

EVALUATION OF PERINATAL DEATHS IN CAESAREAN SECTION MET IN RURAL OBSTETRIC PRACTICE

by

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In the developing countries specially in the rural areas, the perinatal mortality is appallingly high. Many factors are responsible for the high death rate. While in the developed countries or in the urban based institutions of the developing countries caesarean section is being done more and more for foetal well-being but in the rural areas the picture is different. Poor quality of the mothers and adverse environment in the referral district or sub-divisional hospitals limit the use of sections principally for maternal interest as an alternative to difficult and/or risky vaginal deliveries. Amidst high foetal wastage, a fruitless section poses an additional hazard both immediate and remote to the rural mothers. With this objective a critical evaluation of the factors leading to perinatal deaths in Caesarean Section done in the rural environment has been contemplated.

Materials

The material was from the personal series of the senior author (D.C.D) while attached to district hospitals, Jalpaiguri, Suri and Chinsurah, West Bengal and concerns the year 1965-1973. During this period there were 745 caesarean sec-

tions amongst 19,888 deliveries, giving an incidence of 3.7%. There were 127 perinatal deaths in C.S. giving an incidence of 17%, of which there were 75 stillbirths (10% and 52 neonatal deaths within 1 week (7%).

75% of the foetal deaths were confined to A.P.H. and obstructed labour where the mortality ratio was found to be more than the double, being 235 and 217 respectively.

Increased perinatal deaths were observed with labour lasting more than 24 hours, the highest one being 20.3% with labour more than 48 hours.

Perinatal mortality was highest in emergency sections being 19.2%.

Out of 52 neonatal deaths, 36 (69.23%) were slightly asphyxiated at birth and the rest (28.85%) were severely asphyxiated.

Asphyxia was responsible for deaths in 60% cases. R.D.S. and pneumonia were accounted for about 20% of deaths. All the 3 cases of congenital malformation were undiagnosed (anencephaly, hydrocephalus, meningocele with spina bifida).

Discussion

17% incidence of perinatal mortality in caesarean section is indeed very high. The concerned hospitals cater for all

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TABLE I
S.B., N.D. and P.D. in Relation to Indications for C.S.

Indications	No.	S.B.		N.D.		P.D.		MR
		No.	%	No.	%	No.	%	
A.P.H.	175	47	26.9	23	13.1	70	40	235
Obstructed labour	68	15	22.1	10	14.7	25	36.8	217
C.P.D.	54	2	3.7	6	11.1	8	14.8	87
Post CS	158	2	1.3	4	2.5	6	3.8	22
Abnormal uterine action	93	3	3.2	4	4.3	7	7.5	44
Foetal distress	154	4	2.6	2	1.3	6	3.9	23
Miscellaneous	43	2	4.6	3	7.0	5	11.6	68
	745	75	10	52	7	127	17	100

*S.B. = Stillbirth; N.D. = Neonatal death;
P.D. = Perinatal death; M.R. = Mortality ratio.

TABLE II
Perinatal Deaths in Relation to Duration of Labour (excluding A.P.H.)

	Duration of labour (hours)				Total
	0	24	25-48	48+	
No.	169	217	125	59	570
P.D.	3	21	21	12	10
%	1.8	9.7	16.8	20.3	10

TABLE III
Perinatal Deaths in Relation to Time of Performing Section

	Elective	Following trial	Emergency	Total
No.	169	159	242	570
P.D.	3	7	47	57
%	1.8	4.4	19.2	10

TABLE IV
Age at Death of the Babies in Neonatal Period

	Days			All cases
	1-2	3-4	5+	
No.	30	18	4	52
%	57.69	34.62	7.69	100

57.69% of the babies died within 48 hours of delivery.

