

An observational study of 100 cases of fetomaternal outcome of twin's gestation

Hetal Bhakhar^{1*}, Kavita Dudharejia², Kamal Goswami³

¹Resident Doctor, ²Additional Professor, ³Professor & HOD, Department of OBGY, P.D.U Medical College, Rajkot, INDIA.

Email: hetalbhakhar9@gmail.com

Abstract

Background: To study the fetomaternal outcome in twin gestation. it includes 1% of all pregnancies. Multiple birth are more common due to increase use of ovulation induction drug and other assisted reproductive technologies for infertility. However maternal and fetal. complications are more common than singleton pregnancies. **Methods:** The study was carried out in the department of obstetrics and gynecology, at PDU medical college and hospital, Rajkot, Gujarat from 1 October 2017 to 30 September 2018, a period of 1 year. All twins' pregnancy admitted from antenatal clinic as booked cases or from labor room as emergency cases, above 28 weeks of duration of pregnancy was included in the study. During this period there were 7925 deliveries, out of which 118 cases were twins pregnancies. The study reviewed the outcome of 118 cases of twins pregnancy. **Result:** In this an observational studies we taken 100 cases of twins gestation. Twins gestation was found to be more common in 19-24 year of age. Most of them delivered below 37 weeks of gestation. The twins gestation was associated with increased maternal complications compared to singleton pregnancy (Preterm labor (79%). Majority of women delivered vaginally (68%) and (27%) by cesarean section LSCS Taken for malpresentation in most cases. The perinatal mortality was higher when delivered earlier than 33weeks of gestation. Prematurity was the outstanding cause of mortality. The perinatal mortality was occurred in 19 cases and among them prematurity was most common cause of death conclusion, Twins pregnancy is a high risk pregnancy and associated maternal and perinatal complications are high as compared to singleton pregnancy which are preventable by well set up obstetric high risk UNIT and NICU development.

Key Words: Twins pregnancy, preterm labour, low birth weight, perinatal morbidity.

*Address for Correspondence:

Dr Hetal. Bhakhar, Resident Doctor, Department of OBGY, P.D.U Medical College, Rajkot, INDIA.

Email: hetalbhakhar9@gmail.com

Received Date: 13/12/2019 Revised Date: 17/01/2020 Accepted Date: 04/02/2020

DOI: <https://doi.org/10.26611/10121413>

Access this article online

Quick Response Code:



Website:

www.medpulse.in

Accessed Date:
07 April 2020

INTRODUCTION

The phenomenon of twinning has fascinated mankind throughout its recorded history. Twins have often been regarded as being inherently different from singletons, and soci *et al.* responses to their birth have ranged from awe to fear¹. Twin fetuses commonly result from fertilization of two separate ova and are termed as double ovum, dizygotic or fraternal twins. About a third

as often, twins arise from a single fertilized ovum that subsequently divides into two similar structures, each with the potential for developing into a separate individual. These twins are termed as single-ovum, monozygotic, or identical twins.² All dizygotic twins and one-third of monozygotic twins have separate inner and outer sacs and are thus dichorionic-diamniotic. Two thirds of monozygotic twins have a single outer sac and two inner sacs (monochorionicdiamniotic) and about 1% of twins will share their inner sac ie. monochorionic-monoamniotic.³ The incidence of twin pregnancies has increased remarkably since the late seventies because of the improved reproductive medicine and a greater proportion of older pregnant mothers who naturally have a higher incidence of multiple gestations.^{4,5} The occurrence and frequency of twinning varies across human populations.⁶ The maternal age, socioenvironmental factors, increase in the use of contraceptives, the race of human population, 2 increase in spontaneous abortion rate and seasonal variations, are

