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Research Article

IUGR AND IT'S CORRELATION WITH NEONATAL OUTCOME

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A R T I C L E I N F O

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A B S T R A C T

Background: Intrauterine growth restriction (IUGR) in developing countries is a major health problem. Maternal risk factors play a huge role in causing IUGR, many of which are preventable or modifiable.

Aim: To find out the risk factors and outcomes of IUGR infants in pregnant women coming for delivery in a developing country.

Method: A cross sectional observational study was conducted at the department of Obstetrics and Gynaecology, Chalmeda Anand Rao Medical College and hospital. IUGR was diagnosed clinically by a lag of 4 weeks between actual gestational age and uterine fundal height. Total of 62 pregnant women with IUGR coming for delivery were included. Information regarding occupation, gestational age, maternal risk factors, mode of delivery and neonatal outcome were recorded on predesigned proforma. Mothers were followed up till delivery and neonates were followed up till discharge or death.

Results: Out of 62 clinically diagnosed pregnancies with IUGR, Doppler studies were abnormal in 3.17 % cases, NST test being nonreactive in 9.52% cases 9.52% cases were delivered preterm due to various reasons, 4.76%of intrauterine of intrauterine growth restriction was seen in postdated pregnancy 34.92% cases had babies with b.wt 2kg and below at birth Nearly 50.79% cases have been delivered by LSCS for various indications like abnormal doppler /non stress test, preeclampsia and failed induction 1.5% cases had poor Apgar,14.28% cases had meconium stained liquor but 98.41% had good Apgar

Conclusion: Early diagnosis with serial clinical and ultrasound examinations, timely hospitalization, active management, antepartum fetal surveillance with non stress test and fetal doppler can allow expectant managment of expected pregnancies.

INTRODUCTION

Intrauterine growth restriction (IUGR) is defined as birth weight less than 10th centile for gestational age [1]. IUGR is noted in 10-15% of pregnant women [2]. Estimation of fetal weight is heavily influenced by paternal race, fetal gender, genetic influences, maternal Body Mass Index (BMI) and altitude [3,4]. Maternal factors such as low socioeconomic status, under nutrition,anaemia,chronic illness, teenage pregnancies [5], short interpregnancy interval [6], previous IUGR births [7-12] and inadequate prenatal care predispose to complications from fetal growth restriction [3,4]. Comprehensive management of these conditions may prevent perinatal complications. IUGR or small for gestational age (SGA) are at increased risk of perinatal morbidity and mortality this study also have higher rates of physical, neurological and mental impairment than babies with appropriate growth (AGA).

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IUGR is observed in 3-7% of the newborns and approximately thirty million babies worldwide suffer from IUGR every year. Nearly 75% of all detected babies are born in Asia [4]. Limited data is available in the North East part of India. The aim of this study is to determine various risk factors and outcomes of babies diagnosed to have IUGR.

MATERIALS AND METHODS

The study was conducted at the department of Obstetrics and Gynaecology, Chalmeda Anand Rao Medical College and Hospital. A total of 62 patients were included in the study who presented to the labour room for delivery with pregnancies between 28-42 weeks and found to have IUGR. We used the clinical criteria of a lag of 4 weeks between the actual gestational age and uterine height to diagnose IUGR. The gestational age was determined using a combination of last menstrual period and 1st trimester ultrasound. The reason for choosing a clinical method of cases was that ultrasound machines are not widely available in the remote areas. Weight of baby was measured at the time of birth and detailed examination of each baby was carried out by a paediatrician. Babies were categorised as AGA, SGA and IUGR based on

Growth Chart. The babies were followed up till the day of discharge. Informed consent was taken from participants enrolled in the study. A predesigned proforma was filled for each mother at the time of admission to collect information about various risk factors responsible for IUGR. Postnatal weight and height were used to calculate body mass index (BMI). Gestational hypertension, anaemia, gestational diabetes were identified based on previous records or investigations done during admission.

Inclusion criteria: singleton pregnancy, any baby without any congenital anamolies

Exclusion criteria: multiple pregnancy, irregular menses, menstrual date were excluded

Results were tabulated and computed. For qualitative variables Chisquare test was used and t-test for quantitative variables and $p<0.05$ was considered significant.

RESULTS

Growth restriction in late onset that is beyond 28 weeks is seen in96% cases Doppler studies were abnormal in 3.17 %cases ,NST test being nonreactive in 9.52% cases 9.52% cases were delivered preterm due to various reasons , 4.76%of intrauterine of intrauterine growth restriction was seen in postdated pregnancy34.92% cases had babies with b.wt 2kg and below at birth Nearly 50.79% cases have been delivered by LSCS for various indications like abnormal doppler /non stress test ,preeclampsia and failed induction 1.5% cases had poor Apgar ,14.28% cases had meconium stained liquor but 98.41% had good Apgar indicating that proper antenatal fetal surviilleance and timely intervention can prevent fetal hypoxia.

