Section: Obstetrics & Gynaecology

Research

MATERNAL AND PERINATAL OUTCOME OF PATIENTS WITH MULTIPLE PREGNANCY

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Abstract

Background: The incidence of multiple pregnancies is increasing due to advanced maternal age and increased use of assisted reproductive techniques. Multiple pregnancies are associated with higher incidence of maternal and fetal complications. This study aims to study the maternal and perinatal outcome of multiple pregnancy. **Materials and Methods:** This retrospective observational study was conducted in the department of obstetrics and gynaecology at SMGS hospital, GMC Jammu over a period of 6 months from January 2022 to June 2022. All patients with ultrasound documented multiple pregnancy and more than 28 weeks of gestation were included in study. Data was collected from records kept in hospital. **Result:** Total numbers of 90 cases were studied. Maximum numbers of patients were in the age group of 20-25 years (48.89 %). Majority of the patients were multigravida (66.78%). Majority of the women delivered at 36-37.6 weeks (42.2%) followed by 32-35.6 weeks (33.33%). Most common presentation was vertex -vertex (52.22%) followed by non-vertex -others (38.89%). Anaemia was the most common maternal complication seen in 61.11% followed by Preterm labour in 47.77 %, PPH in 16.66%, Gestational hypertension in 12.22%, PPROM in 6.66%, GDM in 4.44% and placenta praevia in 2.22 %. There was no maternal mortality. 3 patients had IUFD of both twins and 1 patient had IUFD of 2nd twin. In 1st twin, Apgar score of less than 4 at 1 minute was found in 3 babies and more than 6 in 71 babies. In 2nd twin, Apgar score of less than 4 at 1 minute was found in 9 babies and more than 6 in 71 babies. **Conclusion:** Multiple pregnancy is associated with significant fetal and maternal complications and needs good antenatal care and tertiary care facilities for delivery to deal with fetal complications.

INTRODUCTION

The incidence of multiple pregnancy is increasing due to advanced maternal age and increased use of assisted reproductive techniques.[1] The incidence of multiple pregnancy differs with ethnicity and geographical distribution[2].Multiple pregnancies are associated with maternal complications such as abortion, hyperemesis gravidarum, anemia, gestational diabetes mellitus (GDM), pre-eclampsia, pregnancy induced hypertension, antepartum hemorrhage, preterm labor, premature rupture of membrane (PROM), placental abruption, polyhydramnios and PPH. Fetal complications include prematurity, low birth weight, birth asphyxia, congenital anomalies, twin-twin transfusion syndrome, acardiac twins, intrauterine fetal death. Cerebral palsy is more common in twins and particularly more in 2nd twin.[3] The purpose of this study was to assess the maternal and fetal outcome in patients with multiple pregnancy.

MATERIALS AND METHODS

This retrospective observational study was conducted in the department of obstetrics and Gynaecology at SMGS hospital, GMC Jammu. This study was conducted over a period of 6 months from January 2022 to June 2022. 90 cases were enrolled in the study according to inclusion criteria. Data was collected from the patients records kept in the hospital. Mode of delivery, intrapartum and postpartum complications, neonatal outcome in terms of birth weight, Apgar score and perinatal outcome were taken into account.

Inclusion Criteria

1. Diagnosis of twin pregnancy confirmed by ultrasound.
2. GA > 28 weeks and more and EFW > 1000 grams or more.
3. Absence of congenital anomaly in either of the two.

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RESULTS

Total numbers of 90 cases were studied. Maximum numbers of patients were in the age group of 20-25 years (48.89 %). [Table 1] Majority of the patients were multigravida (66.78%). [Table 2] Majority of the women delivered at 36-37.6 weeks (42.2%) followed by 32-35.6 weeks (33.33%). [Table 3] Out of the 90 cases, 2 patients had IVF conception. Most common presentation was vertex -vertex (52.22%) followed by non-vertex -others (38.89%) and vertex -non vertex (8.89%). [Table 4] Out of the 90 deliveries, 45.55 % were vaginal, 53.33 % were LSCS and 1.11 % were combined (1st baby delivered vaginally and 2nd delivered by LSCS). [Table 5] Anaemia was the most common maternal complication seen in 61.11% followed by Preterm labour in 47.77 %, PPH in 16.66%, Gestational hypertension in 12.22%, PPROM in 6.66%, GDM in 4.44%, placenta praevia in 2.22 % and retained twin in 1.11%. [Table 6] There was no maternal mortality in our study. In the 1st twin, 17 cases were very low birth weight (VLBW) with birth weight of 1-1.5 kg, 62 babies were low birth weight (LBW) with birth weight of 1.5 -2.5 kg and 11 babies were more than 2.5 kg. [Table 7] In 2nd twin, 19 babies were very low birth weight (1-1.5 kg), 57 babies were low birth weight (1.5 -2.5kg) and 14 cases were more than 2.5 kg. [Table 8] 3 patients had IUFD of both twins and 1 patient had IUFD of 2nd twin. In 1st twin, Apgar score of less than 4 at 1 minute was found in 3 babies and more than 6 in 71 babies. [Table 9] In 2nd twin, Apgar score of less than 4 at 1 minute was found in 9 babies and more than 6 in 71 babies. [Table 10]

Table 1: Distribution of Women According to Age.

