

**MATERNAL MORTALITY  
A TEN YEARS STUDY IN R.M.C. HOSPITAL: IMPHAL**

by

Y. LAKSHIMAI DEVI

and

JATISWAR SINGH

**SUMMARY**

In spite of sophisticated diagnostic tools and improved therapeutic armaments, maternal mortality still remains a challenging problem specially to the developing countries. Analysis of major causative factors in 128 maternal deaths during the last decade could varify the contributing factors and elimination of them facilitated reduction in the incidence.

*Introduction*

Persistently high incidence of maternal mortality not only reflects the quality of maternity service and facilities prevalent but in reality it is an index of the socio-economic status on, poverty, ignorance, inadequate medical facilities and social customs of the people. In the last decade, augmentation of the health care facilities for mothers and children has facilitated reduction of maternal and perinatal mortality appreciably. The integrated child development programme launched by the Government of India with inputs in maternal and child development from the Social Welfare department envisage to augment this service of the Community Development Blocks. This scheme provides attractive packages for the mothers and children below 6 years of age. If the scheme is carried out faithfully a further

reduction could be expected. Periodical review of the result oriented achievements of various machineries involved in the health service of the mothers and children and critical analysis of the outcome would be highly rewarded.

Even to-day, haemorrhage and induced abortions continue to contribute to 60.2 per cent of all maternal deaths in this State.

*Material and Methods*

All the maternal deaths at R.M.C. Hospital during the last decade (January, 1976 to December, 1985) have been included in this study including those of District Hospital, Imphal for 1976 to 1979. All the factors leading to death were carefully assessed after a detailed study of each case individually. The residence, age, parity, gestational period and time interval from admission to death are analysed in relation with the treatment given to each. For abortion deaths the reasons for induction of abortion and

*From: Department of Obstetrics & Gynaecology, R.M.C., Imphal.*

*Accepted for publication on 21-3-86.*

methods used by the abortionist were recorded. All the investigations required in each case were also duly carried out. The entire management protocol of each case was carefully monitored and scrutinised. The time interval between admission and specialist service coverage whenever requisitioned was also reviewed. Any lacuna in the hospital facilities such as essential drugs, blood bank service, transport and laboratory service were carefully assessed. In this study we follow the definition of maternal mortality as defined by FIGO. All the datas of each case are finally analysed.

#### Observations

In the last decade there were 42,614 deliveries and abortions with 128 maternal deaths in the said hospital as shown in Table I, giving an incidence of 3 per thousand. All these deaths were admitted as emergency, attending the hospital for the first time when complications supervened. They were either referred from the District Hospitals or directly brought by the relatives from far rural areas after

home treatment mostly by quacks. Most of them were admitted for severe vaginal bleeding during pregnancy (APH), obstructed labour, retained placenta (delivered at home) and with complicated induced abortion or for acute abdominal pain.

The causes of maternal deaths are summarised in Table I. In this study haemorrhage took maximum lives (35.2%) and next being induced abortions (25%). These two killers are still untamed constituting 60.2 per cent of all maternal deaths. Retained placenta, APH and PPH were three dreadful haemorrhagic causes in this study. Eclampsia claimed 11, slightly higher than reported by Balmur *et al* (1983) and sepsis and ruptured uterus 9 (Wazira *et al* 1979) each with 8 deaths only from complications of caesarean sections performed for complicated cases handled outside. Age and parity distributions are shown in Table II. Highest number of deaths belonged to 21 to 30 years of age (59.4%) and only 16 cases (12.5%) were teenaged. As many as 25 were primigravida and 37 were grand multi. Among other parity group, most

TABLE I  
Causes of Maternal Deaths

Causes	No. of cases	Percentage
1. Haemorrhage		
(a) APH	15	35.2
(b) Retained placenta	19	
(c) PPH	11	
2. Abortion	32	25.0
3. Eclampsia	11	8.6
4. Sepsis	9	7.0
5. Ruptured Uterus	9	7.0
6. C. S. Complications	8	6.25
7. Shock	4	3.12
8. Pulmonary Embolism	3	2.34
9. I.U.D. & Complications	3	2.34
10. Ectopic rupture	1	0.8
11. Encephalitis	1	0.8
12. Infective hepatitis	1	0.8

TABLE II  
*Age and Parity by Distribution*

Age in years	15 to 20	21 to 25	26 to 30	31 to 35	36 to 40	40 & above	Total
No. of deaths	16	41	35	21	9	6	128
Percentage	12.5	32.0	27.3	16.4	7.0	4.7	100
Parity	0	1	2	3	4	5 & above	
No. of deaths	25	17	21	16	12	37	128
Percentage	19.5	13.3	16.4	12.5	9.4	28.9	100

of the deaths were from induced abortions. The reasons for inducing abortion and the methods adopted are shown in Tables III and IV. Maximum deaths in

