

A STUDY OF HAEMORRHAGE AS CAUSE OF MATERNAL MORTALITY

by

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The measure of success in any obstetric care programme might reasonably be thought to depend on the number of mothers dying as a result of pregnancy, labour and puerperium. It is difficult to calculate the status of incidence of morta-

In this study the date of maternal mortality due to haemorrhage of the last 20 years i.e. from 1961 to 1980 of Patna Medical College Hospital has been analysed. They have been divided into 4 five-years period.

TABLE I
Incidence of Direct Obstetric Deaths

	1961-1965	1966-1970	1971-1975	1975-1980
Maternal death	643	583	522	290
Total No. of birth	60041	61711	59859	67778
Incidence	10.7/1000	9.4/1000	8.8/1000	4.3/1000

lity in Bihar where vital statistic registration is not compulsory. Therefore, one has to fall back on the hospital statistics for calculation of maternal deaths. Hospital statistics tend to be limited by their urban orientation, small sample size, and by an unusual concentration of difficult and complicated patients often brought to the hospital from very far away places. The reported maternal mortality figures from the hospitals, therefore, tend to be higher than the accurate rate prevailing in the country as a whole during that period.

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Accepted for publication on 28-6-82.

Haemorrhage is the major cause of maternal death all over the world. In this series also it leads the list of causes of direct obstetric death. It forms 39.8% in 1961-65, 39% in 1966-70, 41.1% in 1971-75 and 40% in 1976-80.

Graph I shows the incidence of maternal death due to haemorrhage.

The incidence of death due to placenta praevia formed between 33 to 37% of haemorrhagic death, while from 1970 onward it was reduced to 4.3 to 9.5% of all death due to haemorrhage. This is mainly due to the use of suitable management and treatment of placenta praevia.

This Table shows the incidence of placenta praevia and the incidence of maternal death.

TABLE II
Important Causes of Direct Obstetric Death

Causes of death	1961- 1965	1966- 1970	1971- 1975	1976- 1980
Haemorrhage	256	228	215	116
Caesarean-section, or caesarean hysterectomy	141	124	130	90
Infection	42	49	40	19
Destructive operation	34	32	20	8
Vascular accidents	14	10	9	6
Anaesthetic accidents	15	15	14	6

TABLE III
Causes of Haemorrhage Resulting in Maternal Death

Causes of haemorrhage	1961-65	1966-70	1971-75	1976-80
Placenta praevia	90	77	54	10
Ruptured uterus	58	54	59	25
Postpartum haemorrhage	38	39	32	15
Post-abortal	17	14	27	34
Abruptio-placentae	22	22	17	11
Retained placenta	13	11	12	9
Mole	12	6	9	5
Bleeding due to unknown causes	6	5	5	7
Total	256	228	215	116

TABLE IV
Incidence of Maternal Death in Placenta Praevia

Year	No. of cases of placenta praevia	Death due to placenta praevia	Incidence in %
1961-65	700	90	12.8%
1966-70	680	77	11.0%
1971-75	710	54	7.6%
1976-80	722	10	1.3%

TABLE V
Incidence of Placenta Praevia, Caesarean Section and Maternal Death

Year	No. of cases of placenta praevia	Incidence of caesarean section	Maternal death
1961-65	700	206 (26.2%)	90 (12.8%)
1966-70	680	240 (34.9%)	77 (11.1%)
1971-75	710	386 (54.3%)	54 (7.3%)
1976-80	722	445 (61.5%)	10 (1.3%)

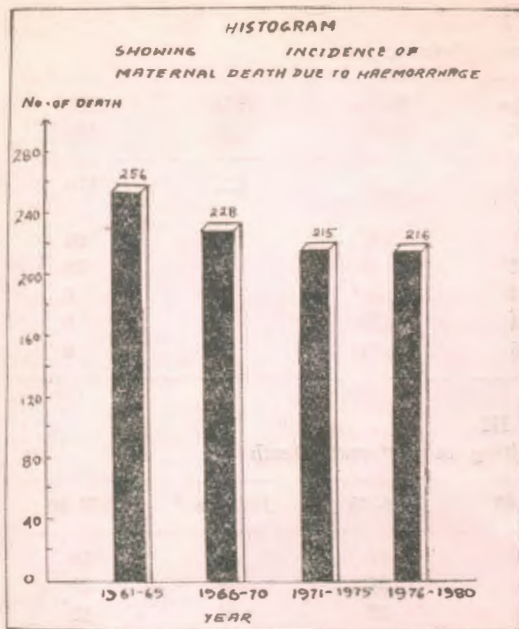


Fig.

This Table shows the treatment offered to the cases of placenta praevia from 1961 to 1980, and the incidence of death.

Though the incidence of placenta praevia remained the same in each year from 1961 to 1980 there had been dramatic change in the management of these cases. During the period 1961 to 1965, 70 per cent had artificial rupture of membrane, pulling down a leg in breech, occasionally Willet forceps application. All these treatments had been pooled under the group of treatment other than caesarean-section. In 1961 to 1965, 28.2% had caesarean-section, and 71.8% had other treatment. During 1966 to 1970 34.9 per cent had caesarean section and 65.1% had other treatment. In 1971 to 1975 54.3% had caesarean section and other treatment was 45.7%. In 1976 to 1980 the incidence of caesarean section was 61.5% and other treatment was 38.5%. The maternal mortality due to placenta praevia came down from the first 5 years i.e. 1961-1965 (13%) to fourth 5 years (1975-1980) i.e. 1.3%. The fall in maternal death is due to liberal use of caesarean-section as a treatment of placenta praevia.

