



TWIN PREGNANCY OUTCOMES BETWEEN PLANNED AND UN-PLANNED CASES AT TERTIARY CARE CENTER

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ABSTRACT

Background: If a twin pregnancy is not diagnosed, it increases the risk to the mother and also raises the likelihood of perinatal mortality. In 75% of cases, twin pregnancies are identified before delivery^[2], but there are instances where they are detected at later stages, which is regrettable because early intervention for both the mother and children can be very beneficial. **Aim:** To determine the prevalence of planned and un-planned twin pregnancies, as well as perinatal mortality among them at a tertiary care institution. **Methods:** From September 2021 to September 2022, a descriptive case series research was carried out in the Department of Gynae/Obs at Government Medical College Barmer (Raj). Non-probability Consecutive sampling was used to pick a total of 80 patients. **Results:** The study included a total of 80 patients with twin pregnancy. Among them, 36 (45%) were aged between 18-30 years, 24 (30%) were aged between 31-40 years, and 16 (20%) were aged between 41-45 years. Out of these patients, 32 (40%) had planned deliveries while 48 (60%) did not. Among the planned deliveries, 2 (2.5%) resulted in perinatal mortality while 28 (35%) did not. On the other hand, among the unplanned deliveries, 12(25%) resulted in perinatal mortality while 36 (75%) did not. The main causes of perinatal mortality were meconium aspiration syndrome, which was present in 8 (10%) of the patients, followed by birth asphyxia in 4 (5%) of the patients and neonatal sepsis in 4 (5%) of the patients. **Conclusion:** The patient should be given enough information about the benefits of regular prenatal examinations so that perinatal mortality in twins pregnancies can be reduced by early detection in the antenatal period and appropriate management.

KEYWORDS: Perinatal Mortality, Twin Pregnancy, Booked Cases.

INTRODUCTION

The use of assisted reproductive techniques like medications to induce ovulation, in vitro fertilization, and various intra-fallopian transfer procedures has led to a rise in the occurrence of twin pregnancies.^[1]

A pregnancy with twins is considered to be high-risk due to the elevated likelihood of complications for both the mother and the fetuses during both the prenatal period and delivery.^[3] Twin pregnancies account for around 1-4% of all pregnancies^[4,5] and contribute to 10% of the total perinatal mortality rate.^[2]

Twin pregnancy is linked with increased occurrences of almost all possible pregnancy-related complications. The most severe danger is the possibility of unexpected premature birth, which significantly contributes to the higher rate of perinatal mortality and both short-term and long-term health problems found in these babies. Perinatal mortality in multiple pregnancies is influenced by several significant factors, including premature birth, low birth weight, gestational age, intrauterine growth

restriction, labor complications, antepartum hemorrhage, and birth injuries.^[6]

Acute respiratory distress syndrome, intraventricular haemorrhage, anaemia, congenital abnormalities, retinopathy, necrotizing enterocolitis, patent ductus arteriosus, and a protracted hospital stay are all risks for premature neonates.^[7] Prematurity and very low birth weight are the leading causes of newborn mortality, followed by infection and jaundice. The risk of severe birth asphyxia in the second twin is three times larger than in the first. Elective caesarean birth at term may enhance the second twin's perinatal prognosis.^[8]

Approximately two-thirds of twins are non-identical or dizygotic, while the remaining one-third are identical or monozygotic. Monozygotic twins, compared to dichorionic twins, have a significantly higher likelihood of complications^[9], such as acute transfusion, twin-to-twin transfusion syndrome, twin reversed arterial perfusion (TRAP) sequence, and intrauterine death. Therefore, identifying chorionicity is crucial^[10], and

monitoring monochorionic pregnancies is critical for antenatal care.^[11]

Twin pregnancy management is most effective when the diagnosis is discovered early in the pregnancy. Current ultrasound scans can show the twin pregnancy, placentation, the shape of the central membranes, and fetal gender. Ultrasonography also aids in the selection of appropriate prenatal treatment and best method of delivery.^[12]

If a twin pregnancy goes Undiagnosed, it can create unnecessary risks for the mother and increase the chances of perinatal mortality. While twin pregnancies are detected in about 75% of cases before delivery, they are often detected late, which is unfortunate because early treatment can benefit both the mother and the babies. According to a study by Rajlaxmi Mundhra published in 2013, only 32.3% of patients were planned while 67.7% were unplanned, and the rate of perinatal mortality was significantly higher in un planned cases (15.3%) compared to planned cases 3.2%.^[13]

MATERIAL AND METHODS

From September 2021 to September 2022, a descriptive case series research was conducted at Government Medical College Barmer (Raj) Department of Gynae/Obs. The sample size of 80 cases was determined using non-probability Consecutive sampling with a 95% confidence level, an 8% margin of error, and the predicted percentage of planned cases of twin pregnancies, which was 32.3%.

