Summary and Conclusions
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Maternal hyperglycemia leads to various maternal and neonatal complications, and development of maternal hyperglycemia during antenatal period can in some cases result in development of frank diabetes mellitus subsequently.

The present study "effect of abnormal gestational glucose tolerance, excepting frank diabetes in pregnancy in newborn", highlights various neonatal complications in infants born to mothers with abnormal glucose tolerance. Mothers with preconceptional diabetes mellitus were excluded from the study.

Study was carried out over 100 antenatal women in their third trimester of pregnancy and infants born to these mothers. These antenatal women were subjected to 3 hour-100 gm glucose tolerance test. On the basis of results of OGTT, these women were categorized into 2 major groups - Normal GTT and abnormal GTT. Mothers with abnormal GTT were further classified into 3 categories - i) Gestational diabetes, ii) Isolated abnormality of blood glucose and; iii) Impaired gestational glucose tolerance.

Out of the total 100 women, 14 were having gestational diabetes, 12 had isolated abnormality blood glucose and 12 had impaired gestational glucose tolerance, while 62 women had normal GTT and they served as controls.
Mothers with abnormal GTT were subjected to 3 hour GTT at weekly interval till termination of pregnancy.

The major risk factor found with higher frequency in mothers with abnormal glucose tolerance were - previous history of perinatal loss and age over 25 years. Most of the mothers with abnormal glucose tolerance were managed with dietary modifications, only 4 required insulin therapy.

Following neonatal complications were found with higher frequencies in infants born to mothers with abnormal gestational glucose tolerance, as compared with infants of mothers with normal GTT. Macrosomia 16.6% - 44.6%, congenital malformations 0-14.4%, prematurity 0-16.6%, RDS 8.1 - 14.4%, hypoglycemia 0-7.2%, hyperbilirubinemia 14.4 - 16.6% perinatal mortality 0-21.2%. The major cause of perinatal mortality was found to be congenital malformations. The statistically significantly higher complications were only macrosomia and congenital malformations.

The following conclusions were drawn from present study -

1. Incidence of various abnormalities of blood glucose in Bundelkhand region's as follows:
   Gestational diabetes mellitus  14% ,
   Isolated abnormality of blood glucose  12% ,
   Impaired gestational glucose tolerance  12%
2. Advancing maternal age and past history of perinatal loss is associated with increased risk of development of abnormal gestational glucose tolerance.

3. Neonatal complications including perinatal mortality are higher in infants born to mothers with abnormal gestational glucose tolerance, as compared with infants of mothers with normal gestational glucose tolerance.