TABLE VI

Death due to Abruptio-placenta out of total Maternal death and Maternal death due to haemorrhage

Year	Total maternal death	Death due to haemorrhage	Death due to abruptio-placenta	Incidence
1961-65	790	256	22	2.8
1966-70	714	228	22	3.1
1971-75	641	215	17	2.8
1976-80	375	116	11	2.9

TABLE VII

Total Number of Abruptio-placenta and the Incidence of Their Death

Year	Total deliveries	Total abruptio placenta	Total death	Incidence (%)
1961-65	60041	224	22	9.8
1966-70	61711	238	22	9.2
1971-75	59859	193	17	8.8
1976-80	67778	196	11	5.6

The incidence of death due to abruptio-placenta has not shown any remarkable improvement, and prospect still remains gloomy for severe variety of abruptio-placenta, because apart from immediate effect from haemorrhage and shock, coagulation defects and anura which are often associated with concealed haemorrhage are responsible considerable number of deaths. There are 35 to 42 cases of

recognised accidental haemorrhage each year. In this series, maternal death due to abruptio placenta varied between 6 to 10 per cent.

Rupture of the gravida uterus continues to be one of the most serious life-threatening complications of pregnancy and labour, and is responsible for a large number of maternal death each year in our hospital.

TABLE VIII

Incidence of Maternal Death and Proportion of Deaths due to Rupture of Uterus

Year	Total maternal death	Death due to rupture of uterus	Incidence (%)
1961-65	790	58	7.3
1966-70	714	54	7.5
1971-75	641	57	8.8
1976-80	375	19	5.0

TABLE IX

Incidence of Rupture Uterus and Associated Maternal Mortality

Year	Rupture of uterus	Maternal death	Incidence (%)
1961-65	309	58	27.7
1966-70	199	54	27.2
1971-75	200	57	28.5
1976-80	139	19	13.7

TABLE X

Maternal Deaths in Post-partum Haemorrhage

Year	Post-partum haemorrhage	Death due to post-partum haemorrhage	Incidence (%)
1961-65	2971	51	1.7
1966-70	2982	50	1.6
1971-75	2811	44	1.5
1976-80	3285	24	0.7

TABLE XI

Incidence of Deaths due to Post-partum Haemorrhage in Total Maternal Death

Years	Total maternal death	Death due to post-partum haemorrhage	Incidence (%)
1961-65	790	51	6.4
1966-70	714	50	7.0
1971-75	641	44	6.8
1976-80	375	24	6.4

The incidence of death due to post-partum haemorrhage varied from 0.7% to 1.7%. In majority of cases of post-partum haemorrhage they were admitted after the delivery at home, with post-partum haemorrhage and retained placenta. In 2/3rd of these deaths, retained placenta was the main factor before any treatment could be given.

quently due to either perforation of uterus or placental site haemorrhage with product of conception in situ. Sometimes, through the perforated uterus, intestine also was pulled down by spong forceps. Most of the patients admitted in hospital were in a very poor condition and the death was due to either sepsis or renal failure.

TABLE XII
Maternal Deaths due to Abortion

Year	Total cases of abortion	Death due to abortion	Incidence (%)
1961-65	2720	44	1.6
1966-70	2639	40	1.5
1971-75	2656	47	1.8
1976-80	2807	34	1.2

TABLE XIII
Total Maternal Deaths and the Incidence of Deaths due to Abortion

Year	Total maternal death	Death due to abortion	Incidence (%)
1961-65	790	44	5.6
1966-70	714	44	5.6
1971-75	641	47	7.3
1976-80	375	34	9.0

There is increased incidence in deaths due to abortion with fall in number of deaths due to other condition of haemorrhage. Deaths due to abortion was increased from 5.6 to 9%. All these cases had profuse haemorrhage or bleeding with supradadded infection. The increased use of M.T.P. by general practitioners who had forgotten his training for carrying out a vaginal operation, is responsible for the incidence in maternal mishaps. They could not even estimate the size of uterus. The uterus was usually bigger than the size, permissible for termination by vaginal route. The death was fre-

Discussion

In this analysis maternal mortality due to haemorrhage has been reduced from 256 in (1961 to 1965) to 116 in (1975 to 1980). Haemorrhages during pregnancy and about still continue to be the major cause of maternal mortality in our country. Although figure for the whole country is not available maternal death rates due to haemorrhage have been reported to range between 15 to 33.5% by different workers (Roy Chowdhury, 1976, Masani *et al* 1962 and Heera and Dasgupta, 1973). Rao (1978) reported

haemorrhagic maternal deaths of teaching institutions in India as 16% for Bombay (1975), 26% for Madras (1975), 24% for Delhi (1970) and 27% for Madurai (1972).

In the past 5 years there has been a decline in maternal mortality due to haemorrhage. This decline undoubtedly is due in large measure to the increased use of blood transfusion and antibiotics, as also improved method of obstetric care particularly for placenta praevia. But this decline is far below the accepted standard.

It is estimated that 82% of India's population live in about 6,00,000 villages, each with a population of a little over 500. These villages are widely scattered with inadequate roads and poor communication. Therefore, to make any inroad in reduction in maternal mortality a most important objective should be to train the students to extend integrated maternal child care service in rural conditions. Maternal and child care should be in every curriculum of study in obstetrics and gynaecology, so that a doctor gets

elementary knowledge of obstetrics, paediatrics, family planning, health administrative and health education. There should be better incentive to practice in rural areas. It is necessary to set up antenatal clinics in all primary health centres, to provide better transport facilities from remote village, "Flying squad service should be available. There must be liaison between subsidiary health centre and primary health centres to sub-divisional hospitals and to greater hospitals in cities, to offer treatment immediately in the referred emergency cases.

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