TABLE III  
*Reasons for Induction of Abortion (32 cases)*

Reasons	No. of deaths
Social factors	6
Economic factors	13
Too many children but refuses F.W. methods	3
Personal ground & Family conditions	3
Last child too young	2
Too old to have a child	1
Religious ground	2
No reason determined	2

TABLE IV  
*Methods used in 32 Abortion Deaths*

Methods	No. of deaths
Stick (medicated/nonmedicated)	12
Abdominal massage & pressure	7
Fetex paste	6
Indigenous herbs	2
D & E (by untrained hand)	2
Unknown	3

TABLE VI  
*Time Interval from Admission to Death*

Time in hours	0 to 1	2 to 12	12 to 24	24 to 168	7 days & above
No. of cases	18	61	12	20	17
Percentage	14.06	47.66	9.37	15.62	13.3

this study occurred in the third trimester followed by labour complications and during puerperium as shown in Table V. Only 33 cases died during the first trimester from abortion and ectopic rupture. Table VI shows the time interval between admission to death and we observe 91 (71.1%) deaths were within 24 hours of admission, 18 within the first hour when even in the most well equipped hospital such tragedy could hardly be avoided, and only 37 (28.9%) deaths were after 24 hours of hospitalisation, indicating the desperate condition in which the cases were brought from outside.

TABLE V  
*Gestations Stage at the Time of Death*

Gestational Period	No. of deaths	Percentage
First trimester	33	25.8
Second trimester	9	7.0
Third trimester	46	36.0
Puerperium & Third stage complications	40	31.2

### Discussion

The average incidence of maternal mortality in this study is 3 per thousand which is lower than earlier report (Devi and Singh, 1981). In spite of this decline in the last few years, we still found avoidable factors in more than 60 per cent of deaths of this series similar to earlier findings (Bhasker Rao, 1980). Higher figure could be noticed in the reports of other workers from other states (Sikdar and Konar, 1979; Wazira *et al* 1979; Mitra and Khera, 1983) giving an incidence from 7.4 to 29 per thousand. Improvement in the blood bank facilities, institution of proper antibiotic therapy and adequate supply of emergency medicines in all such cases could have further reduced the incidence. Wide publicity to convince the people about the available facilities provided by the Family Welfare Programme of the Government, provision for MTP or MR for pregnant women and improvement of the existing PP programme could help in reducing the deaths from induced abortions by untrained hands. Further the doctors performing MTP or MR in the PP Programme institutions should appreciate the expectations of pregnant women who sought their help for termination of the pregnancy by maintaining strict privacy and secrecy of the events and by adopting promptness in their service. This would encourage popularity of the national programme even among illiterate population. There were 86 (67.2%) third trimester and labour complication deaths emphasising the need for compulsory antenatal service for all pregnant women and booking of all high risk pregnancies. For this wide publicity about the hazards of home confinement for high risk group and value of antenatal screening should be made.

In all 97 (76%) deaths were between

21 to 35 age group which is a great loss to the community. A critical review of all 18 first hour deaths suggested the need for more active and prompt intensive care by experienced obstetricians. In few cases (5 cases) immediate surgical intervention might have spared them.

From what was observed in this study it could be rightly concluded that all the deaths with avoidable factors could have been managed to safety. This requires ensuring adequate facilities, specialist cover and institution of intensive care unit for such cases in the obstetric emergency block. Trained dais and midwives should be taught for screening the high risk group timely and to refer them to the hospitals from the rural areas. This demands increase in the antenatal beds in all referral hospitals of the state if we expect to reduce the incidence of maternal deaths. The sudden increase in the incidence during the years 1978-79 and 1982 had been rightly attributed to the medical care vacuum created by the strikes of the nurses and doctors of the hospital, further confirming our postulation of the avoidable factors related to attending doctors and their efficiency in the management of the cases in the emergency.

### Conclusion

Reduction in the maternal deaths could be facilitated by increasing the maternity beds, starting intensive care unit in the emergency block of the maternity wards, providing adequate specialist cover with experienced hands and adequate supply of emergency medicines with blood bank facilities. This could be achieved by increasing the budget allocation of the maternity department. Century long neglect both by the authority and obstetricians in this sphere of proportionate

budgeting for the maternity service, resulted in the lingering high maternal mortality in most of the countries.

#### References

1. Mitra, J. and Bhupendra Nath Khara, B. N.: J. Obstet. Gynec. India. 33: 209, 1983.
2. Bhasker Rao, K.: J. Obstet. Gynec. India. 30: 859, 1980.
3. Sikdar, K. and Konar, M.: J. Obstet. Gynec. India. 29: 1149, 1979.
4. Balmur, V. R., Bhatt, R. V., Patel, P. S. and Hazra, M. N.: J. Obstet. Gynec. India. 33: 805, 1983.
5. Khanam, K., Sheela Kachroo, S., Jamila. B. and Dhar G.: J. Obstet. Gynec. India. 29: 1000, 1979.
6. Devi, Y. L. and Jatiswar Singh, J. J. Obstet. Gynec. India. 31: 267, 1981.