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Incidence of LGA in Infant of Diabetic Mother.

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ABSTRACT

Large for Gestational Age as defined by birth weight more than 90th percentile is one of the recognized complications of neonates born to diabetic mothers. We undertook a study to find the incidence of LGA in neonates born to diabetic mothers and to analyze the various factors influencing the incidence of LGA in neonates born to diabetic mothers. 100 neonates born to diabetic mothers were the subject of our study and LGA was defined by Fenton Chart. In our study we found that the incidence LGA in neonates born to diabetic mothers is 21%. The incidence of LGA was found to be higher in mothers with pre gestational diabetes mellitus and when gestational Diabetes mellitus was diagnosed in first trimester. Also the LGA neonates were found to be more prone for birth injuries and metabolic complications.

Keywords: LGA, Infant of diabetic mother.

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INTRODUCTION

Infants born to mothers with diabetes have been at significantly greater risk for perinatal morbidity and mortality. Multiple neonatal sequelae, including abnormalities of growth, glucose and calcium metabolism, hematologic status, cardiorespiratory function, bilirubin metabolism, and congenital anomalies are common in infants of diabetic mothers. Large for Gestational age babies as defined by birth weight more than 90th percentile is common in infants of diabetic mothers. The LGA babies born to diabetic mothers are more prone for complications compared to LGA babies born to non-diabetic mothers [1-4].

REVIEW OF LITERATURE

Srichumchit S et al in a study of 1350 pregnancies with GDM and 20421 low-risk pregnancies found a significantly higher incidence of macrosomia in GDM [5].

Cordero L et al in a retrospective cohort study found a significantly higher incidence of neonatal complication in macrosomic infants of Diabetic mothers [1].

A K Shefali et al in their study, Pregnancy outcomes in pre-gestational and gestational diabetic women in comparison to non-diabetic women, found that the prevalence of 'large babies' was higher in GDM (27.6%) and pre gestational diabetes mellitus (PGDM) (19.2%) [6].

AIMS AND OBJECTIVES

To find the incidence of LGA in Infant of Diabetic mother

MATERIALS AND METHODS

STUDY DESIGN

The study is a Cross Sectional Study

STUDY PLACE

The study was conducted in the Department of Obstetrics and Pediatrics, Sree Balaji Medical College and Hospital

SAMPLE SIZE

The sample size is 100.

INCLUSION CRITERIA

Newborn born to Diabetic Mothers

EXCLUSION CRITERIA

Newborn born to Non – Diabetic Mothers

STUDY METHOD

100 newborn born to mothers with Diabetes Mellitus (Pregestational and Gestational) at Sree Balaji Medical College were the subject of the study. Detailed maternal medical history was taken and new born examination done. LGA was determined by Fenton Chart.

OBSERVATION AND RESULTS

Among the 100 Antenatal mothers with Diabetes studied, 80% were Gestational Diabetes and 20% were Pregestational diabetes.

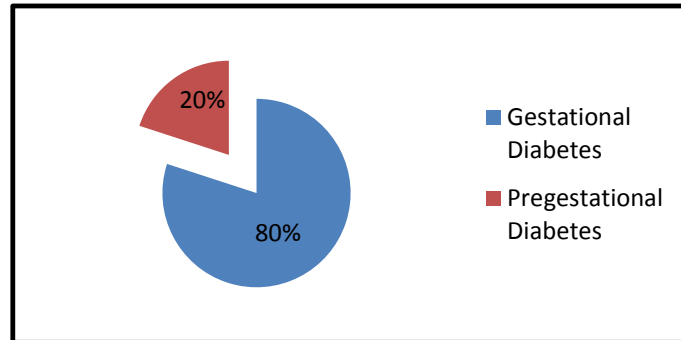


Figure 1: Types of Diabetes

Of the 80 Gestational Diabetic Antenatal mothers studied, 40 were diagnosed in the first trimester, 20 in the second trimester and 20 in the third trimester.

