

# Prevalence of Child Birth or Fetal Death and complications Associated to Twin Pregnancy with respect to Mode of Delivery

ZAIB UN NISA, BILQEES ARA, FARIDA KAKAR

## ABSTRACT

**Aim:** To examine the prevalence of mortality in twin pregnancies and complications associated to it with respect to delivery mode.

**Methods:** This descriptive/cross-sectional study was conducted at Department of Gynecology and Obstetrics Unit II, Sandeman Provincial Teaching Hospital Quetta over a period of one from 01.01.2017 to 31.12.2017. One hundred and ten booked and un-booked mothers whom were expected with twin pregnancy were included. Patient's ages were ranging from 20 to 45 years. Patient's detailed history was examined including age, socio-economic status and education etc after taking informed consent from all the patients. Complications and fetal death during delivery were noted. Mode of delivery was selected after clinical examination. All the statistical data was analyzed by SPSS version 19.0.

**Results:** Out of all one hundred and ten patients, 53 (48.18%) patients were ages between 20 to 29 years, 38 (34.55%) patients had ages 30 to 39 years while 19 (17.27%) patients were ages > 39 years. 62 (56.36%) patients had rural residency while 48 (43.64%) patients had urban residency. 48 (43.64%) patients were literate. 70 (63.64%) patients were booked while 36.36% were un-booked. Mode of delivery was noted as assisted breech delivery, Vacuum deliver, Forceps, C-section and spontaneous vaginal delivery as 20 (18.18%), 2 (1.81%), 3 (2.73%), 45 (40.90%) and 40 (36.36%). Mostly death was noted in C-section delivery mode 15 (13.63%) and they all are un-booked cases. Preterm delivery was the most common complication assisted to twin pregnancy was observed in 45 (40.91%) patients.

**Conclusion:** It is concluded that mostly perinatal deaths were observed in C-section delivery and all were un-booked cases. It may be due to not having sufficient information of patients therefore mostly patients were treated with caesarean section delivery and most of deaths fetal deaths were recorded.

**Keywords:** Child birth mortality, Delivery Mode, Twin pregnancy, Booked , Un-booked

## INTRODUCTION

Globally, twin pregnancies are varies in different age groups. It represent high risk pregnancy<sup>1</sup>. There are several factors that involves in twin pregnancy in which advance maternal age, and the use of drugs for fertility and induction of ovulation, these factors are resulted in increase number of twin pregnancies in the whole world.<sup>2-4</sup> Other factors that involves in twin pregnancies are maternal weight and height, previous twins delivery history and a diet.<sup>5</sup> Twin pregnancy reported as high risk pregnancy because it include increase risk of mortality and morbidity for mother and child during antenatal duration and labour period.<sup>6</sup> It is about 1 to 4% rate in all pregnancies and 10% of perinatal death rate.<sup>1</sup> Worldwide, twin pregnancies included high rate of mortality and morbidity as well as high rate of caesarean delivery. Most of the complications observed in pregnancy associated with twin delivery. The most frequent and serious complication is preterm labour, which plays a important role in increasing perinatal mortality and short and long-term morbidity observed in these new born babies.<sup>7</sup> The main obstructed complication includes that involves in perinatal mortality in twin pregnancy are preterm labour , low birth weight, gestational age, postpartum hemorrhage and prematurity of gestation<sup>8,9</sup>. The most common cause of newborn death is prematurity and low weight associated by sepsis and jaundice. Second twin is normally at high risk of mortality. The risk of severe birth

asphyxia is three times greater than the first twin newborn<sup>10</sup>.

Premature neonate have a great risk of acute respiratory distress, anemia, retinopathy, congenital anomalies and a long stay in hospitals.<sup>11</sup> The rate of mortality in twin pregnancy can be reduces by proper and earlier diagnosis of gestation, regular visits. Use of ultrasonography for gestation diagnoses plays an important role to reduce the mortality and morbidity in twin pregnancies.<sup>12</sup> Un-diagnosed or misdiagnosed may lead to high rate of complications and increase the rate of mortality. Most of the deaths are happens in unbooked cases in which no proper treatment and observation are made during antenatal period<sup>13</sup>.

