

Original Research Article

Maternal and Perinatal Outcome in Twin Gestation in a Referral Hospital at Visakhapatnam

Gundu Vanaja¹, Polumuru Usha Devi^{1*}, D Hemalatha Devi², Usha Prasad³, P Durga Kumari¹, Y Madhuri⁴


¹Asst. Professor, Department of OB&G, Andhra Medical College, Visakhapatnam, India

²Professor, Dept. OB&G, Andhra Medical College, Visakhapatnam, India

³Associate Professor, Dept. of OB&G, Siddhartha Medical College, Vijayawada, India

⁴Post Graduate in OB&G Department, Andhra Medical College, Visakhapatnam, India

*Corresponding author email: dr.ushadevi.p@gmail.com

	International Archives of Integrated Medicine, Vol. 4, Issue 12, December, 2017. Copy right © 2017, IAIM, All Rights Reserved. Available online at http://iaimjournal.com/ ISSN: 2394-0026 (P) ISSN: 2394-0034 (O)
	Received on: 01-12-2017 Accepted on: 07-12-2017 Source of support: Nil Conflict of interest: None declared.
How to cite this article: Gundu Vanaja, Polumuru Usha Devi, D Hemalatha Devi, Usha Prasad, P Durga Kumari, Y Madhuri. Maternal and Perinatal Outcome in Twin Gestation in a Referral Hospital at Visakhapatnam. IAIM, 2017; 4(12): 153-157.	

Abstract

Background: Multiple births have been a subject of great interest to various Scientists such as endocrinologists and geneticists, a source of fascination to some people and a causes concern to obstetrician and pediatricians. Multiple pregnancies are associated with many problems for the obstetrician during ante-natal, intranatal and postnatal periods. For the mother the prognosis is worse than a singleton pregnancy and for the fetus the prognosis is very depressing and it is associated with very high fetal mortality.

Aim: To study various factors leading to maternal and fetal morbidity and mortality in multiple fetal gestations.

Material and methods: Prospective observational study was carried out on 100 antenatal women with twin gestations who attended Victoria Government Hospital, a referral hospital for women and child at Visakhapatnam from October 2015 to September 2017. Maternal and perinatal morbidity and mortality and their causes were analyzed.

Results: In this study, 73 women (73%) were booked and 27 women (27%) were unbooked. Maternal and perinatal complications were more in unbooked cases. Incidence of preeclampsia was 22%, gestational hypertension cases 10% and eclampsia cases twice more than the singleton pregnancy. Incidence of poly-hydromnios 5%, Anemia was 40%, APH was 1%, pre-term labour – 30%.

Intrapartum and postpartum complications like PROM – 20%, uterine inertia – 6%, cord prolapse – 2%, PPS – 13%, LSCS rate – 40%.

Conclusion: Twin gestation is a high risk pregnancy associated with antenatal, intranatal and postnatal complications which cases increased morbidity and mortality of both mother and fetus. Early diagnosis, good antenatal care and treatment of antenatal complications, labor management in the tertiary center, liberal use of C-section also NICU will improve perinatal, maternal outcome.

Key words

Monozygotic Twins, Dixygotic Twins, Poly-hydromnios, Preeclampsia, Maternal mortality, Perinatal mortality.

Introduction

Multiple births have been a subject of great interest to various scientists, such as endocrinologists and geneticists, a source of fascination to some people and a cause of concern to obstetrician and paediatrician.

Materials and methods

This study was carried in 100 antenatal women with twin who attended the Department of Obstetrics and Gynecology, Govt. Victoria Hospital, Visakhapatnam from October 2015 to September 2017. This was a prospective observational study. Results were analyzed in percentages and proportions.

Exclusion criteria

- All multifetal gestations below 10th week of period of gestation excluded as most of them attended for first visit at the end of 3rd month, so all first trimester complications were excluded.
- High order multiple gestation from triplets onwards were excluded.

Results

The study was carried on 100 antenatal women with twin gestation who attended the Department of Obstetrics and Gynecology, Govt. Victoria Hospital, Visakhapatnam from October 2015 to May 2017. It was a prospective study to know obstetric and perinatal outcome. In the present study, 73% were booked cases and 27% were unbooked cases (**Table - 1**). Maternal and perinatal complications were more in unbooked cases. The incidence of twin gestation in the age group of 18-22 years was 41%, between 23-25 years was 32%, between 26-29 years was 21%. Twin gestation cases reported in age group 30 years and above are 6%. This shows maximum cases were in the age group of 18-20 years and next were between age group of 23-25 years, which was due to high fertility in this age group. When compared with total number of antenatal women in the age group of 30 years and above 6 cases of twin gestation constitute about 8% that is four times higher than the incidence in the age group of 20 to 25 years (2%) (**Table - 2**).