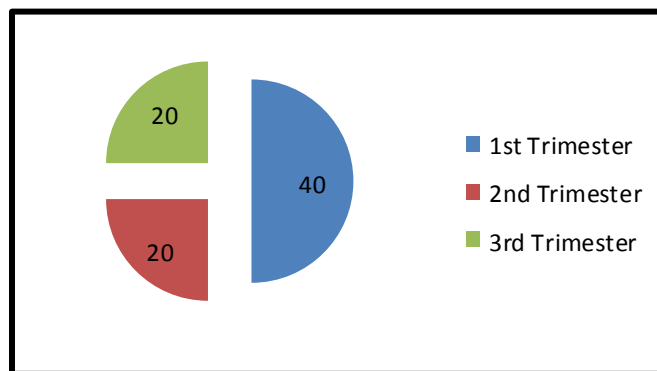


Figure 2: Diagnosis of GDM in each trimester

Of the 100 newborn studies, 25 were of SGA, 54 AGA and 21 were LGA

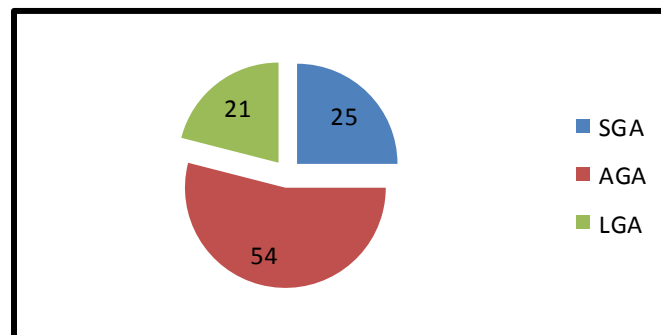


Figure 3: Incidence of LGA

Of the 21 LGA babies, 15 were born to mothers with Gestational Diabetes and 6 were born to mothers with Pregestational Diabetes

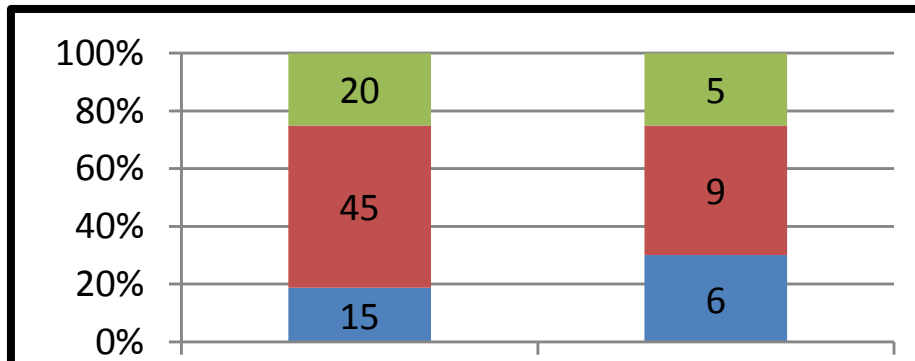


Figure 4: Distribution of LGA babies

Of the 15 LGA babies born to Gestational Diabetes mothers, 10 were born to mothers diagnosed in first trimester, 3 were born to mothers diagnosed in second trimester and 2 were born to mothers diagnosed in third trimester.

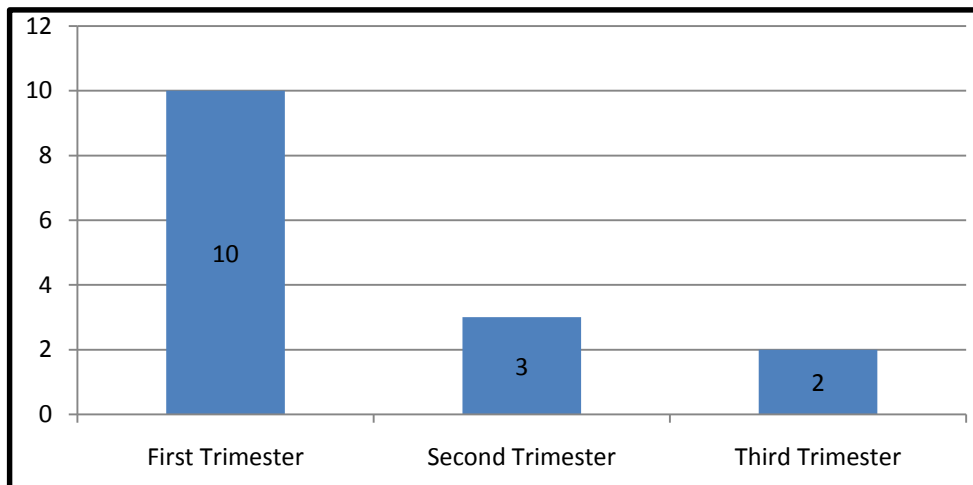


Figure 5: LGA in Gestational Diabetes and Trimester of Diagnosis

Of the 21 LGA babies, 10 were born to mothers on meal plan, 5 to mothers on Oral hypoglycemic agents and 6 to mothers on insulin.

