

Fetomaternal Outcome in Gestational Diabetes Mellitus

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Abstract:

Background: Gestational diabetes mellitus means hyperglycemia in pregnancy. It is “carbohydrate intolerance with onset or first recognition during pregnancy”. In recent times there is increasing prevalence of pregnancies complicated by gestational diabetes mellitus. The prevalence is higher in the Indian population 16.5%

Aims & Objectives: To study the maternal and fetal outcome in gestational diabetes mellitus

Materials & Methods: 40 patients diagnosed with GDM were enrolled in this study after giving 75g GCT as per DIPSI guidelines. All these women were followed till delivery with fetal outcome also.

Results: In this study, 25 patients were between 21-25yrs. LSCS is increased(50%) due to maternal and fetal complication associated with GDM. 11 Preterm delivery with 1 IUD, 2 still birth and 6 babies were more than 4kg.

Conclusion: GDM is associated with both maternal and fetal complication. So early detection and prompt management of this condition can reduce the short and long term complication in both mother and neonate.

Key words: LSCS, PRETERM, PROM, IUD, DIPSI

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I. Introduction

GDM is carbohydrate intolerance with onset or first recognition during pregnancy[1]. The world wide prevalence ranges from 11-14%. The prevalence is slightly higher in indian population 16.5%[2]. As Indians are inherently more vulnerable to get affected to our hereditary and genetic make up and ethnicity. The International Diabetic Federation found that one out of seven births in India is affected by GDM. A large group of women also progress to become overt diabetics in future affecting their quality of life by causing morbidity in various forms. The first study on metabolism of carbohydrates in pregnancy was done in Boston in 1954 by using 50g in 1 hour screening test [3]. Later O’Sullivan criteria were derived and name as “Gestational Diabetes Mellitus” [4]. Peter Dab showed the prognosis of women with GDM in previous pregnancy with respect to subsequent and also development of diabetes of of PREDICTIVE factors for development overt diabetes in these women [5].

II. Material & Methods

This study was done in the Dept of OBG at Dr B R Ambedkar Medical College & Hospital, Bengaluru, between June 2019 to May 2020, were 40 pregnant women enrolled in this study after giving then 75g of glucose by DIPSI criteria and 2hr blood sample taken more than 140mg/dl as GDM and are followed till delivery after taking into all inclusion and exclusion criteria

Inclusion criteria:

1. Patients diagnosed as GDM after 75g of OGCT by DIPSI method
2. Singleton pregnancy

Exclusion criteria:

1. Patients with overt diabetes
2. Chronic hypertension
3. Twins pregnancy
4. Any other medical disorder during pregnancy

III. Observations

In this study 40 pregnant women enrolled in the study after taking all criteria into account that they blood report is more than 140mg/dl.

Age	No of cases	percent
21-25yr	25	62.5
26-30yr	10	25.1
31-35yr	05	12.5
Total	40	100

Table No 1. Age wise distribution of cases

Parity	No of cases	Percent
Primi	10	25
G2	11	27.5
G3	13	32.5
G4 & more	06	15
Total	40	100

Table No 2. Parity wise distribution of cases

Mode of delivery	No of cases	Percent
Vaginal	15	37.5
Lscs	20	50
Instrumental	05	12.5
Total	40	100

Table No 3. Mode of delivery

Gestational Age	No of case	Percent
16-20 week	06	15
21-24 week	10	25
25-28 week	09	22.5
29-34 week	11	27.5
35-38 week	04	10
Total	40	100

Table No 4. Gestational age at diagnosis

Treatment	No of case	Percent
Diet plan	09	22.5
Insulin	31	77.5

Table No 5. Treatment plan

Preeclampsia	No of case	Percent
Absent	23	57.5
Mild	07	17.5
Severe	10	25

Table No 6. GDM with Preeclampsia

Poly Hydramnios	No of case	Percent
No	17	42.5
Yes	23	57.5

Table No 7. GDM with Polyhydramnios

Preterm	No of case	Percent
No	29	72.5
Yes	11	27.5

Table No 8. GDM with Preterm

Fetal outcome	No of case	Percent
IUD	01	2.5
Still birth	02	5
Live birth	33	82.5
Neonatal death	04	10

Table No 9. Fetal Outcome

Birth weight	No of cases	Percent
<2.5 kg	04	10
2.5-3.5	21	52.5
>3.6kg	15	37.5
Total	40	100

Table No 10. Birth weight of fetus

IV. Discussion

GDM has been diagnosed as a clinical entity for the past 50 yrs. Early studies have strongly indicated that untreated carbohydrate intolerance during pregnancy is associated with maternal mortality and morbidity. So the purpose of screening for GDM is to prevent still birth, congenital anomalies, preeclampsia, IUD and to decrease the incidence of macrosomic babies and thereby reducing the rate of LSCS so that perinatal mortality is also reduced.

In this study, about 25(62.5%) women were with GDM at 21-25 years as compared other study were its was 27 years and also pre eclampsia was 42.5% in this study compare to other were it was 26%[6]

In this study, about 13(32.5%) women were multipara when compared to primi with 10 (25%) case.

In this study, 20(50%) women had LSCS when compared to other study who had 49%[7]

The rate of pregnancy complications in this study was similar with GDM patients treated with diet alone and those who received additional insulin alongside the diet[8,9]

The occurrence of big babies, is not necessarily attributable to abnormal glycemic control. Maternal age, parity, ethnicity and obesity along with fetal hyperglycemic are possible contributory risk factors for excessive fetal growth.[10,11]

In this study, 57.5% was incidence of hydramnions when compared to other study which is 17.1%[12]

V. Conclusion

GDM is always associated with complication in both mother and fetus. So all antenatal women should be offered a simple Glucose challenge test . Once diagnosed with GDM proper glycemic control either by insulin or diet plan to achieve good pregnancy outcome

Early detection and prompt management of this condition can reduce the short term and long term complications in both mother and neonate.

All patients with GDM, defined by universally accepted criteria, should be randomized to a diabetic diet and intervention with insulin or metformin, followed by self monitoring of glucose at standardized times, with standardized cutoff glucose levels for intervention.

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