

EVALUATION OF PERINATAL MORTALITY IN 363 CASES OF MULTIPLE PREGNANCY

SHAHESH KORE ● P.K. SHAH ● P.R. VAIDYA

SUMMARY

A study of 363 cases of multiple pregnancy including two cases of triplets was carried out for 8 years at L.T.M.G.H. 82% were booked cases whereas 18% were emergency cases. Breech presentation was found in 15.7% and 49.3% of cases of first and second of the twins respectively. 68.31% of patients were between 28 to 37 weeks of gestation.

82.6% of first of the twins and 79% of second of the twins had vaginal delivery. 7.71% of first of the twins and 10.47% of second of the twins required L.S.C.S. 63% of the first of the twins and 61% of the second of the twins weighed less than 2.0% kg.

The stillbirth rate was 5.23% and 7.16%, in first and second of the twins respectively. Overall perinatal mortality was 23.58%. It was significantly higher ($P > 0.001$) in second of the twins (34.71%) compared to that in the first of the twins (17.91%). The high perinatal mortality was attributed to greater delivery interval, prematurity, operative interference, abnormal presentations and premature separation of placenta.

Increased incidence of associated pregnancy complications like preeclampsia, anaemia and antepartum haemorrhage also were found to be contributory to increased P.N.M.

*Dept. of Obs & Gyn, L.T.M.G. Hospital & College,
Sion, Mumbai*
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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 cesarean section.

Multiple pregnancy is associated with high incidence of problems like anemia, preeclampsia, antepartum haemorrhage, malpresentation, 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 perinatal mortality and morbidity particularly so for the second of the twins.

MATERIAL AND METHODS AND RESULTS

To find out factors related to perinatal mortality, a retrospective study of 363 cases of multifoetal pregnancy was carried out

at L.T.M.G. Hospital, Sion over a period of 8 years.

During this period, out of total 48,415 deliveries, there were 363 cases of multiple pregnancies giving incidence of 0.7%. 360 had twins with incidence of 1:134 pregnancy while 3 had triplets.

298 of 363 cases were booked cases while 65 were emergency cases.

Maximum number of patients were between age group of 21 - 25 years. But we did not find increase in incidence of multiple pregnancy with increasing parity.

There were many combinations of presentations, maximum being both vertex and first vertex second breech combination (Table I).

Table II shows incidence of various presentations in first and second of twins. There was high incidence of breech and transverse lie in second of the twins.

The period of gestation at time of onset of labour varied between 21 - 41 weeks,

Table I

Combination of presentations	No. of cases	Percentage
Vertex-vertex	+ 2*	41.87%
Vertex-breech	118 + 1*	32.5%
Breech-vertex	31	8.54%
Breech-breech	27	7.44%
Vertex-transverse	19	5.23%
Breech-transverse	11	3.03%
Transverse-transverse	3	0.83%

* Triplets

Table II
PRESENTATION IN FIRST AND SECOND OF THE TWINS

Presentation	Ist baby		IInd baby	
	No.	%	No.	%
Cephalic	289	79.6	183	50.4
Breech	69 1	9.0	148	40.8
Transverse	5	1.4	32	8.8

Table III

Mode of delivery	Ist of twins		IInd of twins	
	No.	%	No.	%
Normal vaginal	242 + 2	66.6	141	38.8
Breech	58 + 1	15.98	136	37.47
Forceps	27	7.44	23	6.34
Vaccum	8	2.20	10	2.75
LSCS	28	7.71	48	13.22
IPV	0	-	5	1.38

Table IV

Weight (gms.)	Ist of twins		IInd of twins	
	No.	%	No.	%
1000	34	9.37	31	8.59
1050 - 1500	88	24.2	65	17.91
1550 - 2000	107	29.4	126	34.71
2050 - 2500	81	22.3	122	33.61
2550 - 3000	52	14.3	18	4.96
3050	1	.27	1	.275

average being 34 weeks. Only 31.6% of pregnancies continued beyond 38 weeks of gestation.

Table III shows the mode of delivery in these 363 cases. 82.6% of first of twins and 76.3% of second of twins delivered vaginally. In 13.2% cases, caesarean section was done to deliver second baby. Internal podalic version was done in 5 cases to deliver second of the twins.

In one patient, LSCS was done following failed craniotomy on the second of the twin after the first twin delivered vaginally. Both the foetuses were dead on admission and presented by vertex.

Average duration between delivery of first and second of the twins was 13 minutes, the maximum being 10 hours and 55 minutes and minimum was 3 minutes.

Table IV shows weight of foetuses in grams, maximum falling in the range of 1500 - 2000 gms. Maximum difference

in weight of 2 babies was 1550 gms.

