A STUDY OF MATERNAL MORTALITY IN A RURAL MEDICAL COLLEGE, HOSPITAL

SUDHA SHARMA

SUMMARY

This study analysis maternal mortality, its causes & preventable factors during a period of 5 years from 1989-1993. There were 1751 births & 29 maternal deaths during this period making maternal mortality rate of 16.5/1000 births. Direct causes were responsible for 72.2% deaths. Haemorrhage was responsible for 27.5% deaths, sepsis for 20.6% and toxemia for 17.2% deaths. Indirect causes were present in 27.4% of deaths in the form of anemia 10.3%, malaria 10.3%, viral encephalitis and hepatitis 3.4% each. In 90-95% of maternal deaths preventable factors were present. This could have been done by proper ante and intra natal care, by correction of anemia and by providing effective blood transfusion services.

MATERNAL AND METHODS

The present study is a retrospective analysis of maternal deaths over a period of five year carried out in department of obstetric and Gynaecology of Pramukhswami Medical College, Karamsad, Gujarat. This institute is a rural medical college, mainly caters to illiterate, rural and low socioeconomic community. The aim was to find out various factors responsible for the maternal deaths and preventive measures if any.

The study was done from 1989-1993. During this period there were total 29 maternal deaths. Individual case papers of these patients were thoroughly scrutinised for full details about parity, antenatal booking, age of the patient, admission death interval and causes of deaths.

Dept. of Obst. & Gyn. P.S. Medical College, Karamsad, Gujarat.

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OBSERVATIONS

In 5 years duration from 1989-1993 there were 1751 births and 29 maternal deaths giving the incidence of 16.5/1000 births.

All the patients except one were admitted as emergency cases. They all belonged to low socio economic group.

Table I shows agewise distribution of maternal deaths.

Table II shows distribution of patients on the basis of parity.

Table III shows the interval between admission and death.

Table IV shows causes of deaths.

Major cause of death was haemorrhage. As such direct causes were responsible for 72.2% deaths. Of the various causes of haemorrhage 37.5% were because of ante partum haemorrhage, 25% were due to postpartum haemorrhage. Ectopic pregnancy, inversion of uterus and disseminated intravascular coagulation contributed 12.5% each. Sepsis accounted for 20.6% of maternal deaths. 50% of it were due to pregnancy with septicemia, 33.3% were due to puerperal sepsis and

Table I

Age in years	No. of deaths	Percentage
Less than 20	3	10.6
20-30	20	66.9
> 30	6	20.6

Table II

Parity	No. of patients	Percentage
Primigravida	9	31.0
Multigravida	15	51.7
Grandmultipara	5	17.2

Table III

Admission to death interval	No. of patients	Percentage
< 24 hours	22	75.8
within a week	7	24.1

Table IV

Direct causes	No. of patients	Percentage	Indirect causes	No. of patients	Percentage
Haemorrhage	8	27.5	Anemia	3	10.3
Sepsis	6	20.6	Malaria	3	10.3
Toxemia	5	17.2	Viral encephalitis	1	3.4
Thromboembolism	2	6.9	Hepatitis	1	3.4
Total	21	72.2		8	27.4

16.6% died because of septic abortion.

Toxemia attributed to 17.2% deaths. Out of these 4 cases had eclampsia and one had fulminant toxemia. 6.9% of deaths were accounted by thromboembolism.

In indirect causes anemia and malaria were responsible for 20.3%, one patient had viral encephalitis and another had hepatitis making 27.4% for indirect causes.

DISCUSSION

The present study showed a very high maternal mortality rate of 16.5/1000 births. Maternal mortality has been reported by various authors varying from 1.04/1000 births (Warawalla et al, 1989) to as high as 16.5 per 1000 births. This high incidence of maternal mortality could be due to multiple factors. As this institute is draining mainly poor and rural community, so unawareness about the antenatal care was the most important factor, as evident by the fact that none of the patients except one has received antenatal care. Though facilities for antenatal and intranatal care are present, most of the expectant mothers in rural community do not take advantage of these due to ignorance, carelessness, illiteracy, social and religious taboos.

Haemorrhage remained the commonest (27.5%) cause of death. Association of moderate to severe anemia contributed to increase in the risk from haemorrhage. Anemia was present in 84.5% of patients and it was the sole cause of death in 3 patients (10.3%). In other studies haemorrhage was responsible for deaths in 35.2% (Devi & Singh, 1987), 22.8% (Beebi,1987) and 35.6% Varawalla et al, 1989). In many cases non availability of blood at critical time was the cause of death.

Although the use of $MgSO_4$ has dramatically reduced deaths due to eclampsia, due to late referrals by the local village practitioners and ignorance on the part of relatives, most of the patients were received in a moribund condition. None of the patient had prior antenatal check up. These deaths could have been prevented by proper antenatal care and early hospitalization.

Sepsis claimed 27.5% of deaths in this study as compared to 7% (Devi & Singh, 1987), 12% (Beebi, 1987) & 3.3% (Varawalla et al, 1989) deaths reported in different studies.

CONCLUSIONS

It can be assumed that most of the maternal deaths could have been prevented but had occured as a result of negligence on the part of the patients, their relatives and local practitioners. For prevention specially in India, there is an urgent need for proper implications of existing health programmes in rural areas. For improvement of the female health status it is necessary to give them health education, knowledge of hygiene and importance of antenatal care and complications of pregnancy. Many deaths can be prevented by early and proper antenatal care, avoidance of unwanted and repeated births, training of traditional birth attendants and refresher courses for village medical practitioners and timely available facilities for blood transfusion.

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