

THE PERINATAL MORTALITY AND NEONATAL MORBIDITY AFTER CAESAREAN SECTIONS

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SUMMARY

The use of caesarean section in modern obstetrics is increasing. Although many C.S. are done for foetal interest, there is significant perinatal mortality and morbidity in caesarean delivery. This may be due to the fact that many sections are done when the foetus is already in distress or many a time patients are referred late. In this study an attempt is made to analyse the perinatal mortality and morbidity in caesarean delivery done in our hospital over a period of one year.

The perinatal mortality in this study was 6.76% consisting of 29 fresh stillbirths (2.8%) and 41 neonatal deaths (3.9%). The neonatal morbidity in our study was 16.13% which is quite significant. Morbidity and mortality was found higher in emergency caesareans and cases referred from other hospitals as they were in advanced labour.

The common morbidities observed in our study were respiratory complications (7.9%), septicaemia (3.96%) and hyperbilirubinaemia (2.31%). Prematurity, PROM, obstructed labour, APH, birth asphyxia, septicaemia were common causes found in perinatal mortality and neonatal morbidity.

INTRODUCTION

The use of caesarean section for a better neonatal outcome has gained much im-

portance in modern obstetrics. There is improvement in the neonatal outcome by liberal use of caesareans for breech and other malpresentations. (Hibbard 1976). However Basak et al (1987) reported higher

perinatal mortality and neonatal morbidity in caesarean babies as compared to babies delivered vaginally.

We have analysed 1029 caesarean sections and studied the perinatal mortality and neonatal morbidity.

MATERIAL AND METHOD

All the caesareans done over a period of one year (1992-93) are included in the analysis. These cases are studied under various parameters like indications for caesarean, associated maternal and foetal risk factors, anaesthesia given, gestational age, apgar score at birth, birth injuries, neonatal morbidity, neonatal deaths. Analysis of stillbirths is also done. An attempt is made to correlate indications and risk factors with the perinatal outcome.

OBSERVATIONS

1. Indication for caesarean: In our study 380 cases (36.94%) were operated for fetal indications only, while in 97 cases (9.42%) both maternal and fetal indications were considered (Table I).

The common fetal indications were foetal distress (232) malpresentations and malpositions (98), Cord prolapse (15) and postdatism (14). The main fetomaternal indications were PIH with IUGR, Prev. C.S. with distress or breech etc.

2. Associated Risk factors: The cases with some risk, either maternal or fetal had maximum chance of developing morbidity and mortality. As shown in Table II, prematurity (14.77%), PROM (7.19%), IUGR (6.12%), general anaesthesia (27.89%) and difficult extraction of baby (7.19%), were common risk factors. Obstructed labour, malpresentations, prolonged fetal distress, antepartum haemorrhage etc. were also of serious concern.

3. Apgar scores at birth - 62 babies had poor Apgar score at birth (0-3) while 526 babies had Apgar of 4-6 at birth (Table III). Poor Apgar scores were seen in cases of fetal distress, premature babies, APH, IUGR, eclampsia etc. These babies were found at risk of developing respiratory complications in the neonatal period.

Table I
INDICATIONS FOR CAESAREAN-MATERNAL AND/OR FOETA

Indication	Cases (Total 1029)	Percentage
1. Maternal Indication	552	53.64%
2. Foetal Indication	380	36.94%
3. Maternal with Foetal indication.	97	9.42%

Table II
RISK FACTORS BEFORE AND DURING CAESAREAN SECTION
CAUSING PERINATAL MORTALITY AND NEONATAL MORBIDITY

S. No.	Risk Factor	Cases	Percentage
1.	Prematurity	152	14.77%
2.	IUGR	63	6.12%
3.	PROM	74	7.19%
4.	General anaesthesia	287	27.89%
5.	Diabetes with pregnancy	6	0.6%
6.	Multiple Pregnancy	6	0.6%
7.	Difficult extraction of baby	74	7.19%

Table III
TABLE SHOWING APGAR SCORE OF THE BABIES AT BIRTH

Apgar Score	Total No. of babies	
	1 minute	5 minute
0 - 3	62	53
4 - 6	526	421
7 - 10	447	561

Table IV
NEONATAL MORBIDITY IN BABIES BORN BY CAESAREAN SECTION

S. No.	Morbidity	Cases	Percentage
1.	Respiratory Complications	82	7.9%
2.	Septicaemia	41	3.96%
3.	Hyperbilirubinaemia	24	2.31%
4.	Birth injuries	13	1.26%
5.	Congenital anomalies	7	0.68%
Total		167	16.13%

