

Insulin resistance in pregnancy

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Abstract

Pregnancy is a state of insulin resistance making the pregnant woman prone to developing gestational diabetes. Gestational diabetes in pregnancy is associated with increased maternal and perinatal complications. The present study was planned to study the status of insulin resistance in pregnancy with or without gestational diabetes.

Methods: A prospective cohort study was conducted in Department of Obstetrics and Gynecology, King George Medical University, Lucknow, India over a period of one year. Pregnant women attending the antenatal clinic before 20 weeks of pregnancy were enrolled after taking informed consent. All subjects underwent a detailed history and examination. Test for gestational diabetes (GDM) was done as per Indian protocol by testing for plasma glucose 2 hours after a 75g glucose load irrespective of fasting status and the next day a fasting plasma glucose and fasting serum insulin sample was drawn. Insulin resistance was calculated using the HOMA IR index and a value ≥ 2 was taken to denote insulin resistance. Cut off value of 140mg% was used to diagnose GDM. Both tests i.e fasting plasma glucose and fasting serum insulin were repeated between 24 to 28 weeks. Test for gestational diabetes was also repeated if the test at the first occasion was normal.

Results: Total of 136 women were enrolled and followed up till delivery. Out of these 71 women (52.2%) were diagnosed to have GDM. Insulin resistance was identified in 38 (27.9%) cases. Insulin resistance was more common in women with higher body mass index ($p=0.001$). Significant correlation of insulin resistance was found with GDM, preeclampsia, neonatal hypoglycemia and neonatal respiratory distress syndrome.

Conclusions: Prevalence of GDM in the study population was very high partly due to the overall higher incidence in Indians but mainly due to our institution being a tertiary referral centre and antenatal women attending the hospital are high risk cases referred from large parts of North India and even Nepal. Insulin resistance was found to be associated with obstetric complications like preeclampsia, neonatal hypoglycemia and neonatal respiratory distress syndrome but larger studies are required to confirm these results.

Biography:

Dr Anjoo Agarwal is working as Professor in Department of Obstetrics and Gynecology, King George Medical University Lucknow India. She has more than hundred publications in

various reputed journals and has also contributed chapters to text books. She has organized CMEs and workshops and conferences. She has received award of appreciation as a distinguished teacher. She has also been awarded the FIGO fellowship.

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