Low Apgar score was common amongst second of the twins (27.01%) as compared to first of the twins (16.4%).

19 of 366 babies of first of the twins were stillborn while 26 of second of the twins were stillborn. The rate of stillbirth was high amongst foetuses weighing less than 1500 gms (Table V).

The neonatal mortality rate was 33.9%. It was 30.5% for first of the twins and 37.7% for second of the twins. Neonatal mortality rate decreased significantly in babies above 1500 gms (Table VI).

The main causes of neonatal deaths were prematurity, asphyxia, respiratory distress syndrome, septicemia.

The overall perinatal mortality rate was 38.0% with 277 perinatal deaths, amongst 729 foetuses. (Table VII). It was 34.1% in first while 41.8% in second of the twins.

Perinatal mortality after excluding babies

Table V
STILL BIRTHS

Weight (gms.)	Ist of twins			IInd of twins		
	No.	Still births	%	No.	Still births	%
< 1000	34+3	8	21.62	31	6	19.35
1050-1500	88	4	4.55	65	10	15.38
1550-2000	107	5	4.67	126	6	4.76
2050-2500	81	2	2.47	122	3	2.46
> 2550	53	0	-	19	1	5.26
	366	19	5.19	363	26	7.16

Table VI
NEONATAL DEATHS

Weight (gms.)	No.	Ist of twins		No.	IInd of twins	
		ND	%		ND	%
< 1000	29	29	100	26	26	100
1050-1500	84	46	54.7	55	47	85.4
1550-2000	102	18	17.6	120	33	27.5
2050-2500	79	8	10.1	119	17	14.2
> 2500	53	5	9.3	18	4	22.2
Total	347	106	30.7	337	126	37.4

Table VII
PERINATAL MORTALITY

Weight (gms.)	No.	Ist of twins		No.	IInd of twins	
		PNM	%		PNM	%
< 1000	34+3	34+3	100	31	31	100
1050-1500	88	50	56.8	65	57	87.5
1550-2000	107	23	21.5	126	39	30.95
2050-2500	81	10	12.3	122	20	16.39
> 2550	53	5	9.33	19	5	26.32
Total	366	125	34.15	363	152	41.87

below 1000 gms. was 31.6% while it was only 18.7% in babies more than 1500 gms. weight.

comparable to 35.8% as reported by Solapurkar (1984) and 34.6% by Narvekar and Thakur (1986).

Our perinatal mortality of 38% was

Pregnancy induced hypertension,

antepartum haemorrhage anemia had further deteriorating effect on increasing perinatal mortality rate while intranatal delay in delivery of second of the twins, cord prolapse, malpresentation contributed to high perinatal mortality, more so for the second of the twins.

DISCUSSION

The incidence of multiple pregnancy varies in different countries. It is as low as 10-12/1000 births amongst Caucasians whereas it is as high as 40/1000 births in Nigeria (Macgillivray, 1980). Our incidence of 7.4/1000 births was comparable to 11.4 and 12.8 reported by Narvekar and Thakur (1986) and Sholapurkar (1984) respectively. The incidence of multiple pregnancies including triplets and quadruplets is increasing worldwide due to assisted reproductive technologies.

The preterm labour is common in multiple pregnancy. The incidence of patients delivering before 37 completed weeks was 68.4% in our study, which was much higher than 41% reported by Narvekar and Thakur (1986) and 38% by Sholapurkar (1984).

Because of high incidence of antenatal and intranatal risk factors, instrumental and operative delivery rate is also high in multiple gestation. The incidence of LSCS was 17.5% in our study. This was much higher than 7.5% reported by Narvekar and Thakur (1986).

The perinatal mortality in multiple pregnancy is very high. High incidence of

prematurity, low birthweight and birth asphyxia associated with delay in delivery of second of the twins, high incidence of malpresentations contribute to this high PNM. The associated antenatal and intranatal complications also have additional effect on this. Our perinatal mortality of 38.8% is high as compared to 21.8% reported by Nayak and Dalal (1991). This may be due to high incidence of emergency admissions and undiagnosed twins, inadequate ANC care, less equipped and premature intensive care facilities. PNM is particularly much higher in second of the twins.

CONCLUSION

Thus inspite of improvements in the obstetric services PNM in multiple pregnancy is alarming. Perhaps good antenatal care, early diagnosis, recognition and treatment of antenatal risk factors, prevention of premature labour, better intranatal obstetric care with liberal use of LSCS along with good neonatal intensive care unit especially for premature - LBW babies will help to decrease PNMR in multiple pregnancy significantly.

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