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RESEARCH ARTICLE

MATERNAL AND FETAL OUTCOME IN GESTATIONAL DIABETES MELLITUS

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ABSTRACT

Objective: To determine the maternal and fetal outcomes in mother with gestational diabetes mellitus attending antenatal clinics in VIMS, Pawapuri. Design – This was a cohort study. Participants – (ninety) 90 mothers with gestational ages between 24 – 32 weeks were recruited from may 20 15 to Feb 2016. They were followed up to the time of delivery. The WHO criteria for the diagnosis of gestational diabetes was used. Thirty mothers with a 2 hours' postprandial capillary blood sugar more than 140mg /dl were the expose group & mothers with <140mg/dl were the unexposed group. Blood Sugar was measured by one touch glucometer. **Outcome variables:** Sociodemographic characteristics maternal complications mode of delivery & the fetal outcomes. **Results:** The mean ages of both groups were similar 28.6 years various 27.5 years. Both had BMI more than 26. The mothers of GDM were four times more likely to have hypertensive disease (v= 0.04) & nine times more likely to have a vaginal candidiasis. The indications of caesarean section in mothers with GDM were two times more likely to be due to big babies and obstructedlabors. The babies for Mothers. With GDM were more likely to be macrocosmic, still birth and have shoulder dystocia than those of normal mothers. **Conclusion:** Gestation diabetes mellitus is associated with adverse maternal and fetal outcomes. There is need to routinely screen mothers for gestation diabetes.

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INTRODUCTION

Gestational diabetes mellitus is the development of symptoms and signs of diabetes mellitus during pregnancy and the glucose in tolerance reverts to normal during puerperium. Depending on the type of population and diagnostic criteria used, gestational diabetes is said to complication 1- 16% of all pregnancy. Increasing maternal age, obesity, multiparty and a family history of diabetes are all risk factor for gestation diabetes 6. The WHO expert group recommended that all pregnant women or those with risk factors should be screened, that is Blood glucose 2hrs after giving 75gm of oral glucose load. This is recommended both for screening & diagnosis 8. Pregnancy related morbidity & mortality in gestational diabetes is less than that of overt diabetes mellitus however if not treated it is significantly higher than for non diabetic mother 9, 10. There remains a small increase in unexplained stillbirth in mothers with gestational diabetes. There is increased caesarean section rate because of macrocosmic babies & obstructed labor and also associated birth traumas if thus babies care delivered vaginally 11. Glucose tolerance returns to normal in majority of women with gestational diabetes but one third so two thirds of women well have glucose intolerance. In subsequent pregnancy.

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All women with gestational diabetes should have their glucose tolerance reassessed after delivery, and should receive advice and counselling regarding future pregnancies 14.

MATERIALS AND METHODS

This was a cohort study done in VIMS Pawapuri .60 pregnancy women who has come to attend antenatal clinics from may 2015 to Fe b 2016 at VIMS Pawapuri.

Inclusion Criteria: Women with singleton pregnancy and gestationalage. Bet 24 – 32Wks.

Exclusion Criteria: Women with diabetes mellitus co existing with other medical condition.

Sampling Procedure: The WHO criteria for diagnosis of diabetes using a 2hrs 75gm oral glucose load and 2hrs post prandial plasma glucose. Value greater than or equal to 140mg/dl was used Blood samples were taken using finger pricks after cleaning the site using 70% alcohol antiseptic. the result was recorded as fasting blood sugar. Each mother was then given 75gm glucose dissolved in 200ml water & the results were recorded after 2hrs and the cases where mothers whole blood glucose label across >140mg/dl Both fasting and 2hrs post 75gm oral glucose were interpreted using WHO 15. The mothers with 2hrs hyperglycemia less than 200mg/dl were

given dietary advice and those with hyperglycemia > 200 mg/dl were started on insulin after conformation of result with diabetic physicians. The mothers were followed up & encouraged to deliver in Hospital.

RESULT

Socio demo graphic characteristics of mother the age range for mothers with gestational diabetes was 18 – 39yrs with mean age of 28.6yrs.

Table 1. The controls similar with mean age of 27.5yrs

Characteristics	Mothers with GDM	Controls
Age gap 10-19	1	3
20-29	13.8	33
30-39	16	23
40-49	0	1

Table 2. Pregnancy complications associated with Gestational diabetes

Complications	Gest diabetes	Controls
Hypertension	5(16.7%)	4(6.7%)
Vaginal Candidiasis	6(20%)	2(3.3%)
Polyhydromnios	2(6.7%)	0
Preterm labors	1(3.7%)	0

Table 3. Indication of caesarean Section in mothers with gestational diabetes

Indication	Gestational diabetes %	Controls %
Big baby	2(6.67 %)	2(3.33 %)
Fetal distress	1(3.33 %)	4(6.67 %)
Obst – labor	2(6.67 %)	2(3.33 %)
Poor Obst history	1(3.33 %)	……..

Table 4. Present Pregnant fetal outcome

Complication	Proportion of mothers whose babies affected in Gestational diab mothers	Controls
Normal	12((40%)	54((95%)
Macrosomia	11(36.7%)	3(5%)
Still birth	5(16%)	2(3.3%)
Shoulder dystocia	7(23.3%)	1(1.7%)
Conj abnormality	0 %	1(1.7%)

Mode of delivery in present Pregnancy: Babies born to mothers with gestational diabetes were more likely to macrosomic, stillborn & have shoulder dystocia than those of normal women ($p<0.0001$). Complications of hypoglycemia, congenital anomaly of baby &cot death over infrequent in both groups. All mothers with gestational diabetes at postnatal visit were screened for diabetes mellitus & were found to be normal.

DISCUSSION

Pregnancy is a diabetogenic state manifested by insulin resistance and hyperglycemia.

The age gp at risk of getting gestational diabetes in this study was bet 20 – 39 yrs in 96.8% of case. Mothers with gestational diabetes mellitus were 4 times more likely to develop hypertension and nine time more likely to develop vaginal candiasis than the controls. The mode of deliver was similar in both groups studies but other studies have observed increased operative deliveries such as caesarean sect 11,20 in this study the indication for C.S in mothers with gestationaldiabetic were twice likely to be for big babies & obstructed labour than in controls.

Conclusion

Gestational diabetes mellitus is prevalent in mothers attending antenatal clinics at VIMS and is associated with increased risk of Pregnancy and delivery complication. There is need to screen mothers who are at risk of develop gestational. Diabetes.

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