

## PERINATAL MORTALITY IN CAESAREAN SECTION

PRABHA SINGHAL ● SAVITRI SHARMA ● RAMA GARG

### SUMMARY

The study was conducted on 100 perinatal deaths in Caesarean Section. The incidence of perinatal mortality in caesarean section was 7.87%. Out of these 100 cases of perinatal deaths, 73 were still-births and 27 were neonatal deaths. The maximum PNM in CS was due to obstructed labour 42%. The other causes of PNM included 26 in APH, 10 due to foetal distress, 9 in cases of eclampsia, 7 in women with previous C.S., 5 were associated with PROM and 1 case of BOH. The majority of PNM occurred in term babies. The C.S. was done in most of the cases for obstetrical complications. Gestational age was below 32 weeks only in 10% cases, 33 to 36 weeks in 16% cases and 36 weeks and above in 74% cases. In 66% the neonatal deaths were due to birth asphyxia, in 26% due to low birth weight with birth asphyxia and in 8% due to neonatal septicemia.

### INTRODUCTION

Modern obstetric care includes liberalized use of CS in the interest of neonatal outcome. Antepartum and intrapartum monitoring has enabled us to identify the neonates, who will be better served by abdominal delivery. In other instances retrospective analysis has taught that abdominal delivery is in the best interest

of the neonate in cases of premature breech, midpelvic arrest or other dystocias. This liberalized approach, which increased the incidence of caesarean section has elicited concern from colleagues within our discipline, from other disciplines, from Government and from public itself regarding justification of increased maternal mortality, morbidity and healthcare cost. Often such concern is inappropriately alarming and is based on meager lay as

well as scientific reports. As the perfect neonatal outcome is every obstetrician's goal, a perinatal loss in caesarean section deliveries causes much concern. This has prompted us to review our experience with perinatal deaths associated with C.S.

In our country not only the perinatal mortality is high but infant mortality rate is also quite high. Many times caesarean section is done in the interest of the baby but while deciding for C.S., consideration should be kept in mind of further nursing and medical care available to the patient and ability on the part of the patient and her relatives to utilize the medical care. C.S. done to improve the PNM should not be only just a shift from PNM to infant mortality. A C.S. when performed after careful and proper planning carries a lower risk for the newborn. However, an emergency C.S. though a life saving measure, carries a higher mortality and morbidity for the new born.

#### AIMS OF STUDY

The importance of determining the causes of perinatal deaths in C.S. is relevant because only when the cause is known, the patient can be counselled about chances of its recurrence, and about measures to be taken for its prevention and treatment.

#### MATERIAL AND METHODS

The present study included all the perinatal deaths in C.S. during the period January, 1993 to March 1994, in the Department of Obstetrics and Gynaecology, J.L.N. Medical College Hospital, Ajmer.

All the perinatal deaths in C.S. with a birth of neonate dead or alive weighing more than 500 gms and early neonatal deaths occurring during the first 7 completed days of life were included in this study.

#### OBSERVATIONS

Table I shows the incidence of perinatal mortality in C.S. Total number of deliveries were 8226, out of which 789 babies died giving the incidence of PNM 9.59%. In 1270 cases, C.S. was done, giving the incidence of C.S. to be 15.4%. Out of these 1270 C.S., 100 babies died giving the incidence of PNM 7.87% in C.S.

Table II shows PNM in relation to indication of C.S. While analysing indication of C.S. in relation to PNM it was noted that APH was the prime cause of mortality i.e. 26%, (25% SB and 1% neonatal death). C.P.D. was responsible for 22% deaths, in two cases there was rupture of the uterus. In 20% cases, transverse lie was the indication for C.S.