This study was conducted to determine the prevalence of death in twin pregnancy with respect to mode of delivery and booked or un-booked cases also examine the complication followed by twin pregnancies. This study may helps to reduce the rate of mortality and morbidity and for better treatment of twin pregnancies.

## MATERIALS AND METHODS

This descriptive/cross-sectional study was conducted at Department of Gynecology and Obstetrics Unit II, Sandeman Provincial Teaching Hospital Quetta over a period of one from 01.01.2017 to 31.12.2017. One hundred and ten booked and un-booked mothers whom were expected with twin pregnancy were included. Patient's ages were ranging from 20 to 45 years. Patient's detailed history was examined including age, socio-economic status and education etc after taking informed consent from all the

Associate Professors, Obstetrics & Gynecology, Sandeman Provincial Hospital, Bolan Medical College Quetta  
Correspondence to Dr. Zaib un Nisa,  
Email: zaibunnisa.uob@gmail.com

patients. Complications and fetal death during delivery were noted. Mode of delivery was selected after clinical examination. Patients with singleton pregnancy, anemic patients, history of cancer or those who were not interested in this research was excluded from the study. All the statistical data was analyzed by SPSS version 19.0.

## RESULTS

Out of all one hundred and ten patients, 53 (48.18%) patients were ages between 20 to 29 years, 38 (34.55%) patients had ages 30 to 39 years while 19 (17.27%) patients were ages >39 years. 62 (56.36%) patients had rural residency while 48 (43.64%) patients had urban residency. 48 (43.64%) patients were literate (Table 1). 70 (63.64%) patients were un-booked while 40 (36.36%) were booked (Table 2).

Mode of delivery was noted as assisted breech delivery, Vacuum deliver, Forceps, C-section and spontaneous vaginal delivery as 20 (18.18%), 2 (1.81%), 3 (2.73%), 45 (40.90%) and 40 (36.36%). Mostly death was noted in C-section delivery mode 15 (13.63%) and they all are un-booked cases. 2 (1.82%) deaths are in SVD procedure (Table 3).

Complication followed by obstructed labour in twin pregnancies were noted as antepartum hemorrhage in 2 (1.81%) patients, cord prolapsed in 4 (3.64%), delayed 2<sup>nd</sup> stage in 1 (0.91%), pregnancy induced hypertension in 20 (18.18%), malposition in 10 (9.09%), prolonged labour in 5 (4.55%), premature rupture of membranes in 4 (3.64%) Preterm delivery was the most common complication assisted to twin pregnancy was observed in 45 (40.91%) patients and no complications were observed in 19 (17.27%) patients (Table 4).

Table 1: Demographically detail of all the patients

Characteristics	No.	%
<b>Age (years)</b>		
20 to 29	53	48.18
30 to 39	38	34.55
>39	19	17.27
<b>Residency</b>		
Urban	48	43.64
Rural	62	56.36
<b>Education</b>		
Literate	48	43.64
Illiterate	62	56.36

Table 2: Booked and un-booked cases

Characteristics	No.	%
Un-Booked	70	63.64
Booked	40	36.36

Table 3: Mode of delivery of all patients

Characteristics	No.	%
Assisted breech deliver	20	18.18
Vacuum Delivery	2	1.81
Forceps	3	2.73
C-Section	45	40.9
Spontaneous vaginal delivery	40	36.36
Assisted breech deliver	20	18.18

Table 4: Prevalence of mortality followed by mode of delivery and booked and un-booked cases