Figure 1 : Relation of parity and IUGR

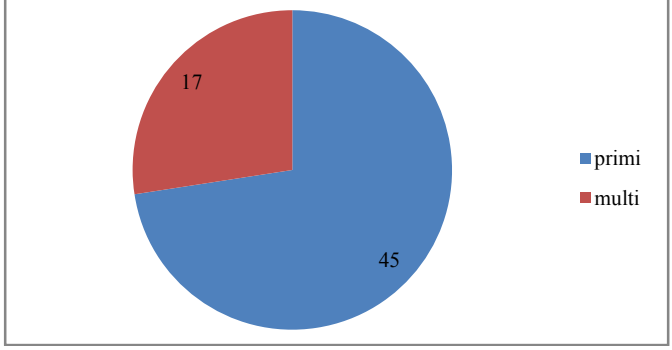


Figure 2: Relation between IUGR and liquor status.

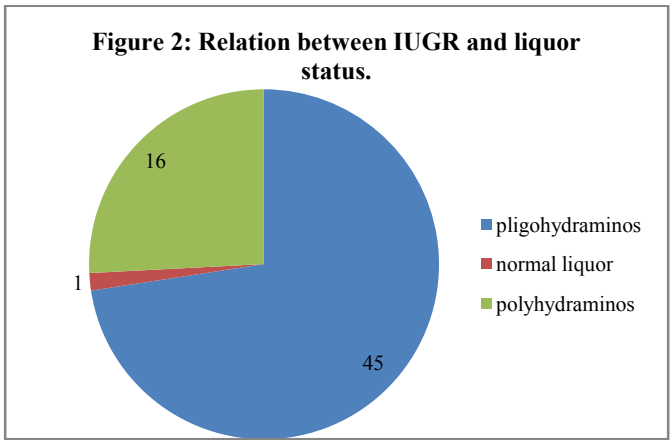


Fig 3 : Mode of delivery

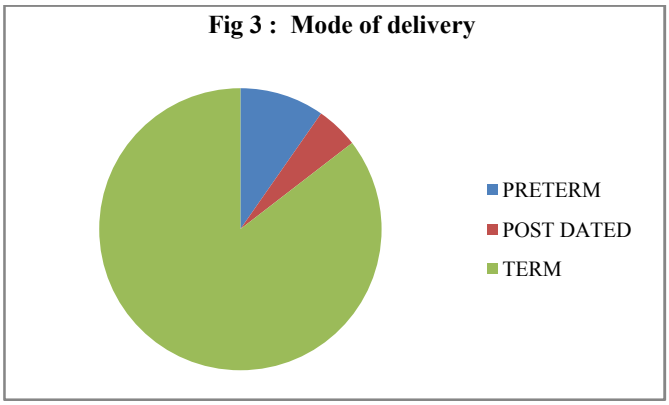
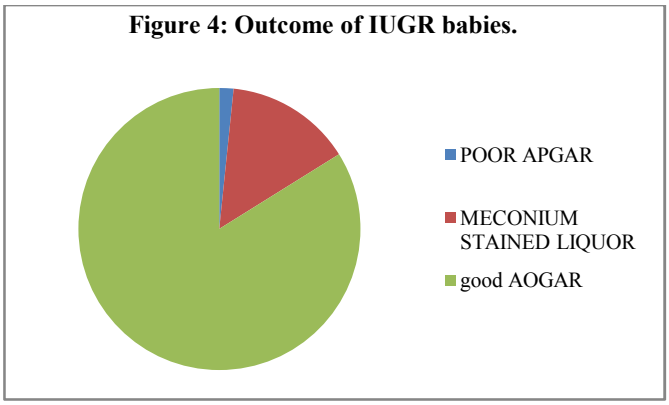


Figure 4: Outcome of IUGR babies.



DISCUSSION

Intrauterine growth restriction is common cause of perinatal mortality and morbidity in developing countries. Hence the present study has been done for the analysizing the neonatal outcoke of these cases of intrauterine growth restriction .Incidence of 16.8%cases of low birth weight babies in some studies in India, which coincides with our present study analysis. According to perinatal mortality survey (1958) infants with low birth weight born after full duration or prolonges pregnancy had higher mortality than those weighing more than 2.5kg at the same gestational ages hrnce careful monitoring of fetal condition with judicious continuation /termination of pregnancy is crucial In this study nearly 1/3rd (30.16%) cases of pregnant women had delivered around 34 - 36 weeks and nearly 1⁄2 (50.76%) cases had delivered between 37-40 weeks . The mode of termination of pregnancy either by caeserian section or normal delivery had equal chances of good foetal outcome in the present study. Timely termination of pregnancies with appropriate method leads to the birth of the uncompromised babies with good APGAR scorw (98.41%) cases. Mode of delivery may not alter the fetal outcome. Ideally IUGR cases should go long term follow up but due to practical reasons it is not possible we cannot follow up the cases.

CONCLUSION

Early diagnosis with serial clinical and ultrasound examinations, timely hospitalization, active management ,antepartum fetal surveillance with non stress test and fetal doppler can allow expectant managment of expected pregnancies.

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Conflicts Of Interest

There are no conflicts of interest

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