Table - 1: Types of cases.

Total cases	Booked	Unbooked	% Booked	% Unbooked
100	73	27	73%	27%

Family history was positive in 10% women, 8% maternal side and 2% paternal side. In this study, antenatal complications like anemia was 40%, preeclampsia was 22%, gestational HTN was 10%, eclampsia was 1%, hydramnios was 5%, placenta previa was 1%, preterm labor was 30%

and malpresentation was 35% with various combinations. High incidence of anemia in the present study was due to low socio-economic status and irregular follow-ups. One case of placenta previa elective LSCS was done at 36 weeks for bleeding PV complaint, babies

weighted two kg each. Pre-term labor in the present study was second common complication (30%) which was due to over distension (**Table - 3**).

Table - 2: Analysis of maternal age.

Age in years	No. of twin cases	%
18-22	41	41%
23-25	32	32%
26-29	21	21%
30 and above	6	6%

Table - 3: Incidence of antenatal complications in twin pregnancy.

Complications	No. of cases	%
Anemia	40	40%
Preeclampsia	22	22%
Gestational hypertension	10	10%
Eclampsia	1	1%
Hydromnios	5	5%
Placenta previa	1	1%
Preterm labour	30	30%
Malpresentations	35	35%

Table - 4: Mode of Delivery.

Delivery by	No. of Cases	%
Vaginal	60	60%
Abdominal (LSCS)	40	40%

Table - 5: Distribution of Zygosity.

Study Group	No. of Cases	%
Monosygous Twins	31	31%
Dizygous Twins	69	69%

Table - 6: Incidence of various combinations of twins.

Presentations of twins	Number	%
Vertex Vertex	65	65%
Vertex Breech	17	17%
Breech Breech	7	7%
Breech V ertex	5	5%
Breech Transverse	3	3%
Vertex Transverse	1	1%
Transverse Breech	1	1%
Both transverse	1	1%

Table - 7: Incidence of Intrapartum Complications.

Complications	No. of Cases	%
PROM	20	20%
Uterine Inertia	6	6%
Cord Prolapse	2	2%

Table - 8: Indications.

Indications	No. of Cases
Both Breech	5
Footling with cord prolapse of 1 st twin	1
1 st Breech 2 nd transverse lie	3
1 st transverse 2 nd breech	1
PROM with uterine inertia	1
Twin pregnancy preeclampsia	8
Post C-section with twins	14
Twins with fetal distress	3
Past dates with twin gestation	1
Twin gestation with placenta previa	1
Twin gestation with single fetal demise	1

Table - 9: Socioeconomic status and twins.

Socioeconomic status	No. of twin cases	%
low	72	72%
Middle class	28	28%

Table - 10: Incidence of twin pregnancy in relation to parity.

Parity	No. twin pregnancies	%
Primi	54	54%
Second gravida	35	35%
Third gravida	8	8%
Fourth gravida	3	3%

65 cases (65%) progressed into spontaneous labour and 60 cases (60%) delivered vaginally, of which 4% required assisted breach delivery. Remaining 40 cases (40%), 8 cases elective LSCS was done for mal-presentation first baby and post cesarean pregnancy and 32% cases emergency LSCS was done for various indications (**Table - 4**).

24 cases (24%) were discordant twins, of which 20 were monozygotic twins (20%) and 4 were Dizygotic (4%). Monozygous Twins were observed with Placental examination 31 cases (31%) and Dizygous Twins were 69 cases (69%) (**Table - 5**). Most common combination of presentation of twins in the present study is Vertex-Vertex (65%), next common is Vertex Breach (17%), Breach-Breach (7%), Breach - Vertex (5%), Breach - Transverse (3%), Vertex - Transverse (1%), transverse - Breach (1%), both Transverse (1%) without conjoint twins (**Table - 6**). Common intranatal complications are PROM (20%), next is Uterine Inertia (6%) and Cord Prolapse (2%) (**Table - 7**). Out of two cases of Cord Prolapse, one baby died and the other baby was saved with emergency LSCS. In the above study, 12.5% babies were with birth weights above 2.6 kg, 30% babies were weighing between 2.1 to 2.5 kg, 31% babies were weight between 1.6 kg to 2 kg, 23% babies were weighing between 1 to 1.5 kg. Less than 1 kg babies were 6.5%. Perinatal mortality was 100 % in babies weighing less than 1 kg and 75% in babies weighing 1 to 1.5 kg, 3% in babies weighing 1.6 to 2 kg. Indications were as per **Table - 8**. Socioeconomic status and twins was as per **Table - 9**. Incidence of twin pregnancy in relation to parity was as per **Table - 10**.

