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Perinatal Mortality in Twin Pregnancy - A Retrospective Analysis

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OBJECTIVE - To find out the perinatal mortality in twin pregnancy and factors related to it. **METHODS** - A retrospective study of 188 cases of twin pregnancy seen over a period of two years (Jan 1999 to Dec 2000) was carried out. Mortality in first of the twins and second of the twins was analysed. A subanalysis of mortality at different weights of the fetuses was done. **RESULT** - 94.14% were booked cases while 5.86 were emergency cases. Breech presentation was found in 19.68% and 26.59% of cases of first and second of the twins respectively. Twenty five percent of first of the twins and 27.65% of second of the twins required LSCS. Perinatal mortality of second of the twins was significantly higher than that of first of twins. **CONCLUSION** - Perinatal mortality in twin pregnancy is alarmingly high. Early diagnosis, prevention of prematurity and liberal use of caesarian section with good neonatal care can decrease perinatal mortality in twin pregnancy.

Key words : twin, perinatal mortality

Introduction

Multiple pregnancy is a high risk pregnancy deserving institutional delivery. Undue enlargement of abdomen arouses suspicion of multiple pregnancy and diagnosis must be confirmed before patient goes in active labour. But, at times, diagnosis is made late in labour or after delivery of first baby or even at time of caesarean section.

Multiple pregnancy is associated with high incidence of problems like anaemia, PIH, APH, malpresentations, hydramnios and premature onset of labour. Also during labour, there is increased risk of abnormal presentations, prolonged labour and cord prolapse. All these factors contribute to increase in perinatal mortality and morbidity, particularly so for the second of the twins.

Material, methods and results

A retrospective study of 188 cases of twin pregnancy cases seen over a period of two years was carried out.

During this period, out of total 12598 deliveries, there were 188 cases of twin pregnancy giving an incidence of 1.49% (1:67). This incidence was higher than 1:88 reported by Narvekar and Thakur[1].

One hundred seventy seven of these 188 cases were booked cases. Maximum number of patients were between age group of 21-25 yrs. We did not find increased incidence of twin pregnancy with increasing parity.

There were many combinations of presentations, commonest being both vertex followed by 1st vertex and 2nd breech combination (Table I). Incidence of breech was 19.7% and 26.5% in first and second fetuses. The period of gestation at the time of onset of labour varied between 24 – 41 wks, average being 33 wks. Only 38.29% of pregnancies continued beyond 37 wks of gestation.

Table II shows the mode of delivery in these 188 cases. 65.96% of first and 51.59% of second of twins delivered normally vaginally. In 27.65% cases, caesarean section was done to deliver second baby. Internal podalic version was done in four cases to deliver the second baby.

Table I : Various Combinations.

Combinations	Number of women	Percentage
Vx-Vx	108	57.44
Vx-Br	34	18.08
Br-Vx	20	10.63
Br-Br	14	7.44
Vx-Tr	5	2.65
Br-Tr	3	1.59
Tr-Br	2	1.06
Tr-Tr	1	0.53
Tr-Vx	1	0.53
Total	188	100.0%

Average duration between the delivery of first and second of the twins was 10 minutes, the maximum being 5 hrs 20 min and the minimum being 2 min.

Table III shows weight of fetuses in grams, maximum being in the range of 1550 – 2000 gm. Maximum difference in weight of two babies was 1,450 gm. The incidence of low birth weight babies weighing < 2000 gm was 63.3%.

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Table II : Mode of delivery

Mode of delivery	1st baby (n=188)	2nd baby (n=188)
Normal	(65.96%) 124	97 (51.59%)
Breech	(9.04%) 17	52 (17.02%)
Forceps	0	5 (2.65%)
Vaccum	0	2(1.06%)
LSCS	(25%) 47	52 (27.65%)
Internal Podalic Version	0	4 (2.12%)
Total LSCS	52 (27.65%)	

Table III : Weight of the babies

Weight in grams	1st baby	2nd baby
< 1000	11 (5.85%)	10 (5.31%)
1050 – 1500	38 (20.21%)	39 (20.74%)
1550 – 2000	67 (35.63%)	74 (39.36%)
2050 – 2500	48 (25.53%)	54 (28.72%)
> 2550	24 (12.76%)	11 (5.15%)

Low Apgar score was more common amongst the second of the twins (25.04%) as compared to first of the twins (13.08%). Four of 188 babies of first of the twins were still born while 10 of the second of the twins were still born. The rate of still births was high amongst the fetuses weighing < 2000 gm (Table IV).

Table IV : Still Births

Weight in grams	1st baby		2nd baby	
	No.	S.B.	No.	S.B.
< 1000	11	1	10	-
1050 – 1500	38	2	39	3
1550 – 2000	67	1	74	9
2050 – 2500	48	-	54	2
> 2550	24	-	11	1
Total	188	4	188	10

The overall perinatal mortality rate was 17.02%, with 64 perinatal deaths in 376 fetuses. It was much higher in second of the twins as compared to the first of the twins (Table V). Perinatal mortality after excluding the babies weighing < 1000 gm was 13.29%, while it was only 3.39% in babies weighing > 2000 gm. PIH, APH and anemia had further deteriorating effect on increasing mortality rate while intrapartum delay in the delivery of second of the twins, cord prolapse, and malpresentations contributed to high PNM more so for the second of the twins.

Table V : Perinatal mortality

Weight in grams	1st baby		2nd baby	
	No.	N.D.	No.	N.D.
< 1000	11	9 (81.8%)	10	9 (90%)
1050 – 1500	38	8 (21.05%)	39	12 (30.76%)
1550 – 2000	67	3 (4.47%)	74	18 (24.32%)
2050 – 2500	48	2 (4.1%)	54	3 (5.5%)
> 2550	24	0	11	0
Total	188	22 (11.70%)	188	42 (22.34%)

Discussions

The incidence of twin preganancy varies in different countries. It is as low as 10 – 12/1000 births amongst Caucacians where as it is as high as 40/1000 births in Nigeria as reported by MacGillivary et al [2]. Preterm labour is common in twin preganancy. The incidence of patients delivering before 37 completed weeks was 61.21% in our study, which was comparable to 64% reported by Chhabra et al [3]. Because of high incidence of antenatal and intranatal risk factor, instrumental and operative delivery rate is high in twin gestation. The incidence of LSCS was 27.65% in our study. This was similar to 27% reported by Rani [4].Low birth weight is common in twin gestation. The average weight of first of the twins was 2 kg, while it was 1.7 kg for second of the twins.

Perinatal mortality in twin pregnancy is very high. High incidence of prematurity, low birthweight, birth asphyxia associated with delay in delivery of second of the twin and high incidence of malpresentations contributed to this high perinatal mortality. The associated antenatal and intranatal complications also have additional effect on this. The perinatal mortality rate in our study was 17.02%. High perinatal mortality rates of 11.5% and 17.4% have been reported by Chabra et al [3] and Rani et al [4] respectively. Perinatal mortality rate is much higher in second of the twins.

Thus, in spite of improvements in the obstetric services perinatal mortality in twin pregnancy is alarmingly high. Perhaps good antenatal care, early diagnosis, recognition and treatment of antenatal risk factors, prevention of premature labor, better intranatal obstetric care with liberal use of LSCS along with good neonatal intensive care unit.especially for premature low birth weight babies will help to decrease perinatal mortality rate in twin pregnancy significantly.

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