Table I

#### Incidence of Perinatal Mortality

No. of Total deliveries	Overall PNM	No. of C.S.	Incidence of C.S.	PNM in C.S.
8226	789 9.59	1270	15.43%	100 7.87%

**Table II**  
**Perinatal Mortality in Relation to Indication of C.S.**

Indication	No. of still Birth	No. of Neonatal Deaths	No. of Perinatal Deaths
APH	25	1	26
CPD			
- Big Baby	8	0	22
- Contracted Pelvis	12	2	
Transverse lie	20	0	20
Foetal distress	1	9	10
Eclampsia	1	8	9
Previous CS	5	2	7
PROM with cervical dystocia	1	4	5
Bad OH	0	1	1
<b>Total</b>	<b>73</b>	<b>27</b>	<b>70</b>

Out of these 20 cases, there was rupture of uterus in 5% cases. In 10% cases fetal distress was the indication for C.S. Out of these 10 cases, 1 was SB and 9 were neonatal deaths. In the case of foetal distress in which a still birth occurred, foetal heart sounds were audible but during C.S. the baby aspirated meconium and could not be revived. In 9 cases the indication was eclampsia, in 7 cases it was a previous C.S., in 5 cases of previous scar, C.S. was done as there was impending rupture. In all these cases the baby born was still-born. In 5 cases PROM and cervical dystocia was the indication. In one case, indication for CS was BOH, the baby died due to birth asphyxia, at birth the apgar was 4/10, but the baby could not be revived.

Table III shows PNM in relation to

gestational age and indication of C.S. In 10 cases, CS was done below 32 weeks of gestation, APH was the indication in all these cases. In 16 cases, the gestational age was 32-36 weeks, the indications for C.S. were, 5 for APH 1 for transverse lie, 5 for eclampsia, 2 for prev. C.S. and 2 PROM with cervical dystocia and 1 for foetal distress. In the rest of the 74% cases, CS was done at term.

Table IV shows birth weight in relation to PNM. In 63% of cases, birth weight was 2.5 Kg and above, and only in six cases it was below 1000 gms.

Table V shows causes of the neonatal death. Out of the 27 neonatal deaths, 18 died within 48 hours due to severe birth asphyxia, 7 died because of low birth weight and birth asphyxia and 2 died because of neonatal septicemia.

**Table III**  
**PNM Relation to Gestational Age and Indication of CS**

Indications	32 weeks		33-36 weeks		37 weeks and above	
	SB	Neonatal Death	SB	Neonatal Death	SB	Neonatal Death
APH	9	1	5	-	11	-
CPD						
Big baby	-	-	-	-	7	1
Contracted Pelvis	-	-	-	-	12	2
Transverse lie	-	-	1	-	19	-
Foetal distress	-	-	-	1	1	8
Eclampsia	-	-	1	4	-	4
Previous CS	-	-	1	1	4	1
PROM with Cx dystocia	-	-	-	2	1	2
Bad OH	-	-	-	-	-	1
<b>Total</b>	<b>9</b>	<b>1</b>	<b>8</b>	<b>8</b>	<b>55</b>	<b>19</b>

**Table IV**  
**Birth Weight**

Weight (gms.)	Still brith	Neonatal death	Perinatal death	Percentage
Less than 1000	6	-	6	6
1001 - 1500	4	-	4	4
1501 - 2000	9	8	17	17
2001 - 2500	6	4	10	10
2501 and above	48	15	63	63
<b>Total</b>	<b>73</b>	<b>27</b>	<b>100</b>	<b>100</b>

Out of the 100 CS in which PN deaths occurred, 7 mothers died. Indication for C.S. was rupture of uterus in 4 cases, APH in 2, eclampsia in 1 case.

#### **DISCUSSION**

The present study was done to determine the causes of perinatal deaths in C.S. PNM in C.S. in present study was 7.87%

**Table V**  
**Cause and Time of Neonatal Death**

Cause of Death	In 48 hours	After 48 hours	Number
Severe birth asphyxia	18	-	18
LBW with birth asphyxia	4	3	7
Neonatal Septicaemia	-	2	2
<b>Total</b>	<b>22</b>	<b>5</b>	<b>27</b>

