

Frequency of Perinatal Mortality in Women with Twin Gestation

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ABSTRACT

Aim: To determine the frequency of booked and un-booked twin pregnancies and perinatal mortality among them.

Study design: It was a descriptive cross sectional study.

Duration: Six months from March 2012 to September 2012. Settings: Department of Obstetrics & Gynaecology, Bahawal Victoria Hospital, Bahawalpur.

Methods: A total of 100 cases with twin gestation in reproductive age group with any parity and gestational age after 28 weeks were enrolled in the study while patients with fetal anomalies, known cases of: diabetes mellitus, hypertension, respiratory, cardiac, liver, gastrointestinal, neoplastic and who deliver first twin outside hospital and then present in hospital with retained second twin were excluded from the study.

Results: In this study, 45(45%) were between 18-30 years, 40(40%) were between 31-40 years and 15(15%) were between 41-45 years, mean+sd was calculated as 28.45+5.26 years, frequency of booked and unbooked cases in twin pregnancies were recorded as 31(31%) and 69(69%) respectively, regarding perinatal mortality, out of 31 booked cases, 2(6.45%) while out of 69 unbooked cases, 17(24.64%) were recorded with mortality while remaining cases in both groups had findings of perinatal mortality.

Conclusion: We concluded that the frequency of perinatal mortality is significantly higher among unbooked twin pregnancies than booked twin pregnancies.

Keywords: Perinatal mortality, perinatal mortality, fetal anomaly

INTRODUCTION

Twin pregnancies account for approximately 10 in 1000 live births in the United States (variable based on geographic location)¹. The incidence of twinning has been increasing in developing countries because of 2 factors: use of fertility treatment and advanced maternal age². The rate of twinning is 3.8 times higher with assisted reproduction than in the general population. Multiple gestations account for 10% of all perinatal morbidity and mortality³.

Multiple gestation is associated with higher rates of almost every potential complication of pregnancy, with the exceptions of post-term pregnancy and macrosomia⁴. The most serious risk is spontaneous preterm delivery, which plays a major role in the increased perinatal mortality and short-term and long-term morbidity observed in these infants⁵. Higher rates of fetal growth restriction and congenital anomalies also contribute to adverse outcome in twin births. In addition, monochorionic twins are at risk for complications unique to these pregnancies, such as twin-twin transfusion syndrome, which can be lethal or associated with serious morbidity⁶.

Undiagnosed twin pregnancy imposes unnecessary risk for the mother and increases

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perinatal mortality. Twin pregnancy is diagnosed in 75% of patients before delivery and often presents late, which is regrettable because much can be done for the mother and the offspring if treatment is given earlier.

This study will enable us to educate the subjects with twin gestation that perinatal mortality of twins can be reduced by early diagnosis in antenatal period following proper management.

MATERIAL & METHODS

A total of 100 cases with twin gestation in reproductive age group with any parity and gestational age after 28 weeks were enrolled in the study while patients with fetal anomalies, known cases of: diabetes mellitus, hypertension, respiratory, cardiac, liver, gastrointestinal, neoplastic and who deliver first twin outside hospital and then present in hospital with retained second twin were excluded from the study. These cases were collected from Department of Obstetrics & Gynaecology, Bahawal Victoria Hospital, Bahawalpur. An informed consent of the patients was obtained to include their data in the study. Patients were followed till first week after delivery for the outcome variable i.e. perinatal mortality in both Groups.

Data was entered and analyzed in Statistical package for SPSS 16. Mean+standard deviation was

calculated for quantitative data. Frequencies and percentages were calculated for booked, un-booked cases and perinatal mortality. Chi-Square was used to determine any significance in perinatal mortality between the groups. P value <0.05 was considered significant.

RESULTS

In this study, 45(45%) were between 18-30 years, 40(40%) were between 31-40 years and 15(15%) were between 41-45 years, mean+sd was calculated as 28.45+5.26 years (Table 1).