Characteristics	Booked cases n=40/110	Un-booked cases n=70/110
<b>Delivery mode</b>		
Assisted breech delivery	0/20	0
Vacuum delivery	0/2	0
Forceps	0/3	0
C-section	0/20	15/25 (13.63%)
Spontaneous vaginal delivery	0/25	2/25 (1.82%)

Table 5: Obstetrics Complications followed by twin pregnancy

Characteristics	No.	%
Antepartum hemorrhage	2	1.81
Cord prolapsed	4	3.64
Delayed 2 <sup>nd</sup> stage	1	0.91
Pregnancy induced hypertension	20	18.18
Malposition	10	9.09
Prolonged labour	5	4.55
Premature rupture of membranes	4	3.64
Preterm delivery	45	40.91
No complications	19	17.27

## DISCUSSION

Mortality in twin pregnancy is most commonly found in advance ages<sup>14</sup>. In this study, 53(48.18%) patients were ages between 20 to 29 years, 38(34.55%) patients had ages 30 to 39 years while 19(17.27%) patients were ages >39 years, these results shows similarity to the study conducted by Luo et al in 2013 in which most of the patients were ages between 18 to 30 years (46%). In our study mostly patients were ages between 20 to 29 years. These results may be reported due to the increase use of fertility drugs in this age group. Another study shows similarity to our study in which most of the patients were ages between 20 to 30 years<sup>16</sup>.

In the present study, we found mostly patients was un-booked 70 (63.64%) patients while 40 (36.36%) were booked, it was may be due to the number of patients had rural residency and had low income due to these factors patients do not aware of antenatal visits and care.<sup>17</sup> These results shows similarity to the study conducted by Mehreen et al<sup>12</sup> and Naushaba et al.<sup>2</sup> We observed that most of the patients were unbooked and all the deaths of perinatal was in unbooked patients and in C-section delivery mode. These results shows that caesarean section delivery rate is high in un-booked patients. 17 (15.45%) mortality rate was shown in our study. These results shows the similarity to the study conducted by Akaba et al<sup>17</sup> and Obiechina et al<sup>18</sup>, in which they reported that the rate of C-section and SVD delivery mode was high in twin pregnancies and all the 60% C-section deliveries were performed in un-booked patients.

Currently we demonstrated that early and proper diagnosing and proper antenatal care may helps to reduce the rate of perinatal mortality in twin pregnancy and this shows similarity to the other study.<sup>19</sup> In the present study, we observed complication followed by obstructed labour in twin pregnancies were noted as antepartum hemorrhage in 2(1.81%) patients, cord prolapsed in 4 (3.64%), delayed 2<sup>nd</sup>

stage in 1 (0.91%), pregnancy induced hypertension in 20(18.18%), malposition in 10 (9.09%), prolonged labour in 5 (4.55%), premature rupture of membranes in 4 (3.64%) Preterm delivery was the most common complication assisted to twin pregnancy was observed in 45 (40.91%) patients and no complications were observed in 19(17.27%) patients these results shows similarity to some other studies in which the rate of preterm labour was high as 38.91% and 40%<sup>20,21</sup>.

Moreover, this research was not sufficient due to less number of patients population. We should have to do more work to provide better treatment and to reduce the perinatal mortality rate and to aware mothers that antenatal visits or care is much important for her and her spouse.

## CONCLUSION

Twin pregnancy is a high risk pregnancy because rate of morbidity and mortality is high in twin pregnancy. In this study we concluded that mostly perinatal deaths were observed in C-section delivery and all were un-booked cases. It may be due to not having sufficient information of patients therefore mostly patients were treated with caesarean section delivery and most of perinatal or fetal deaths were recorded. Patients should be aware of importance of antenatal visits and regular care during gestation period.