Table V
CAUSES OF NEONATAL DEATHS

S. No.	Causes of neonatal deaths	Cases (41)
1.	Prematurity	10
2.	Severe birth asphyxia	9
3.	Severe birth asphyxia with meconium aspiration syndrome	7
4.	Septicaemia	5
5.	Pulmonary haemorrhage	4
6.	Aspiration pneumonitis	3
7.	Hyperbilirubinaemia	2
8.	Congenital anomaly	1

4. Neonatal Morbidity - Common morbidities observed in caesarean babies were Respiratory complications (7.9%), Septicaemia (3.96%), Hyperbilirubinaemia (2.31%), birth injuries (1.26%) etc. (Table IV). The overall incidence of neonatal morbidity was 16.31 %

5. Perinatal Morbidity : In our study there were 29 still births (2.81%) and 41 neonatal deaths (3.9%). In cases where a stillborn baby was delivered the indication for caesarean was mostly maternal, like obstructed labour (8), transverse lie with obstructed labour (6), placenta praevia (6), eclampsia (2) etc.

The common cause for neonatal deaths was prematurity in 10 cases while birth asphyxia, meconium aspirations, septicaemia, pulmonary haemorrhage, aspiration pneumonitis accounted for most other cases (Table V). Majority of these babies had birth weight below 2.5 kg. and had some

neonatal morbidity.

Overall we had 6.75% perinatal mortality and most of these cases were operated in emergency, giving a perinatal mortality rate of 7.7% in 882 cases operated in emergency. These figures are comparable with those of Basak et al (1981).

DISCUSSION

Even though perinatal outcome is considerably improved with the liberal use of caesarean section, respiratory distress in neonates born by caesarean section is claimed to be higher.

In our study Perinatal mortality was slightly higher (6.76%) due to various factors like prematurity, maternal risk factors, obstructed labour, PROM, APH, Severe and prolonged intrauterine asphyxia etc.

The common causes of neonatal deaths in our study (Prematurity, birth anoxia, and septicaemia) were also reported by Basak

et al (1981). Pandey (1986) also reported 9.11% neonatal mortality in her study with prematurity, birth anoxia and septicaemia as common causes. Prematurity has also been reported as an important cause for perinatal mortality by Kafka et al. (1969). In our study prematurity accounted for 50% of perinatal deaths.

Prematurity, maternal risk factors, obstructed labour, difficult extraction, PROM < fetal asphyxia were common causative factors responsible for high morbidity. Birth injuries were due to difficult extraction of the baby during caesarean section.

The common morbidity in our study was respiratory complications which was

Table VI
CORRELATION BETWEEN RISK FACTOR,
MORBIDITY & MORTALITY

Group	Risk factor	Morbidity	Neonatal deaths
A	1. Prematurity (152)	1. Respiratory	19
	2. IUGR (63)	Complication (60)	
	3. Foetal distress (232)	2. Septicaemia (26)	
	4. Malpresentations and malpositions (98)	3. Hyperbiliru- binaemia (24)	
	5. Multiple Pregnancy (6)	4. Birth injury (4)	
B	1. APH (32)	1. Respiratory complications (22)	11
	2. Diabetes (6)	2. Septicaemia (15)	
	3. Prolonged labour obstructed labour (82)	3. Birth injury (13)	
	4. PROM (158)		

The neonatal morbidity in 167 babies seen mostly in premature babies and/or in our study was also significantly higher. those who had severe intrauterine hypoxia.

Apgar Scores of the babies at birth were studied carefully. Thirty two babies born with poor Apgar scores had respiratory complications later and most of them did not survive. Poor Apgar scores were commonly seen in premature babies., fetal distress, APH and eclampsia.

A significant correlation was found between preoperative risk factor, neonatal morbidity and perinatal mortality (Table VI)

CONCLUSION

1. The Caesareans done for fetal indications were 477 (46.36%); fetal distress (132) and malpresentations and malpositions (98) being the common indications.

2. Mothers operated for fetal distress, prematurity APH, IUGR and obstructed labour had babies born with poor Apgar scores.

3. The neonatal morbidity was 16.13%

respiratory complications and septicaemia being common morbidities.

4. The perinatal mortality was 6.7%. Obstructed labour, transverse lie with cord prolapse, placenta praevia were common indications resulting in a stillborn baby. Prematurity, birth asphyxia, septicaemia were common causes for neonatal deaths.

5. Morbidity and mortality was high in emergency caesarean sections.

6. There was a significant correlation between preoperative risk factor, maternal or fetal, and perinatal mortality and neonatal morbidity.

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