which is comparable to PNM in CS reported by other authors. Leela Chogtu and Chowdhary (1975) 15.38%, Gupta AN (1981) 5.6%, N. Basak et al (1981) 7.9%, Vijakar S.V. (1987) reported a very low PNM 2.2%. Pal (1992) 12.10%, P.K. Bhattacharya et al (1992) 6.07%. The high PNM in present and other studies were because most of the cases were admitted in the hospital after 3-4 days of labour and repeated manipulations. In our country, where proper antenatal care is not available, C.S. for obstetrical complications like CPD and abnormal presentations will continue to share a major portion of indication for caesarean section, resulting in a high PNM. APH was responsible for 26% of PN deaths which was comparable with other authors. Chogtu and Chowdhary (1975) 30%, N. Basak et al (1981) 30%, P.K. Bhattacharya et al (1992) 28.96%. There was very little scope of prevention of foetal death in APH because the conditions in which patients were brought, precluded any further conservative treatment and CS was done in the interest of mother, and the few babies which were saved by C.S. died in neonatal

period as their life was jeopardised by intrauterine anoxia due to prematurity.

PNM for obstructed labour in CS in present study was 42% Chogtu and Chowdhary (1975) reported 30%, N. Basak et al (1981), - 20%, P. K. Bhattacharya et al (1992) - 16.99%. In these emergency situations, one has to accept a high PN death rate as CS is resorted to, for the termination of obstetric problems. Destructive operations and high forceps are not applied now-a-days as maternal mortality and morbidity is much higher in difficult vaginal delivery than C.S.

Foetal distress was responsible for 10% PNM in present study. 9 newborns died due to birth asphyxia in neonatal period. P.N.M. in C.S. reported by other authors in foetal distress is as follows - 15% by N. Basak et al (1981) 12.81% P.K. Bhattacharya (1992). As every obstetrician's goal is a perfect neonatal outcome, no baby should die when C.S. is planned only for foetal distress. But in all the studies, PNM was not zero because by the time C.S. was performed, foetus was already deeply asphyxiated and baby could not be revived. In most of the

institutions timely diagnosis of intrapartum asphyxia is not possible because of non-availability of sophisticated facilities to diagnose foetal anoxia. Foetal heart irregularity, presence of meconium and excess of foetal movements, these clinical signs do not always reliably predict the neonatal status in majority of the cases and many a times intervention is done late, resulting in severe asphyxia at the time of C.S. and perinatal loss afterwards. If however the labour is interfered soon after the evidence of foetal distress, the neonatal status remains good.

Perinatal mortality in CS for eclampsia was 9% in present study. Chogtu and Chowdhary (1975) reported 10%, Basak et al (1981) 0%, P.K. Bhattacharya et al (1992) 5.01%. In eclampsia much better results are seen by C.S. than the vaginal deliveries for the mother as well as for the baby. Though the C.S. is better in patients of eclampsia it can not be practiced on a wider scale because the patients are usually young primigravida in a compromised state after number of fits. In previous C.S. PNM was 7% in present study Chogtu and Chowdhary (1975) and Basak et al (1981) reported 0%,

Bhattacharya et al (1992) 8.9%. In present study the high PNM in previous C.S. was observed because patients were admitted with impending rupture of uterus demanding C.S. PROM was responsible for 5% PNM in CS in present study as compared to 2.5% by Leela Chogtu (1975) and 2.5% by P.K. Bhattacharya (1992).

It was observed that majority of PNM in CS occurred due to lack of antenatal care among the poorly educated females of low socioeconomic status. Early prenatal identification and prompt management of obstetrical complications and timely done CS is likely to offer best dividends for reduction in PNM and improved quality of life among survivors.

#### REFERENCES

1. Baska N, K Sikdar, Mondal GS : *J. Obstet. & Gynec. Ind.* : 31;64;1981.
2. Bhattacharya PK, S Purkayastha V.K., Ray R.N., Mondal : *J. Obstet. & Gynec. Ind.* : 42;192;1992.
3. Gupta A.N., Kala Vaishya, Rekha Khatri : *J. Obstet. & Gynec. Ind.* : 31;775;1981.
4. Chogtu V., Chowdhary V. : *J. Obstet. & Gynec. Ind.* : 25;778;1975.
5. Pal S.K. : *J. Obstet. & Gynec. Ind.* : 42;616;1992.
6. Vijaykar S.V., M.Y. Rawal : *J. Obstet. & Gynec. Ind.* : 37;245;1987.