

**A 5 YEAR STUDY OF MATERNAL MORTALITY: ANALYSIS OF  
ITS CAUSATIVE FACTORS (1976-1980)**

by  
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**SUMMARY**

**Maternal mortality in the developing countries including India is about 10 times higher than in the developed countries (Rao, 1975). In India the maternal death rate was 20 per 1,000 in 1946 which declined to 5.9 per 1,000 (Sen Gupta and Kapoor) 25 years later. This has been possible because of advent of antibiotics, blood transfusion, better antenatal and intra natal care. During the period of 1976-1980 there were 375 maternal deaths in 67,778 live births. The total number of maternal deaths due to direct obstetrical cause was 290 (i.e. 43/1000) and those due to indirect cause was 85 (i.e. 1.3/1000). After analysing the direct and indirect maternal deaths at P.M.C.H. it seems that 80-90% of the deaths were preventable. Proper antenatal check-up, selection of high risk cases for hospital delivery, good domicilliary services for conducting some delivery, adequate facility for transporting cases to hospital in good time can drastically reduce maternal mortality.**

The maternal mortality in the developing countries including India is about 10 times higher than in the developed countries (Rao, 1975). In India the maternal death rate was 20/1000 births in 1946 which declined to 5.9/1000 births (Sengupta and Kapoor, 1975). Twentyfive years later. This has been possible because of advent of antibiotics, blood transfusion, better antenatal and intranatal care.

The present study deals with the study of maternal mortality during the period of 1976-1980 in the Patna Medical College Hospital. This hospital deals along with own cases all abnormal cases referred from the

periphery. During this period there were 375 maternal deaths in 67,778 live births. The total number of maternal deaths due to direct obstetric causes was 290 i.e. 43/1000 and in those due to indirect causes was only 85 i.e. 1.3/1000.

Haemorrhage is the major cause of maternal death all over the world. Maternal death rate due to haemorrhage has been reported to range between 15 — 33.5% by different workers (Roychowdhury, 1976, Heera and Dasgupta, 1973). It heads our list of direct obstetric death, being the causative factor in 116 cases (40%).

When maternal death due to haemorrhage is further analysed it is due to (a) placenta praevia in 25 and accidental haemorrhage in 11 cases. The cases of placenta praevia were brought to the hospital in moribund

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TABLE I  
Maternal Deaths due to Direct Obstetric Causes

Causes	Number	Percentage
1. Haemorrhage	116	40.0
A.P.H.,		
Post-abortal haemorrhage		
Post-partum haemorrhage		
Molar pregnancy		
Unexplained		
2. Toxaemia	45	15.5
3. Following caesarean section and caesarean hysterectomy	90	31.0
4. Sepsis	19	6.5
5. Destructive operations	8	2.7
6. Vascular accident	6	2.0
7. Anaesthetic accident	6	2.0
Total	290	

state and they expired within hours of hospitalization. The deaths due to abruptio apart from haemorrhage and shock occurred also due to coagulation defect and anuria, (b) Deaths due to post-abortal haemorrhage occurred in 34 cases. The cases were admitted with profuse haemorrhage with superimposed infection. The liberalization of M.T.P. Act has resulted in general private practitioners doing M.T.P. indiscriminantly and often incompletely. Death occurred either due to perforation or retained placenta product with profuse placental site haemorrhage. Sepsis was also a contributory factor in these cases, (c) In 24 cases death occurred due to P.P.H. All these cases had home delivery. In 9 cases the placenta had been retained. Transport facility not being available transfer of the patients to the hospital took a long time, (d) The other causes of haemorrhagic maternal deaths were molar pregnancy, 3 cases ectopic pregnancy, 4 cases had haemorrhage of unexplained aetiology in others.

Toxaemia accounts for 45 (15.5%) maternal deaths. All were cases of eclampsia. The patients expired between the first and fifth day of hospitalization due to pulmonary

complication, anuria or cerebral haemorrhage.

In spite of liberal use of antibiotics after hospitalization, sepsis alone accounted for 19 (6.5%) maternal deaths. Nine of these were of septic abortion, the other 10 were cases of prolonged labour handled outside by local dais.

Of the 90 cases (31.0%) dying after caesarean section or caesarean hysterectomy, 23 cases were of rupture uterus. The other cases were of prolonged obstructed labour. Death in these cases as well as those following destructive operations (8 cases) was not primarily due to the surgical procedure. It was a sequelae of maternal exhaustion, dehydration and sepsis.

Despite anaesthetic services being available anaesthetic accident occurred in 6 cases (2.0%). All these cases had been taken up for surgery as an emergency measure.

Table II list the causes of indirect maternal deaths. Anaemia heads the list and of the 85 (100%) indirect death anaemia was in 47 (55.2%) cases. Severe anaemia due to parasitic infestation or of nutritional origin was present. Another contributing factor was multiparity with inadequate

spacing between child births. The age group having maximum death due to anaemia was in the age of 35-40 years. All the patients had a haemoglobin level below 3 gm. %.

TABLE II  
Maternal Death due to Indirect Obstetric Cases

Causes	No.	Percentage
Anaemia	47	55.2
Heart disease	14	16.4
Hepatic coma	12	14.1
Intestinal obstruction	6	7.0
Tetanus	6	7.0
Total	85	

Cardiovascular disease with pregnancy resulted in 14 deaths (16.4%). None of these cases had any proper antenatal care. Majority of cases were admitted with premature onset of labour precipitated by congestive cardiac failure. Pulmonary oedema and congestive cardiac failure were the factors causing death.

Viral hepatitis was present in the State in epidemic and sporadic form. Pregnancy makes the patient more vulnerable to hepatic injury. All the 12 patients (14%), were admitted in third trimester of pregnancy come in or with deep jaundice, very high serum bilirubin and treatment was virtually ineffective.

The other 6 cases (7.0%) were that of

tetanus, no immunisation being done in these patients in the antenatal period as they did not seek antenatal care.

#### Comment

From this study it is evident that maternal mortality in 80-90% of the cases were due to preventable factors. Proper antenatal check-up, selection of high-risk cases for hospital delivery. Good domiciliary services for conducting home delivery, adequate facility for transporting cases to the hospital in good time can drastically reduce maternal mortality.

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