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Review Articles

Perinatal Outcome of Second Twin

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Perinatal mortality is an index of obstetric care. Recent advances in Obstetrics and Neonatalogy have dramatically improved perinatal outcome in various types of high risk pregnancies. Nonetheless the risk in twin gestation remains significantly higher than that of singleton.

A study of 100 twin deliveries in a tertiary care hospital over a period of 28 months was performed. Births less than 28 weeks were not included.

Incidence of perinatal mortality and NICU admission

Out of 200 babies there were 36 deaths, giving incidence of 18%, out of that 11 were still births, 8 fresh and 3 macerated still births. 15 deaths were in first twin and 21 deaths in second twin. There were 51 NICU admissions, 23 were first twin and 28 were second twin babies (Fig. 1).

Prematurity growth restrictions are the main risk factors in mortality and morbidity in twins. Perinatal mortality rate in twins ranges from 47-120 per 1000 births, with the risk being more to second twin as reported by Botting *et al*.

Mac Donald in his series of 66425 spontaneous deliveries reported that 7.8% of first infant were lost as compared with 9.4% of second infants. Second twin is affected more commonly and severely because of

1. Partial separation of placenta
2. Interference with placental circulation after partial separation of placenta
3. Cord prolapse
4. Malposition
5. Assisted delivery
6. Anaesthetic risk
7. Low Birth weight

Mode of Delivery and Perinatal Outcome in Second Twin

Out of 100 babies, 37 delivered normally, 9 were vaginal breech deliveries, 7 were instrumental deliveries and 47 were repeated caesarean section. Perinatal mortality in babies delivered normally was 29.72% and in those delivered by caesarean section was 10.63%.[6]

Overall perinatal mortality in second twin was 21% as compared with 15% in first twin.

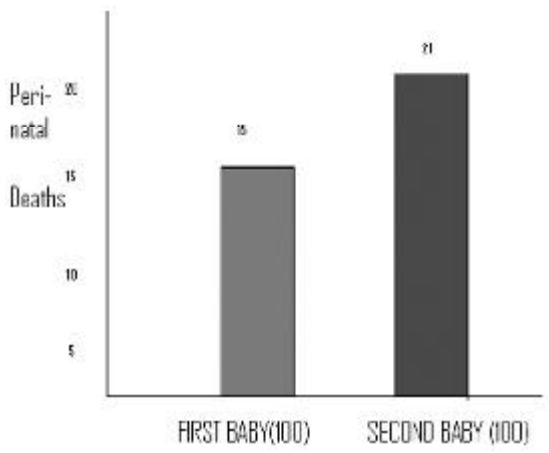

Fig. 1

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Table 1 : Mode of delivery and perinatal outcome in second twin

Mode of delivery	No. of babies	Perinatal mortality	NICU admissions
Normal	37	11(29.72%)	12(32.43%)
Vaginal Breech	9	3(33.33%)	6(66.66%)
Instrument	7	2(28.57%)	1(14.28%)
LSCS	47	5(10.63%)	9(19.14%)
Total	100	21(22.1%)	28(28%)

28% babies required NICU admission as compared to 23% in first twin (Table 1).

Divon *et al* observed that malpresentations are common in twin gestation but often resolve before onset of labour.

McCarthy *et al* and Fishman *et al* observed no significant difference in perinatal outcome in nonvertex second twin delivered vaginally and those delivered by caesarean section.[3]

Suneel *et al* recommended to consider vaginal delivery in nonvertex second twin, if expected birth weight is more than 1.5 kg

Birth Order and Perinatal Outcome

Perinatal mortality in first twin	-	15%
Perinatal mortality in second twin	-	21%
NICU admission rate in first twin	-	23%
NICU admission rate in second twin	-	28%

Botting *et al* observed that perinatal mortality for twins was 47-120 per 1000 births with more risk to the second twin.

Birth Interval and Perinatal Outcome

Out of 100 pts in 182 points the birth interval was less than 10 mins in 6 pts it was 11 to 20 mins and in remaining 12 it was more than 21 mins.

In first group perinatal mortality was 10.97%, in second group it was 16.66% and in last group it was 66.66%.

Table 2 : Birth interval and perinatal outcome

Birth interval	Perinatal mortality	NICU admission
< 10 mins (164)	18(10.97%)	41(25%)
11-20 mins (12)	2(16.66%)	7(58.33%)
> 21 mins (24)	16(66.66%)	3(12.5%)
Total (200)	36(18%)	51(25.55%)

Table 3 : Birth weight and perinatal outcome in second twin

Birth Weight	No. of babies	Perinatal mortality	NICU admissions
< 1.5 Kg	24	13(54.16%)	10(41.66%)
1.5-2.4 Kg	62	4(6.45%)	18(29.03%)
> 2.5 Kg	14	4(28.57%)	0(0%)
Total	100	21(21%)	28(28%)

The rate of NICU admission in first group was 25%, in second group it was 58.33% and in last group it was 12.5% (Table 2).

Birth Weight and Perinatal Outcome

Out of 100 babies 24 weighed less than 1.5 kg with perinatal mortality of 54.16% and NICU admission rate of 41.66%.

62 babies weighed between 1.5 to 2.4 kg with perinatal mortality of 6.45% and NICU admission rate of 29.03%.

Only 14 babies weighed more than 2.5 kg with perinatal mortality of 28.5% (Table 3).

Alexander *et al* observed that in twins 10.12% babies weighed less than 1.5 kg and 52.24% weighed less than 2.5 kg.

In present study there were total 11 still births out of which 8 were fresh still births and 3 were macerated still births. All 8 fresh still births were observed in second twin. All three macerated still births were in first twin. Vellore study showed the still birth rate of 58.1 per 1000 births in twins and 11.1 per 1000 births in singleton gestation.

In present study out of 100 babies, 18 babies expired because of various causes as

Still birth – 5

Prematurity and low birth weight – 8

Septicaemia – 3

RDS – 2

Inspite of so many advances in obstetrics and neonatology the perinatal mortality in second twin is still alarmingly high.

Prolonged birth interval between first and second twin worsens the perinatal outcome. Low birth weight and very low birth weight also has a major contribution in increased perinatal mortality and morbidity.

It can be said that early diagnosis, proper antenatal care, vigilance during labour and good NICU facilities and care can improve the perinatal outcome in twin gestation.

References

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PANDEMIC H1N1 INFECTION IN PREGNANT WOMEN IN THE USA

On the basis of the number of deaths of June 23, 2009, the size of the increased mortality risk in pregnant women compared with that in the general population seems high (crude relative risk 7.7, 95% CI 3.3-16.7).

Although the true level of increased risk remains uncertain, the US analysis clearly indicates a need to provide particularly close medical care to pregnant women who might have pandemic H1N1 viral infection. These findings also indicate the importance of preventive measures including immunization, which is also likely to benefit the offspring, and of the need for timely intervention with neuraminidase inhibitors in confirmed or strongly suspected cases in pregnant women. Although much less ideal or effective, there is some suggestion that delayed use of oseltamivir (> 48 h since symptom onset) might still reduce maternal mortality, as seen in non-pregnant individuals infected with other influenza viruses.

The Lancet, 2009; 374 : 429.