Original Research Paper

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FETOMATERNAL OUTCOME IN MULTIFETAL PREGNANCIES – A PROSPECTIVE STUDY IN A TERTIARY CARE CENTER

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KEYWORDS :

INTRODUCTION

DEFINITION :

Multifetal pregnancy may result from two or more fertilization events, from a single fertilization followed by a splitting of the zygote or both.

- Twin pregnancies had a prominent role in human mythology since ages. Hindu mythology had the twins Luv and Kush, sons of Lord Rama. The foundation of Rome by the twins Remus and Romulus.
- The incidence ranges from 0.01% to 0.07% of all pregnancies.
- The world wide prevalence varies from 2-20/1000 live births.
- The incidence is rising because of rise in infertility treatment which can be explained by social shift in womens attitude towards postponement of childbearing in favour of work and career commitments, this delayed childbearing has resulted in an increased maternal age at conception which in turn lead to choose infertility treatment such as ovulation induction,in vitro fertilization and intracytoplasmic sperm injection .
- Multiple pregnancies becoming a public health hazard with dramatic increase in its incidence, such pregnancies are associated with increased risk for both mother and the child. The fetal perinatal morbidity and mortality is high due to preterm births. Risk increases with the number of offsprings.
- In comparision to singleton pregnancies, the multifetal pregnancies are reported to carry higher maternal as well as fetal morbidity and mortality. The adverse complications in mother are hyperemesis, anaemia, hypertensive disorders, preterm labour, antepartum haemorrhage, polyhydramniosis, increased pressure symptoms, gestational diabetes, varicose vains, deep vain thrombosis, postpartum haemorrhage, operative delivery and postnatal morbidity.
- In general, maternal mortality associated with multiple pregnancy is 2.5 times that for singleton births.
- Multifetal pregnancy is considered as high risk pregnancy because of the associated adverse maternal and fetal outcome ,vigilant obstetric care not only decreases the maternal morbidity and mortality but also improves fetal survival rate.
- Major priorities in the management of multifetal pregnancy are early prenatal diagnosis, detection and management of maternal complications and fetal growth restriction.
- Planning the time and mode of delivery, early detection of monochorionic placentation and management of its consequences are important in achieving high success rates.

AIMS AND OBJECTIVES :

- The study aimed to find out the incidence of multifetal pregnancy with associated maternal complications and fetal outcome , to find the main mode of delivery in the study population.

MATERIAL AND METHODS :

- This prospective observational study was conducted over a period of one year that is from 1 stJune 2021 to 31 stmay 2022 at Kurnool medical college, Kurnool.
- A total of 106 multifetal pregnant women who were admitted in antenatal ward and labour room, who had completed 28 weeks of gestational age included in the study.
- Data regarding Maternal age , parity, whether spontaneous or assisted conception, gestational age , booked or unbooked case, family history, time and mode of delivery, birthweight, NICU admissions , maternal and neonatal deaths were investigated, collected and analysed.RESULTS:
- Total number of deliveries conducted during the study period was 8365 of which 106 are multifetal pregnancies with the incidence of 1.26%. There were 2 triplets and 104 twin pregnancies.

Table no.1 Types of cases:

Booking status	No. of cases	Percentage%
booked	41	38.67
unbooked	65	61.33
Family history	No.of cases	Percentage%
Positive	16	15.09
Negative	90	84.90

Table no. 2 maternal age :

Age in years	No. of cases	Percentage%
<=20	7	6.6%
21-25	20	18.86%
26-30	43	40.56%
31-35	28	26.41%
>35	8	7.54%
total	106	100%

Table no.3 Parity:

Parity	No. of cases	Percentage%
Primigravida	57	53.77%
G2	29	27.35%
G3	11	10.37%
G4 and above	9	8.49%
Total	106	100%

Table no.4 mode of conception:

mode of conception	No.of cases	Percentage%
spontaneous	74	69.82
assisted	32	30.18
total	106	100

Table no.5 Period of gestation at the time of delivery:

Period of geststion	No. of cases	Percentage
28 to 32 weeks	21	19.81
32 to 35 weeks	50	47.16
35 to 37 weeks	31	29.24
>37 weeks	4	3.77
Total	106	100

Table no. 6 Fetal presentation at delivery:

