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Study Of Maternal And Perinatal Outcome In Twin Pregnancy In A Tertiary Care Hospital

[1]Dr. Bhavika Goswami, [2]Dr. Seema Patel, [3]Dr. R. Krishna Suraj, [4]Dr Harsh Dhorajia
[1]Assistant Professor, Department of Obstetrics and Gynaecology, GMERS Medical College, Sola, Ahmedabad
[2]Professor (H.G), Department of Obstetrics and Gynaecology, GMERS Medical College, Sola, Ahmedabad
[3]3rd Year Resident, Department of Obstetrics and Gynaecology, GMERS Medical College, Sola, Ahmedabad
[4]Senior Resident, Department of Obstetrics and Gynaecology, Shantabaa Medical College, Amreli, Gujarat.

Corresponding Author

Dr. R. Krishna Suraj
3rd Year Resident, Department of Obstetrics and Gynaecology, GMERS Medical College, Sola, Ahmedabad

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ABSTRACT

Introduction: Study of maternal and perinatal outcome in twin pregnancy admitted and delivered in GMCH. Evaluation of problems of multi-fetal pregnancy in relation to maternal age, birth weight, method of delivery etc.
Method: This is a retrospective study that has been done in GMCH Udaipur, which included all pregnant females admitted in antenatal ward and labour room with clinical or USG diagnosis of twin pregnancy after 28 week of gestation. The maternal and foetal outcomes have been collected and noted as per records.
Results: In this study majority of the patients delivered before 32 weeks and had birth weight <1.5kg making prematurity as the most common cause of LBW. Administration of corticosteroids in all cases of imminent preterm deliveries reduced the respiratory complications and NICU stay.
Conclusion: The perinatal mortality can be significantly reduced if we are able to achieve a birth weight of more than 1.5kg. Thus regular antenatal care, planned delivery and dedicated NICU care can reduce the perinatal morbidity and mortality of twin pregnancy.

Keywords: Multiple Pregnancy, Dizogygotic Twins, feto-maternal Complications, infertility Treatment, twin to twin transfusion, IUGR, Perinatal morbidity.

INTRODUCTION

Multiple pregnancy occurs when two or more foetus are conceived at the same time in same woman. It can be monozygotic or dizygotic pregnancy. Multiple gestation are associated with increased feto-maternal complication. The world incidence of multiple pregnancies varies considerably but on average it is around 200 per 1000 birth. Dizygotic twins result from the maturation and fertilization of two ova during a single ovulatory cycle. Monozygotic twin or identical twins arise from division of the embryo at various stages of development as follows
Within 0-4th day - diamniotic dichorionic twins with two distinct placenta. Beween 4th and 8th day – monochromic diamniotic twin pregnancy. Between 8th and 13th day–monoamniotic monochromic twins. Division of embryo beyond 13th day may result in conjoint twins.

The treatment of anovulation and other cause of infertility make an important contribution to the incidence of twins. Ovulation induction by clomiphene (8% risk of multiple pregnancy) or gonadotropins (2 % risk) requires careful monitoring. Multiple pregnancy is becoming more common as a result of increased use of assisted reproductive techniques.
Risk of all pregnancy related complications is greater when there is more than one foetus. Maternal complication – Anaemia, Hyper emesis, Preterm labour, Hypertensive disorders of pregnancies, APH, Polyhydramnios, PPROM, Gestational diabetes
Perinatal complications - Low birth weight, IUGR, Prematurity, Twin to twin transfusion syndrome, Intrauterine foetal demise.

AIMS AND OBJECTIVE

Evaluation of various complications of multiple pregnancies in relation to maternal age, birth weight, method of delivery.