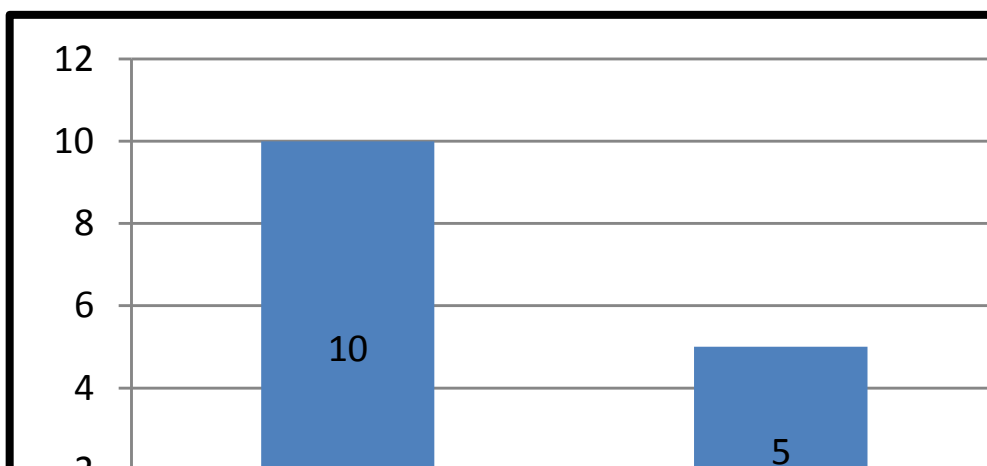


Figure 6: LGA and Mode of treatment

Of the 21 LGA babies, 2 developed shoulder dystocia, 10 developed hypoglycemia and 12 developed neonatal jaundice.

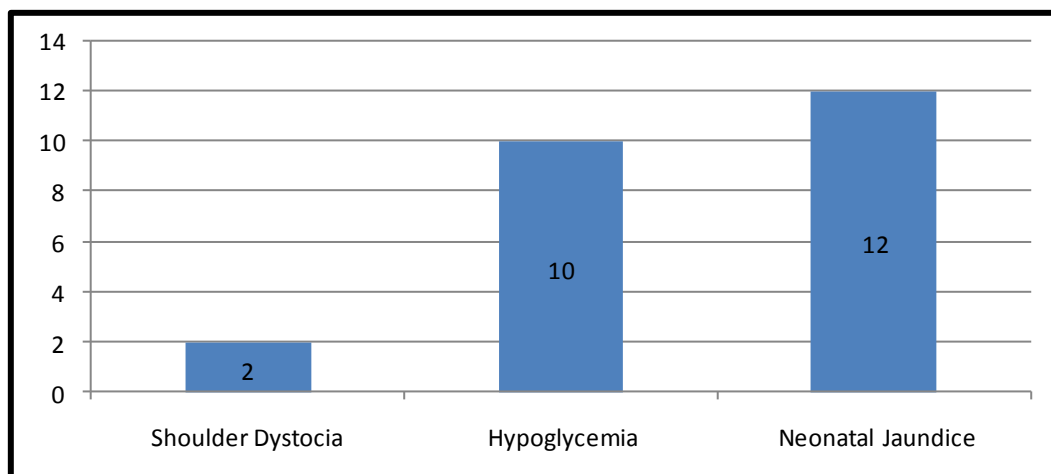


Figure 6: LGA and Related Complications

DISCUSSION

Large for Gestational age babies as defined by birth weight more than 90th percentile is considered a common complication of infants born to diabetic mothers. In our study we found that the incidence LGA in infants born to diabetic mothers is 21%. The incidence of LGA is higher in mothers with pre gestational diabetes mellitus and when gestational Diabetes mellitus was diagnosed in first trimester. Also the LGA neonates were found to be more prone for birth injuries and metabolic complications.

CONCLUSION AND RECOMMENDATION

It is concluded that there is a high incidence of LGA is high in babies born to diabetic mothers and they are more prone for birth injuries and metabolic complications. Hence early diagnosis and aggressive glycemic control is the key to prevention of increased birth weight and related complications.

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