Fetal presentation	No. of cases	Percentage%
Vertex – vertex	35	33.01
Vertex - breech	22	20.75
Vertex - transverse	6	5.66
Breech - breech	20	18.86
Breech - vertex	16	15.09

Breech - transverse	3	2.83
Transverse- breech	2	1.88
Vertex – breech-breech	1	0.94
Vertex- vertex -vertex	1	0.94
Total	106	100

Table no.7 Chorionicity:

Chorionicity	No. of cases	Percentage%
Monochorionic-monoamniotic	23	21.69
Monochorionic-diamniotic	33	31.13
Dichrionic - diamniotic	48	45.28
Trichorionic	2	1.88
T0tal	106	100

Table no.8 Mode of delivery:

Mode of delivery	No. of cases	Percentage%
Vaginal delivery	40	37.73
Caesarean delivery	66	62.27
Total	106	100

Table no.9 time interval between delivery of fetuses:

Time interval	No. of cases	Percentage%
<5minutes	52	49.05
6 to 10 minutes	30	28.30
11 to 30 minutes	16	15.09
31 to 60 minutes	7	6.60
.1 hour	1	0.94
Total	106	100

Table no. 10 maternal complications

antenatal complications	No. of cases	Percentage%
Preterm labour	71	66.98
Anaemia	68	64.18
pPROM	65	61.32
Preeclamsia	36	33.96
Eclampsia	4	3.77
Gestational diabetes mellitus	32	30.18
Polyhydramniosis	21	19.811
Thyroid disorders	40	37.37
others	4	3.77
Postnatal complications		
Postpartum haemorrahe	16	15.09
wound infection	6	5.66
DVT	1	0.94
Peripartum cardiomyopathy	2	1.88

Table no.11 birth weight of babies{in kgs}

Birth weight{twins}	1st baby	2nd baby	3rd baby
>2.5kgs	30[28.84%]	28[26.92%]	
1.5 to 2.5kgs	52[50%]	50[48.07%]	
1 to 1.5kgs	17[16.34%]	10[9.61%]	
<1kgs	5[4.80%]	6[5.76%]	
birth weight{triplets}			
>2.5kgs			
1.5 to 2.5kgs			
1 to 1.5kgs	1[50%]		
<1kgs	1[50%]	2[100%]	2[100%]

Table no.12 fetal complications

Fetal complications	No. of babies	Percentage%
Discordant twins	2	1.88
Twin to twin transfusion syndrome	4	3.77
NICU admissions	170	79.43
Single fetal demise	4	1.86
Perinatal death	58	27.10
Birth asphyxia	64	29.90
Fetal growth restriction	102	47.66
Congenital anomalies	2	0.93

- In this study, we had twins and triplets . According to varies studies conducted since 1970s, the incidence of the multifetal pregnancies was 3%. Percentage of booked cases 38.67% more number of cases get directly reported or they are referred from peripheries as ours is a tertiary care center.
- 15.09% of them showed positive family history, where as 30.18% are conceived by assisted reproductive techqnics.
- We found that the incidence of multifetal pregnancy was highest in the age group 26 to 30yrs(40.56%) . The least incidence was in <=20. primigravida are associated with higher incidence i.e,53.77%. In our study the incidence decreased as the parity increased.
- Highest number of deliveries where conducted at 32 to 35 weeks of geastational age. Only 4 deliveries out of 106 where conducted above 37 weeks of gestational age. The incidence we found in our study regarding placention was majority of are dichorionic diamniotic.
- Main mode of delivery by caesarean sections which of 62.27%.
- Most common complications associated with multifetal pregnancies in our study are Preterm labour(66.69%), Anaemia(64.18%), pPROM(61.32%), Preeclamsia(33.96%), eclampsia(3.77%), GDM(30.18%), thyroid dysorders(37.37%), PPH(15.09%), LBW are of (50%), NICU admissions(79.43%), Perinatal death (27.10%), Fetal growth restriction(47.66%).

CONCLUSION:

every case of multifetal pregnancy need admission and safe institutional deliverybecause od adverse maternal and fetal complications. Caesarean delivery was the main mode of deliveryin the study associated significantlywith preterm deliveryand anemia. Fetal complications were low birth weight. Prenatal care during antenatal period is required to choose suitable mode of delivery for higher survival rate in neoborn.