How to cite this article: Hetal Bhakhar, Kavita Dudharejia, Kamal Goswami. An observational study of 100 cases of fetomaternal outcome of twin's gestation. *MedPulse International Journal of Gynaecology*. April 2020; 14(1): 12-15.
<http://medpulse.in/Gynaecology/index.php>

among the factors that could influence twinning rate.⁶ Twin pregnancies are more prone to complications than single pregnancies. Early in pregnancy there is high risk of miscarriage and sometimes one fetus dies and is reabsorbed resulting into the vanishing twin syndrome⁷. Other complications associated with twin pregnancy include high incidence of hypertension (pregnancy-induced hypertension, preeclampsia or eclampsia), gestational diabetes mellitus, bleeding in pregnancy (placenta praevia or abruptio), preterm birth and small-for-gestational-age babies due to Intrauterine growth restriction (IUGR), postpartum hemorrhage, congenital malformations, and Twin to twin transfusion syndrome (TTTS)^{3,7}. Twin pregnancies in general population comprise about 1% of all pregnancies, but can account for up to 10% of perinatal mortality⁵. Low birth weight and prematurity are the main causes of high perinatal morbidity and mortality in twins, whereas malpresentation and the hazards of delivery are next in order of concern. For these reasons, twin pregnancy is considered a high-risk pregnancy; different aspects of the risk include the mode of delivery, which remains a subject of a controversy and discussion among obstetricians.

METHODOLOGY

Study is carried out at Department of Obstetrics and Gynecology, Zanana Hospital Rajkot, includes 100 Pregnant women who are admitted in Labour room with twin gestation from 1st October 2017 to 30th September 2018.

INCLUSION CRITERIA

- Women and their newborns who delivered vaginally and by caesarean section in our institution.
- Gestational age >28 week
- Women who give consent for this study.

EXCLUSION CRITERIA

- Women who were delivered twins babies outside our hospital.
- Gestational age <28 Week.
- Woman who don't give consent for this study.

Study is done during antenatal, intranatal and post-natal period till the patients are discharged.

Incidence of relevant factors, complications, characteristic of Twin gestations in antenatal period and the sequel of these complications on maternal and fetal outcome were analyzed. Detailed obstetrics history was taken. Family history of any twin gestation in maternal or paternal side was noted. History of intake of ovulation induction drugs and infertility treatment is taken. A general physical examination was done to note the associated complications like anemia, hypertension, and

jaundice. Per abdomen examination was done to note the Uterine size, abdominal girth, presentation, presenting part, lie, position, amount of liquor, size and its relation to birth canal, uterine contraction and FHS were noted. Per vaginal examination was done to note cervical dilation, effacement, presenting part, status of the membranes and the adequacy of pelvis to rule out fetopelvic disproportion. Progress of labour was monitored along with simultaneous fetomaternal monitoring. Adequate preparation was made to safely conduct the delivery of both twins and to safely resuscitate both the twins. Obstetrical outcome is recorded in terms of, Gestational age at the time of delivery, Parity of patient, Associated obstetric factor like PROM, Gestational hypertension, anemia etc, Mode of delivery: Vaginal/ Assisted vaginal delivery / Caesarean delivery, Type of placenta, if any other complications. Foetal outcome is recorded in terms of, Apgar Score at birth, Foetal Weight, NICU admission, Perinatal outcome, Neonatal mortality, if occurred cause of death.

RESULTS

Present study of twin pregnancy was conducted prospectively during this period of October 2018 to September 2019. Total of 100 case of twin pregnancy were studied randomly and result were tabulated. Total no of deliveries during study period were 7925. So we had incidence of twins gestation in our study was 1.488% which is shown in (Table No.1)

Table-1: Comparative Analysis of Incidence of twin gestation

Study	Year	Incidence
NJ Obiechina <i>et al.</i>	2011	3.37%
Enid Simon <i>et al.</i>	2013	2.1%
Present study	2019	1.488%

Table 2: Distribution According to Age

Age Group		
Age	Age	Age
19-24	19-24	19-24
25-30	25-30	25-30
>30	>30	>30
Total	Total	Total