Frequency of booked and unbooked cases in twin pregnancies were recorded as 31(31%) and 69%(n=69) respectively (Table 2).

Regarding perinatal mortality, out of 31 booked cases, 2(6.45%) while out of 69 unbooked cases, 17(24.64%) were recorded with mortality while remaining cases in both groups had findings of perinatal mortality (Table 3).

Table 1: Age distribution (n=100)

Age(in years)	n=	%age
18-30	45	45
31-40	40	40
41-45	15	15

Mean+SD:28.45+5.26

Table 2: Frequency of booked and un-booked cases in twin pregnancies (n=100)

Booked/Un-booked cases	n=	%age
Booked	31	31
Un-booked	69	69

Table 3: Frequency of perinatal mortality in booked and un-booked cases in twin pregnancies (n=100)

Perinatal mortality	Booked	Unbooked
Yes	2(6.45%)	17(24.64%)
No	29(93.55)	52(75.36)

P value=0.000

DISCUSSION

In this study, 45(45%) were between 18-30 years, 40(40%) were between 31-40 years and 15(15%) were between 41-45 years, mean+sd was calculated as 28.45+5.26 years, frequency of booked and unbooked cases in twin pregnancies were recorded as 31(31%) and 69(69%) respectively, regarding perinatal mortality, out of 31 booked cases, 2(6.45%) while out of 69 unbooked cases, 17(24.64%) were recorded with mortality while remaining cases in both groups had findings of perinatal mortality.

Our findings with regards to frequency of booked and unbooked cases of twin pregnancies are in agreement with MN Mahreen who recorded Booked patient in 32.3% and unbooked patient 67.7% while

perinatal mortality was 15.3% in non booked cases versus 3.2% in booked cases (p-value less than 0.01)⁷.

Another study⁸ by Rozina Mustafa and others determined the frequency of causes and perinatal mortality rates in twins and recorded that out of total 18 affected twins 3(16.6%) were booked and 15(83.3%) were unbooked, these findings are showing comparatively higher than ours but similar to the hypothesis of the current study that unbooked cases are significantly higher risk of perinatal mortality in twins as compare to booked cases.

Another study⁹ assessed the outcome of twin pregnancy in unbooked cases and recorded that the rate of 9 patients (15%) the perinatal mortality was high in twin pregnancy as compared to singleton pregnancy. In this study comparison with booked was not done but the rate of perinatal mortality and other outcome was higher. Though we did not include other outcome of unbooked cases in our trial being the limitation of the study, but in support with the other studies it clarifies that unbooked twin pregnancies are significantly at higher risk of adverse outcome.

The concept that early diagnosis of twin pregnancy leads to a decreased likelihood of perinatal mortality was described as early as 1979¹⁰. Today, consensus exists that early diagnosis not only decreases mortality and morbidity rates, but is the key to providing optimal antepartum care and the cornerstone of effective management of labor and delivery. Among the most important advantages of early diagnosis is elimination of the possibility that the second twin will remain unrecognized until after the birth of the first.

It is well known that birth weight and gestational age are most important factors affecting perinatal mortality and are the most significant determinants of infant and childhood morbidity. Luke and Keith in 1992, reported on the contribution, during a contemporary time frame, of singletons, twins and triplets to low birth weight infants mortality and handicap in the United States, twins were reported to have an overall risk of 1.4 when compared with singletons¹¹. Prematurity and low birth weight was the major problem found in our study.

However, the results of the study are helpful to educate the subjects with twin gestation that perinatal mortality of twins can be reduced by early diagnosis in antenatal period following proper management.

CONCLUSION

We concluded that the frequency of perinatal mortality is significantly higher among unbooked twin pregnancies than booked twin pregnancies. So, it is required that every patient who present with

unbooked twin gestation, should be sort out for perinatal mortality. However, it is also required that every setup should have their surveillance in order to know the frequency of the problem while the awareness of proper follow up in antenatal period in twin gestation should also be increased to control the frequency of perinatal mortality.

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