

# Effects of Gestational Diabetes in Pregnancy

Dr. Sowmya Sri. K<sup>1</sup>, Dr. Pramod Kumar Korani Ratnam<sup>2</sup>

<sup>1</sup>Resident, Department of Obstetrics and Gynaecology, Osmania Medical College, Hyderabad, Telangana, India

<sup>2</sup>Assistant Professor, Department of General Medicine, Deccan College of Medical Sciences

**Abstract:** *Gestational Diabetes Mellitus (GDM) is the most common medical complication and metabolic disorder of pregnancy. Proper recognition and intervention can reduce the well described GDM associated perinatal morbidity and mortality.*

**Keywords:** Gestational Diabetes Mellitus, pregnancy, glucose intolerance

## 1. Materials and Methods

The study was conducted in the Department of Obstetrics and Gynecology at Osmania Medical College between December 2013 and December 2015. 100 pregnant women attending the antenatal clinic at Osmania Medical College between 24 to 32 weeks of pregnancy were included in the study.

## 2. Introduction

Gestational diabetes mellitus (GDM) is defined as any degree of glucose intolerance with onset or first recognition during pregnancy<sup>(1)</sup>. This definition applies irrespective of the form of treatment or whether the diabetes persists after the pregnancy. It is the most common medical complication and metabolic disorder of pregnancy<sup>(2)</sup>. A small proportion of cases of denovo diabetes are found to persist after pregnancy. Most of these are type II DM. However, rarely Type I DM will arise during pregnancy simply as a matter of coincidence.<sup>(3)</sup> Approximately 4% of all pregnancies are complicated by GDM while the prevalence may range from 1–14% of all pregnancies depending on the population and the method of screening<sup>(4,5)</sup>.

## 3. Discussion

There is no worldwide agreement on the best way to screen for GDM. Previously, universal screening at 24-28 weeks of gestation with a 50-g oral glucose challenge test was recommended. Women with a 1-hour glucose level > 140 mg/dl were referred for a diagnostic OGTT.<sup>(6)</sup> However, Naylor et al.<sup>(7)</sup> developed a selective screening approach with data collected from 3,131 pregnant women. They randomly selected data from half of the women and categorized them into three groups (low-, intermediate-, and high-risk) and found that this selective screening approach resulted in a 34.6% reduction in the number of screening tests performed, without a decrease in the detection rate of GDM. The ADA now recommends selective screening for GDM.<sup>(8,9)</sup> According to the ADA guidelines, patients should be screened for risk factors for GDM at their initial visit. A woman is considered high risk if she has one or more of the following: marked obesity, personal history of GDM, glucose intolerance or glycosuria, or a strong family history of type 2 diabetes. If a woman is high risk, glucose testing should be done as soon as possible. If the initial testing is negative, the woman should be retested between 24 to 28

weeks of gestation. If she is intermediate risk, she should undergo glucose testing at 24 to 28 weeks. If she is low risk, the ADA does not recommend screening for GDM.<sup>(8-10)</sup> An additional possible risk factor for GDM not mentioned in the list above is a history of polycystic ovary syndrome.<sup>(11,12)</sup>

## 4. Results and Observations

A prospective study was carried out on 100 pregnant women of 24-32 weeks of gestation during the time period of December 2013 to December 2015.

### Age Distribution

Frequent distribution is noted among the age group of 26-30 years.

Age in years	Number
15-20	5
21-25	41
26-30	47
31-35	7
Total	100

### Parity

Majority of the study population were primigravida.

Gravida	Percentage
Primigravida	64
Gravida 2	27
Gravida 3 and above	9
Total	100

Risk factors and effects of GDM on fetus;

These are the risk factors and the effects of GDM on fetus with risk factor like obesity and effects such as abortions and polyhydramnios being more prevalent.

Risk factors	Percentage
Abortions	16
Obesity	11
Family history	9
Prematurity	12
IUD	5
IUGR	7
Polyhydramnios	14
Anomalies	3
Big baby	6

Number of screen positive as per 50 gm GCT and 75 gm OGCT for screening for GDM

Screen for GDM	50 gm GCT	75 gm OGCT
	No	No
Screen +	6	10
Screen -	94	90

6% of the study population were screened positive by 50g GCT. In our study population 10% were diagnosed as GDM as per the WHO diagnostic criteria.

## 5. Summary and Conclusion

100 pregnant attending the antenatal clinic in our hospital between 24-32 weeks of gestation were studied. This prospective study was done to know the incidence of GDM in our setup and to find the feasibility of a approach in the screening and diagnosis of GDM.

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