We noticed incidence of twins pregnancy was highest in age group of 19-24 year followed by 25-30 year which were 51.4% and 32.4% respectively however least incidence was seen in patient above the 30 year which was 16.2% (Table no 2). Highest incidence of twins pregnancy in primipara seen in 41 cases Followed by second para seen in 29 case and least in more than 5th para (Table no 3.) We noticed maximum number of twins pregnancy as a result of spontaneous conception which was 89% followed by 8% by ovulation induction and 3% by IVF. None of them had any family history or conceive through any contraceptive methods. (Table no 4)

Table 3: Distribution According to Parity

Parity	Primi	2 para	3 para	4 para	> 5 para
No Cases	41	29	17	8	5

Table - 4: Mode of conception

Mode of Conception	
Mode	Present Study
Spontaneously	89
Ovulation induction	8
IVF	3

Table 5: Distribution according to Maturity

Maturity		
	Week	No of cases
Preterm Delivery	<34	52
	34-37	27
Term Delivery (>37)		21

We observed in this study highest cases(52%) of prematurity in below 34 week of gestation. All babies refer to NICU admission because of there prematurity and (21%) cases of babies delivered above 37 week of gestation.

Table 6: Complication in mothers due to twins gestation

Maternal Complication	
Complications	No of Cases
Anemia	45
Prom	25
PIH	22
DIC	1
PPH	3
Eclampsia	3
Pulmonary edema	1

As per all maternal complication in twins pregnancy we shown severe anemia among in 45% followed by PROM occurred in 25%. PIH occurred in 22%. PPH occurred in 3% cases which is decreased due to AMTSL and newer prostaglandins. We came across Eclampsia in 3% and DIC and pulmonary edema in 1 % (Table no.6)

Table 7: Fet al. presentation

Fet al. Presentation	
Fet al. Presentation	No of Cases
Cephalic + Cephalic	41
Cephalic + Breech	26
Breech + Breech	18
Breech + Cephalic	9
Cephalic + Transverse lie	4
Transverse lie + Cephalic	2

Table 8: Mode of Delivery

Mode of Delivery	
Mode	Present Study
Lscs	27
Vaginal	68
Induced	3
Instrumental	2

Table 9: Distribution according to Birth Weight

Birth Weight		
Weight (kg)	Twins 1 st	Twins 2 nd
<1.5	18	23
1.5-2.5	75	71
>2.5	7	6

In this study, most common presentation was cephalic + cephalic (41%) followed by cephalic + breech (26%) and least was in Transverse lie + Cephalic (2%) LSCS taken for this presentation(table no.7).Among this study, most of twin babies delivered by vaginally(68%),LSCS taken in (27%) and instrumental delivery in 2% cases (Table no.8).we observed highest cases of babies delivered in birthweight between 1.5kg to 2.5kg and lowest in birthweight more than 2.5kg (Table no.9)

Table 10: Distribution according to Neonatal morbidity

Neonatal Morbidity		
Neonatal Morbidity	1st Twin	2nd Twin
VlBW	22	28
Sepsis	2	2
Prematurity	5	5
Birth asphyxia	4	4
Rds	3	4
Msl	1	0
Jaundice	1	2

Table 11: Perinatal Outcome

Perinatal Outcome		
Perinatal Outcome	1st Twin	2nd Twin
NICU Admission	23	34
IUFD	3	5
Neonatal Morbidity	38	45

Table 12: Neonatal Mortality

Neonatal mortality	T1	T2	Total
Septicemia	01	04	05
Hyaline Membrane Disease	05	06	11
Hypoxic ischemic encephalopathy	01	02	03

Amongst all neonatal morbidity, VLBW were most common seen followed by sepsis and least in MSL(table no.10).3 cases of IUFD seen in our study and 34 babies required NICU admission(Table no.11) We noticed neonatal mortality in 18 cases and most of them due to Hyaline membrane diseases because of their prematurity. (Table no.12)