## REFERENCES

- Bangash N. Outcome of twin pregnancy in non-booked cases. *Pak Armed Forces Med J* 2005;55:323-6.
- Naushaba R, Abbasi RM, Mughal R. Maternal morbidity and perinatal outcome with twin pregnancy. *J Ayub Med Coll Abbottabad* 2010; 22(2):105-7.
- Crowther CA, Dodd JM. Multiple pregnancy. In: James DK, Steer PJ, Weiner CP, Gonik B, eds. *High risk pregnancy management options*. 4<sup>th</sup> ed. London: Elsevier 2011; 1053-64.
- Qazi G. Obstetric and perinatal outcome of multiple pregnancy. *JCPSP* 2011; 21(3): 142-5.
- Mazhar SB, Rahim F, Furukh T. Fetomaternal outcome in triplet pregnancy. *J Coll Physicians Surg Pak* 2008;18: 217.
- Onyiriuka S. Twin delivery: incidence and perinatal outcome in a Nigerian mission hospital. *Bangladesh J Med Sci* 2011; 10(1):45-51.
- Nargis D, Aneesa F, Nasreen A. Assessment of pregnancy outcome in primigravida: comparison between booked and non booked patients. *J Ayub Med Coll Abbottabad* 2010; 22(2): 23-5.
- Chittacharoen A, Singhakun D, Israngura, N, Ayudhya NA. Pregnancy outcome of twin pregnancy in Ramathi Hospital *J Med Assoc Thai* 2006; 89(4): 76-9.
- Armson BA, O'Connell C, Persad V Determination of perinatal mortality and serious neonatal morbidity in the second twin. *Obstet Gynecol* 2006; 108(3pt 1): 556-64.
- Renata Almeida DE Assuncao. perinatal outcome of twin pregnancies in a teaching hospital. *Rev Assoc Med Bras* 2010; 56(4): 447-51.
- Pons JC, Hoffmann P, Bringer S, Deutsch V, Lisik F, Schall JP. Management of twin pregnancy. *Rev Prat* 2016; 56: 2227.
- Mahreen MN. Outcome of twin pregnancy in booked versus un-booked cases. *JCPSP* 2003; 13: 498-500.
- Sperling, Kiil C, Larsen LU, Brocks V, Woidemann KR, Qvist I. Detection of chromosomal abnormalities and transfusion syndrome in twins. *Ultrasound Obstet Gynecol* 2007;29: 517.
- Rizwan N, Abbasi RM, Mughal R. Maternal morbidity and perinatal outcome with twin pregnancy. *J Ayub Med Coll Abbottabad* 2010;22:105-7.
- Luo ZC, Zhao YJ, Ouyang F, Yang ZJ, Guo YN, Zhang J. Diabetes and perinatal mortality in twin pregnancies. *PLOS* 2013;8(9):375345.
- Mundhra R, Singh AS, Manika Agarwal, Kumar R. Utilization of antenatal care and its influence on fetal-maternal outcome: a tertiary care experience. *Int J Reprod Contracept Obstet Gynecol* 2013; 2(4): 600-6.
- Akaba GO, Agida TE, Olatunde O, Offiong RA, Adewole ND. Review of twin pregnancies in a tertiary hospital in Abuja, Nigeria. *J Health Popul Nutr* 2015;31(2):272-7.
- Obiechina N, Okolie V, Eleje G, Okechukwu Z, Anemeje O. Twin versus singleton pregnancies: the incidence, pregnancy complications, and obstetric outcomes in a Nigerian tertiary hospital. *Int J Women's Health* 2011;3:227-30.
- Parveen T, Shaheen N, Kausar T. Frequency of perinatal mortality in women with twin gestation. *PJMHS* 2013; 7: 1153-5.
- Persad VL, Baskett TF, O'Connell CM, Scott HM. Combined vaginal-cesarean delivery of twin pregnancies. *Obstet Gynecol* 2001;98:1032-7.
- Kontopoulos EV, Ananth CV, Smulian JC, Vintzileos AM. The impact of route of delivery and presentation on twin neonatal and infant mortality: a population based study in the USA, 1995-97. *J Matern Fetal Neonatal Med* 2004;15:219-24.