Discussion

The incidence of twins in the present study 3% which is higher than the study of Vidyadhar B Bengal [1], Shruti M P, et al. where it was 1.5 per 1000, may be because it is a tertiary referral hospital and liberal use of ovulation induction drugs [2, 3]. The average gestation at which twin deliveries occur is 35 weeks and account for 30% in twins and 12% of total preterm births [4-6]. Maternal complications like anemia, pregnancy induced hypertension, and premature rupture of membrane were mainly due to malnutrition, poor antenatal checkups and illiteracy [7]. The most common finding of vertex-vertex presentation, in the higher rate of caesarian section rates were due to liberalization of indication for LSCS when compared to other studies [3, 8]. Low birth

weight was the most common indication for the neonatal admission. Of the hundred twin pairs, 31 were monozygotic twins which includes 3 monochroionic, monoamniotic, 23 monochorionic diamniotic, 5 Dichorionic Diailitniotic placenta and 69 were dizygotic twins showing Dichorionic and diamniotic placenta. Perinatal mortality was total 20%, first twin 9.5%, second twin 10.5% is observed to be lower when compared to other studies^{9, 10} due to availability of advanced neonatal care unit. Perinatal mortality was mainly due to prematurity and low birth weight and one case of cord prolapse.

Multiple pregnancies were associated with higher maternal and fetal/ neonatal adverse outcomes. Early detection of high risk cases, timely referral, frequent antenatal visits and early hospitalization, liberal use of LSCS with good neonatal care facilities especially for premature low birth weight babies will decrease perinatal and maternal morbidity and mortality and contribute to improvement in maternal and neonatal outcomes.

Conclusion

Twin gestation is a high risk pregnancy associated with antenatal, intranatal and postnatal complications which cases increased morbidity and mortality of both mother and fetus. Early diagnosis, good antenatal care and treatment of antenatal complications, labor management in the tertiary center, liberal use of C-section also NICU will improve perinatal, maternal outcome.

References

1. Vidyadhar B. Bengal, Shruti M Patel, Devendra N Khairnar. Study of maternal and fetal outcome in twin gestation at tertiary care teaching hospital. IJBAR Journal, 2012; 3(10): 758-76.
2. Yasmeen N, Aleem M, Iqbal N. Maternal and fetal complications in multiple pregnancies. Ann K Ed Med Coll., 2006; 12: 512-4.

3. Chittacharoen A. Pregnancy outcome of twin pregnancy in Ramathibodi Hospital. *J Med Assoc Thai*, 2006; 89: 576-80.
4. Khan H, Saeeda M, Hafizulla M. Peculiar risk factors and complications of pregnancy induced hypertension in a tertiary care hospital of Peshawar. *Pak Armed Forces Med J.*, 2009; 4: 9.
5. Rao A, Sairam S, Shehata H. Obstretic complications of twin pregnancies. *Best Pract Res Clin Obstet Gynaecol.*, 2004; 18: 557-76.
6. Khaliq S, Qureshi S, Roohi M. Multiple pregnancy: frequency of maternal and fetal complications. *Professional Med J.*, 2008; 15: 175-8.
7. Like B. Improving Multiple pregnancy outcomes with nutritional interventions. *Clin Obstet Gynacol.*, 2004; 47: 146-62.
8. Blickstein I. Managing multiple pregnancy and birth In: Stud J, Tan SL, Chervenac FA, editors. *Progress in obstetrics and gynecology*. Edinburgh: Elsevier; 2008, p. 111-24.
9. Fisk NM. Multiple pregnancy. In: Edmonds DK, editor. *Dewhurst's textbook of obstetrics and gynaecology*. 7th edition, Malden: Blackwell Publishing; 2007, p. 166-76.
10. Loos RJ, Derom C, Vlietinck R. Determents of birth-weight and intrauterine growth in live born twins. *Paediatre Perinat Epidimio.*, 2005; 19: 15-22.
11. Mahendra Raj Pandey, Bikash Jang Kshetri, Deepak Dhakal. *Maternal and Perinatal Outcome in Multifetal Pregnancy*. *American Journal of Public Health Research*, 2015; 3(5A): 135-138.
12. *Munro Kerr's Operative Obstetrics, Pleural Pregnancy*, Saunders Ltd., 12th edition 2014.
13. *William's Text book of Obstetrics and Gynecology*, McGraw Hill, 25th Edition, 2014.
14. Shayesta Rahi, Neha Mahajan, Asif Iqbal. Maternal and perinatal outcome of twin pregnancy. *Int. Journal of Current Research*, 2017; 9(6): 52639-41.