DISCUSSION

As per above study Incidence of twin pregnancy in our study was more common between age group of 19-24 years. In our study, 89% had conceived spontaneously, 8% after ovulation induction by clomiphene citrate and gonadotrophins, and 3% after IVF. Most of the patients were primigravida (41%) and second gravida (29%) and from low socio-economic class (84%) and majority had regular antenatal check-ups (83%). Antenatal, Intrapartum and postpartum maternal and fetal complications were studied. Preterm labor was the commonest complication in our study. Incidence of preterm labor was (79%) most common followed by pre-eclampsia 18% and anemia 45%. Limited physical activity, early work leave, more frequent health care visits and sonographic examinations, and structured maternal education on preterm delivery risks have been advocated to reduce preterm births in women with multifetal pregnancy⁽⁸⁾. We came across most Commonest presentation was vertex-vertex (41%) followed by cephalic-breech (26%). The majority of cases in this study had vaginal delivery (68%) and 27% had cesarean sections. In majority cases indication of cesarean section was being malpresentation of the first baby followed by previous LSCS. Incidence of still birth was 3%. Majority of twins (79%) were having maturity less than 37 weeks. 27 twins were having maturity between 34 to 37 weeks and (21%) having maturity \geq 37 weeks. We noticed maternal complication Preterm (79%) were most common and others were Anemia (45%), Preeclampsia (18%), PPH (3%), Eclampsia (3%), DIC (1%), Pulmonary edema (1%). Not any case of maternal mortality happened in this series. Neonatal morbidity was in form of VLBW (28%), RDS (4%), Jaundice (2%), Sepsis (2%), Prematurity (5%), Birth Asphyxia (4%). In the present study, Most of babies with their baby weights come under 1500-2500 grams. In our study, (57%) NICU admission was observed for prematurity,

low birth weight, Respiratory Distress Syndrome, septicemia and Jaundice. 19 case of neonatal mortality occurred in which most common cause was hyaline membrane disease and it is due to prematurity.

CONCLUSION

Majority of the complications can be prevented with judicious approach and intensive monitoring protocols during antenatal period and labour. Adequate tocolysis should be instituted till lung maturity of both foetuses are achieved. Lung maturity should be achieved by administering steroids as and when indicated, thus preventing perinatal mortality secondary to preterm birth. The improved obstetric and NICU care in handling the problems of prematurity and other associated complications will improve the outcome in twin gestation

REFERENCE

1. Gabbe SG NJ, Simpson J.L, editor. Obstetrics Normal and Problem Pregnancies. 4th edition. Ed 2002.
2. Cunningham FG LK, Blood SL, Hauth JC, Gilstrap III LC, Wenstrom KD, editor. Williams Obstetrics. 22nd Ed ed. Apleton and Lange 25 Vant Street, East Norwak 2005.
3. Corsello G, Piro E. The world of twins: an update. J Matern Fet al. Neonatal Med. 2010 Oct;23 Suppl 3:59-62.
4. Roland Axt DM, Jochen Hendrik, Kulbilay Ertan., Michaela von Blohn aWS. Maternal and neonatal outcome of twin pregnancies complicated by single fet al. death. J Perinat Med. 1999;27(3):221-7.
5. Anna Dera GHB, Louis Keith. The mode of delivery in twin pregnancy Part I. Neonatal outcome. Archives of Perinatal Medicine 2008;14(1): 7-22.
6. Akinboro A, Azeez MA, Bakare AA. Frequency of twinning in southwest Nigeria. Indian J Hum Genet. 2008 May;14(2):41-7
7. Chan. PFY. Obstetric Implications of multiple gestation. The Australian and New Zealand Journal of Obstetrics and Gynecology. 2006.
8. Williams Obstetrics, 24e Chapter 45. Multifet al. pregnancy.

Source of Support: None Declared
Conflict of Interest: None Declared