Age (years)	Number	Percentage
20 – 25	44	48.89
26 – 30	31	34.44
>30	15	16.67

Table 2: Distribution of women according to parity.

Parity	Number	Percentage
PRIMI	29	32.22
MULTI	61	66.78

Table 3: gestational age at the time of delivery.

Gestation (weeks)	Number	Percentage
28 - 31.6	15	16.67
32 - 35.6	30	33.33
36 - 37.6	38	42.22
>38	7	7.78

Table 4: fetal presentation

Presentation	Number	Percentage
vertex – vertex	47	52.22
vertex- nonvertex	8	8.89
nonvertex – others	35	38.89

Table 5: mode of delivery

Mode of delivery	Number	Percentage
NVD	41	45.55
LSCS	48	53.33
1st NVD - 2nd LSCS	1	1.11

Table 6: maternal complications

Maternal complications	Number	Percentage
ANEMIA	55	61.11
PRETERM	43	47.77
PPH	15	16.66
PROM	6	6.66
GESTATIONAL HYPERTENSION	11	12.22
GDM	4	4.44
PLACENTA PRAEVIA	2	2.22
RETAINED TWIN	1	1.11

Table 7: birth weight of 1st twin.

Birth weight (1st twin)	Number	Percentage
1 - 1.5KG	17	18.88
1.5 – 2.5 KG	62	68.88
> 2.5 KG	11	12.22

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Table 8: birth weight of 2nd twin

Birth weight (2nd twin)	Number	Percentage
1 - 1.5KG	19	21.11
1.5 – 2.5 KG	57	63.33
> 2.5 KG	14	15.55

Table 9: Apgar score of 1st twin

Apgar score (1st twin)	Number	Percentage
0/10	3	3.33
1-3	0	0
4 – 6	16	17.77
>6	71	78.88

Table 10: Apgar Score of 2nd Twin.

Apgar score (2nd twin)	Number	Percentage
0/10	4	4.44
1-3	5	5.55
4 – 6	10	10
>6	71	78.88

DISCUSSION

In our study, incidence of twin pregnancy was highest (48.89 %) in the age group of 20-25 years which is similar to the study done by Bhavana S et al [4] where the incidence of twin pregnancy was maximum in the age group of 20-25 years. Majority of the patients were multigravida (66.78 %) which is similar to the study done by Lata et al,[5] where the incidence of twin pregnancy was 70.7% in multigravida and 29.3% in primigravida. Preterm labour occurred in 47.77 % of twin pregnancy which is more than the study done by Bhattacharya et al (44%).[6] In our study, 6.66 % had preterm premature rupture of membrane which is less than the study done by Wong L(11.1%).[7] Placenta praevia occurred in 2.22 % cases which is similar to the study done by Simi et al (3 %).[8] Gestational hypertension developed in 12.22% which is similar to the study done by Laine K et al (12.9%).[9] Antepartum eclampsia occurred in 3.33 % of cases which is more than the study done by Simi et al (0.5 %). Incidence of anaemia in our study is 61.11%, which is similar to the study done by Bhalla S et al (62 %).[10] In another study done by Brown et al,[11] incidence of anemia was 35.5%. Other maternal complications include GDM in 4.44%, retained twin in 1.11%, IUGR, polyhydramnios, oligohydramnios. There was no maternal mortality in our study. Majority of the women in our study delivered at 36-37.6 weeks (42.2%) followed by 32-35.6 weeks (33.33%) and 28-31.6 weeks (16.67 %). Only 7 cases reached more than 38 weeks (7.78 %). As per the study done by Amiben V. Gajera et al,[12] 46% cases delivered before 36 weeks and 18 % delivered at 29-32 weeks. In another similar study done by Mahita Reddy A et al,[13] 56% cases delivered at more than 34 weeks of gestation. Most common presentation in our study was vertex-vertex (52.22 %) and malpresentation occurred in 43 cases (47 .77 %). Most common mode of delivery was LSCS (53.33 %) followed by normal delivery (45.55 %). In a study done by Bangal et al,[14] caesarean section was done in 33 % cases. The study conducted by Chittacharoen et al,[15] showed that caesarean section was the commonest mode of delivery. In our study, increase in caesarean section rate is due to increased incidence of other obstetric indications like malpresentations, cord prolapse, preterm premature rupture of membranes, placenta praevia. In our study, Incidence of low birth weight (< 2. 5 kg) in 1st twin is 87.77 % and in 2nd twin is 84.44 %. In the study done by Bangal et al, 82% babies were low birth weight. In another study done by Taj M et al,[16] 79.2% babies were low birth weight. 3 patients had IUFD of both twins and 1 patient had IUFD of 2nd twin. In 1st twin, Apgar score of less than 4 at 1 minute was found in 3 babies and more than 6 in 71 babies. In 2nd twin, Apgar score of less than 4 at 1 minute was found in 9 babies and more than 6 in 71 babies. Higher incidence of severe birth asphyxia was found in 2nd twin which is comparable to other studies.

CONCLUSION

Multiple pregnancy is considered to be a high risk pregnancy. Multiple pregnancy is associated with maternal and fetal complications. Majority of the complications in twin pregnancy are preventable. It requires early diagnosis and proper antenatal care to reduce complications and adverse outcome. It also requires good intranatal care and intensive neonatal care to improve perinatal outcome.

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