TABLE V
Causes of Perinatal Deaths

Causes	No.	%
Asphyxia	76	59.84
Respiratory distress syndrome	17	13.38
Prematurity	16	12.59
Pneumonia	10	7.87
Congenital malformaton	3	2.36
Haemorrhagic disease	2	1.57
Unknown	3	2.36
	127	100

types of neglected, unbooked and emergency cases from far flung areas. The magnitude of the neglected cases was reflected by equally high incidence of perinatal and maternal mortality in one of the concerned hospitals, being 14.6% (Dutta, 1972) and 19/1000 (Dutta, 1978) respectively. Only a marginal increase of deaths in section over the prevailing perinatal mortality in contrast to that of over two-fold increase in U.K. (Stallworthy and Bourne, 1966) clearly reflects a wider use of section for foetal interest in advanced countries. While it is not prudent to compare the findings with that of developed countries, yet the perinatal mortality in section in the series compares favourably with that mentioned in different series published in the country during the last two decades by Das (1956) 18.85%, Saxena (1964) 19.7% and Chogtu (1975) 15.5% etc.

75% of perinatal deaths in section was confined to A.P.H. and obstructed labour where the fatality ratio was increased more than two-fold (Table I). This clearly amplifies the foetal risk involved in these two conditions. There is very little scope of prevention of deaths in A.P.H. in the existing circumstances as there is hardly any scope of conservative treatment in placenta praevia in rural hospitals. Caesarean section should be em-

ployed judiciously in obstructed labour which is still rampant in day-to-day obstetric practice. The presence of F.H.S. alone should not be a yardstick for the indication of section, specially in late cases. It is much better to shift the death column to destructive operations alternative to fruitless sections thereby minimising incidental hazards of operation to the mother either immediate or remote.

The foetus of the illnourished mother tolerates badly the stress of labour and the prognosis sharply deteriorates with increasing duration of labour (Table II). The fact should be borne in mind while conducting labour, specially when there is a tendency to its prolongation.

As expected caesarean sections done in emergency cases gives the highest perinatal deaths (Table II). Neglect in antenatal and intranatal period and its impact in obstetric outcome needs no elaboration. One should not take a casual attitude in performing section in such neglected cases for foetal interest alone. Lack of facilities for continuous supervision and on the spot assessment at long intervals fail to fulfil the fundamental principle of conduction of trial labour. A balance judgement is to be executed at the right moment to get a good result without increasing unnecessary caesarean section rate.

Anaesthetists play an important role in caesarean section specially when it is done in critically ill-patients either in A.P.H. or in prolonged labour in adverse environment. Non-availability of trained anaesthetists and/or lack of ideal anaesthetic agents often pose a problem and may be responsible for at least few deaths.

Majority of the neonatal deaths within 48 hours (Table IV) in the series emphasises the need of an intensive baby care unit supervised by a paediatrician. In fact this facility is urgently to be extended to all centres where obstetric units are established.

80% of the deaths were related to asphyxia, R.D.S. and pneumonia (Table V). While there is enough scope of reduction of deaths in asphyxia and pneumonia but R.D.S. still poses a problem even in developed countries. Antenatal or intranatal radiography in susceptible cases could reveal bony congenital malformation of the foetus, thereby minimising occasional fruitless section.

Summary and Conclusion

1. Perinatal mortality in caesarean section was 17%. Poor quality of patients and adverse environment are the principal responsible factors for such high death rate.

2. Perinatal deaths were principally confined to A.P.H. and obstructed labour (75% in the series). While there is little scope of prevention of deaths in A.P.H. in the existing circumstances but in obstructed labour, judicious selection of cases for section could minimise few deaths.

3. Perinatal deaths increased sharply

with labour lasting more than 24 hours (1½ times between 25-48 hrs. and twice beyond 48 hrs.). The foetus of an ill-nourished mother tolerates badly the stress of labour and the distress seems to appear much earlier than that in a well-nourished mother.

4. Perinatal mortality increased twofold in emergency sections (excluding A.P.H.). Decision of section for foetal interest alone in such cases should be taken judiciously.

5. Role of anaesthetist service and intensive baby care unit supervised by a paediatrician are emphasised to improve the foetal salvage.

6. 80% of the deaths were related to asphyxia, R.D.S. and pneumonia. While there is enough scope of prevention of deaths from asphyxia and pneumonia but R.D.S. still remains a problem.

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