adverse maternal and fetal outcome of GDM by early intervention like diet control and exercise.

REFERENCE: [ACOG practice Bulletin No. 190 Summary: gestational diabetes mellitus. . 2018, 131:406-8.](#)

[American Diabetes Association: Classification and diagnosis of diabetes: standards of medical care in diabetes-2020. Diabetes Care. 2020, 43:S14-31.](#)