The study involved women in their reproductive age group who presented at a tertiary care hospital with confirmed twin gestation through ultrasonography. Those who had a parity and gestational age after 28 weeks were included, while those with fetal anomalies, known cases of diabetes mellitus, hypertension, respiratory, cardiac, liver, gastrointestinal, or neoplastic diseases were excluded. Additionally, patients who delivered the first twin outside the hospital and came to the hospital later with the second twin retained were also excluded from the study.

The hospital's ethical committee granted approval, and the study population provided informed consent with the promise that their information would be kept confidential. The cases were gathered from the Obstetrics & Gynaecology Department at Government Medical College Barmer (Raj), India. Patients agreed to have their data included in the study after giving informed consent. The patients were monitored for perinatal mortality in both groups until the first week following delivery, and all of this data was documented on a pre-designed form.

The information was input and assessed through SPSS software. The mean and standard deviation were computed for the numerical data in order to determine

descriptive statistics, while the frequencies and percentages were calculated for the categorical variable (i.e. Planned, un-planned, and perinatal mortality). To assess the significance of perinatal mortality between the groups, a Chi-Square test was performed, with a P value of less than 0.05 being considered significant. In order to control the effect modifiers, the data was stratified based on age and parity.

RESULTS

Table 1: Distribution of patients according to their age (n=80)

Age in years	n	%age
18-30	36	45
31-40	24	30
41-45	16	20

Table 2: Frequency of planned and Unplanned cases in twin pregnancies (n=80)

Booked/Un booked cases	n	%age
Booked	32	40
Un Booked	48	60

Table 3: Frequency of Perinatal Mortality in planned and Unplanned in twin pregnancies (n=80)

Perinatal Mortality	Planned	Un Planned
Yes	2 (2.5%)	12(25 %)
No	28 (35%)	36(75 %)

Table 4: Causes of perinatal mortality (n=80)

Causes of perinatal mortality	n	%age
Meconium aspiration	8	10
Birth asphyxia	4	5
Neonatal sepsis	4	5

This research involved 80 patients who had twin pregnancies. The age distribution of these patients was recorded in table 1, and the results showed that 36 individuals (45%) were between the ages of 18-30, 48 individuals 24 (30%) were between the ages of 31-40, and 30 individuals 16(20%) were between the ages of 41-45. Table 2 presents the distribution of 80 patients based on their booking status, indicating that 32 (40%) were planned while 48 (60%) were unplanned.

Perinatal mortality (Table 3) occurred in 2(2.5%) of planned patients, whereas there was no perinatal mortality in 28(35%).

Perinatal mortality (Table 3) occurred in 12(25%) of unplanned patients, while there was no perinatal mortality in 36 (75%).

The most common cause of perinatal mortality was meconium aspiration syndrome, which occurred in 8(10%) of patients. The second main cause of perinatal mortality was birth asphyxia, which occurred in 4(5%) of patients, followed by neonatal sepsis in 4(5%) of patients (Table -4).

DISCUSSION

Pregnancies with twins and consequently perinatal death occur more frequently in older women. Our research revealed that 36(45%) of cases were within the age range of 18-30 years, 24(30%) were between 31-40 years, and 16(20%) were between 41-45 years. Rajlaxmi Mundhra also obtained Similar findings in 2013.^[13]

The incidence of twin pregnancies was observed to be 32 (40%) for planned cases and 48 (60%) for unplanned cases. A considerable number of pregnant women who were not planned may be due to their lower educational status and lower social class, which may lead to a lack of awareness about the importance of antenatal visits.^[2] Nowadays, There is widespread agreement that early detection of medical conditions not only reduces the incidence of morbidity and mortality rates but is also crucial in providing the best possible prenatal care and serves as the foundation for effective management of labor and delivery.^[15]

In regards to perinatal mortality, studies have shown that the rate of perinatal death in twin pregnancies is 4-10 times greater than in single pregnancies, making up a significant proportion of overall perinatal mortality. Our study recorded that out of 32 cases (40%) who were planned, only 2 cases (2.5%) experienced perinatal mortality, whereas out of 48 unplanned cases (60%), 12 cases (25%) experienced perinatal mortality. Another study conducted by Rajlaxmi Mundhra reported similarly high rates of perinatal mortality. The primary causes of perinatal mortality in our study were meconium aspiration, birth asphyxia, and neonatal sepsis.^[13]

CONCLUSION

Twin pregnancies are considered high risk, and unplanned twin pregnancies have a significantly higher frequency of perinatal mortality compared to planned twin pregnancies. It is crucial to diagnose twin pregnancies before delivery, and patients should receive adequate information about the benefits of regular antenatal visits. This can lead to early diagnosis and proper management during the antenatal period, which may reduce perinatal mortality in twins.

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