MATERIALS AND METHODS

The maternal and perinatal records of all patients were collected from medicals records department at GMCH hospital.
A retrospective study was done which includes all women admitted in antenatal ward and labour room with clinical or ultrasound diagnosis of twin pregnancy after 28 weeks of gestation.
Study area: department of Obstetrics and Gynaecology, GMCH, Udaipur
Study design: Retrospective study.
Sample size: 68 cases.
Study population: Twin pregnancy conceived after ART/naturally delivered at GMCH, Udaipur.
Inclusion criteria: Pregnant women delivered as twin pregnancy after 28weeks of gestation.
Exclusion criteria:

1.) Pregnant women delivered as twin pregnancy before 28 weeks of gestation.
2.) Singleton pregnancy
3.) Triplet pregnancy
4.) History of 2 or more preterm deliveries in past.

RESULTS

In the study most female were of age group 25-29 yrs and mean age of mother was 31.44 years.

Age Group	Number of Patients	Percentage
20-24 years	15	22.1%
25-29 years	30	44.1%
30-34 years	16	23.5%
≥35 years	7	10.3%

In Gravida wise distribution, maximum were in Primigravida; 46(%) and 22(%) were second gravida

Gravida	Number	Percentage
Primi	46	67.6%
2nd Gravida	22	32.4%

In present study maximum patients are IVF conception 31(45.6%) followed by spontaneous 14(20.6) and induction by Clomiphene citrate 14(20.6) and least were by GNRH therapy 9(13.2).

Mode of Conception	Number	Percentage
IVF	31	45.6
Spontaneous	14	20.6
Induction with Clomiphen Citrate	14	20.6
GNRH Therapy	9	13.2

At time of delivery maximum 36(52.9%) patient had gestational age <32 weeks followed by 32-37 weeks 26(38.2%) and only 6(8.8%) were of 37-40 weeks.

Gestational Age	Number	Percentage
<32 weeks	36	52.9
32-37 weeks	26	38.2
37-40 weeks	6	8.8

In antenatal complication maximum are anemic 34(50%) followed by gestational diabetes mellitus 14(20.6%), 10(14.7%) were of pregnancy induced hypertension and 9(13.2%) of PPROM and minimum are of APH 3(4.4%).

Antenatal complications	Number	Percentage
Anemia	34	50%
GDM	13	19.1%

Gestational Hypertension	10	14.7%
PPROM	8	11.8%
APH	3	4.4%

Out of 68 deliveries most babies were delivered by caesarean section 63(92.6%) and 5(7.4%) were delivered by normal delivery.

Mode of Delivery	Number	Percentage
Vaginal Delivery	5	7.4%
Caesarean section	63	92.6%

Birth weight of first twin in most of babies ;30(44.1%)is in between 2-2.4kg followed by 15(22.1%) in 1.5-1.9kg group and 14 (20.5%)of >2.5kg then 6(8.8%) is 1-1.5kg and least 3(4.4%) are <1kg category.

WEIGHT OF NEW BORN	Number Of 1st Twin	Percentage	Number of 2nd Twin	Percentage
>2.5 kg	14	20.5	12	17.6
2-2.4 kg	30	44.1	30	44.1
1.5-1.9	15	22.1	17	25
1-1.5	6	8.8	6	8.8
<1kg	3	4.4	3	4.4
total	68		68	

For duration of stay in NICU out of first twin babies most babies were stayed between 11-30 days that is 30(44.1%) followed by up to 10 days were 16(23.5%) and 14(20.6%) babies were there who stayed for >30 days, while 8(11.8%) babies didn't require NICU stay at all.

NICU STAY	Number	Percentage
No stay	8	11.8%
<10 Days	16	23.5%
11-30 Days	30	44.1%
>30 Days	14	20.6%

CONCLUSION

1.) Multiple pregnancy significantly increases the maternal and perinatal morbidity.
2.) It can be reduced by proper antenatal care, early diagnosis, adequate rest, nutritional supplementation and planned delivery at tertiary care centre for optimal handling of any complications.
3.) The perinatal mortality can be significantly reduced if we are able to achieve a birth weight of more than 1.5kg
4.) Administration of corticosteroids in all cases of imminent preterm reduces respiratory complication and NICU stay.

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Thus regular antenatal care, planned delivery and dedicated NICU care can reduce the perinatal morbidity and mortality of twin pregnancy.

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