

A Study On Maternal Mortality In Silchar Medical College & Hospital

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Summary

A prospective clinical study of maternal mortality was carried out in the Department of Obstetrics & Gynaecology, Silchar Medical College and Hospital during the period from 1st September 1994 to 31st August, 1995. In 1985, representatives from 25 countries met in Geneva and discussed the extent of maternal deaths in the developing countries which are 200 times higher than in the industrialized countries (WHO 1985). During the study period, there were 2920 total births and 61 maternal deaths; and the maternal mortality rate (MMR) was 20.89/1000 births. Sepsis claimed 24 lives and was the major killer. Haemorrhage and eclampsia accounted for 10 deaths each. Of the indirect causes, anaemia was the leading cause. An attempt has been to evaluate the cause of such high MMR and the factors responsible were found to be inadequate antenatal check-up, illiteracy, poverty, rural background and improper transport system.

Introduction:

Maternal death is a vital event for the obstetrician as it is not only useful to evaluate the performance but also to measure the social status of the community and the availability of MCH services. Maternal mortality studies have as their objective the reduction of maternal deaths to an irreducible minimum. This is a challenge to every institution, every public health agency and to society at large. At the All India level, the MMR varies from 54.8 to 3254.3/100,000 live births according to FOGSI Study (Rao 1982).

Material & Methods:

The study population consisted of all maternal deaths which occurred between September 1994 to August 1995 in the Dept. Of Obst. & Gyn., Silchar Medical

College and Hospital, Silchar. This hospital being the only referral institution in the Barak Valley region of Assam caters to a vast rural population. Relevant maternal data was recorded with special reference to residence, duration of hospital stay, booked case, socio-economic status and education. No autopsy could be done due to social objections. An attempt has been made to evaluate various factors responsible for such high MMR. The definition adopted for the study is as per Park & Park (1991)-"the death of a woman while pregnant or within 42 days of termination of pregnancy irrespective of the duration and site of pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes." The maternal mortality rate should be expressed as a rate per 1000 live births.

The causes of death have been classified as direct and indirect.

Results And Observations**Incidence:**

The total number of deliveries during the period 1st September, 1994 to 31st August, 1995 was 2920. There were 61 maternal deaths. The maternal mortality rate is 20.89/1000 total births.

Parity & Age:

Highest number of maternal deaths (40.98%) were observed in primipara and 29.5% deaths occurred in the age group (25-29) years and only 11.4% in the teenage pregnancy as observed in Table-I.

Table - I
Age and parity distribution

Category Age (in years)	Number	Percentage
15-19	7	11.4%
20-24	14	22.9%
25-29	18	29.5%
30-34	12	19.0%
35+	10	16.3%
Parity		
P ₀	2	3.27%
P ₁	25	40.98%
P ₂	9	14.7%
P ₃	9	14.7%
P ₄ +	6	26.2%

Table - I (A)
Age and parity distribution

Category	Total deliveries	Maternal death	Percentage of death among total deliveries
A. Age (in years)			
15-19	413	7	1.69%
20-24	653	14	2.14%
25-29	750	18	2.4%
30-34	583	12	2.05%
35	521	10	1.91%
B. Parity			
P	332	2	0.60%
P ₁	800	25	3.12%
P ₂	570	9	1.57%
P ₃	598	9	1.50%
P ₄ +	620	16	2.58%

Locality & hospital registration

91.8% of maternal deaths were unbooked emergency admissions, 78.6% belonging to rural areas as seen in Table-II.

Table - II
Distribution of maternal deaths according to locality and hospital registration

Category	Numbers	Percentage
Booked	5	8.1%
Unbooked	56	91.8%
Rural Area	48	78.6%
Urban Slum	6	9.8%
Urban Area	7	11.1%

Table II A
Distribution of maternal deaths according to locality and hospital registration

Category	Total deliveries	Maternal death	Percentage of death Among total deliveries
(A)			
Booked	898	5	0.55%
Unbooked	2022	56	2.76%
(B)			
Rural Area	1889	48	2.54%
Urban Slum	456	6	1.31%
Urban Area	576	7	1.21%

Socio-economic status and female literacy

As observed in Table-III, there is a negative association between maternal death and education of mother. Socio-economic conditions and maternal mortality are inversely related as seen in Table-III.

study is in accordance with Rao's (1975) report of MMR being 16.7/1000 births. National figures range from 54.82-3254.3/1,00,000 births according to ICGSI study (Bayera et al 1992) NCS.S.M. (1994) reported MMR to be 12.1 in Assam.

Table-III
Socio-economic status and female literacy Distribution

Socio-Economic Status Grade	Socio-Economic Status		Education of Mother		
	Number	Percentage	Category	Number	Percentage
I	-	-	Illiterate	46	75.4
II	5	8.19	Primary School	12	19.6
III	26	42.62	Middle School	3	4.9
IV	30	49.18	High School & above	0	0

Table III (A)
Socio-economic status and female literacy distribution

Grade	Socio-Economic status			Category	Education of Mother		
	Total Deliveries	Mat. Death	Percent among Total deliveries		Total deliveries	Mat. Death	Percent among total deliveries
I	250	-	-	Illiterate	1676	16	4
II	581	5	0.85%	Primary school	692	12	1.73%
III	986	26	2.63%	Middle School	400	7	1.75%
IV	1100	30	2.72%	High School & above	152	1	0.66%

Time Interval:

Majority (55.7%) of the deaths took place within 24 hours of admission and only in 4.9% cases, time interval was more than 7 days.

Causes:

It is evident from Table-IV that there were 51 (83.6%) maternal deaths due to direct causes and 10 (16.93%) due to indirect causes. Sepsis was the major killer claiming 24 lives (39.3%) followed by haemorrhage and eclampsia with 10 deaths each. Anaemia claimed 6 lives (9.83%). Of the septic deaths, 16 (66.66%) died of septic abortion 4 (16.66%) of puerperal sepsis and 4 of chorioamnionitis leading to endotoxic shock. Of haemorrhagic deaths, 50% died of P.P.H., and 30% due to abortion. There was no case of death due to molar or ectopic pregnancy. Seventy percent of the eclamptic deaths were of antepartum eclampsia.

Discussion:

In the last part of 20th century, the maternal death rate is still very high in our country and the present study shows that MMR is 20.89 /1000 total live births. WHO (1980) reports MMR /1000 live births to be 5.8. The present

Death rate in primipara is highest (40.98%). Rao (1986) has reported that risk of death in primipara slightly more than that of second or third gravida.

As observed in the present study, there is great need for antenatal care as 91.8% of cases were admitted as unbooked emergency and only 8% deaths occurred in booked cases. Similar figures were reported by Rao (1986) viz 95%. In the present study, there were 48 deaths (78.6%) in women hailing from rural areas and only 7 (11.4%) from urban areas. Tewari & Gulati (1990) reported 75-78% maternal deaths in rural India. The above observations reveal the gross disparity between the availability and utilization of medical facilities between urban and rural areas.

Female literacy, employment and women's status are closely linked with mortality. The highest mortality is found in illiterate mothers where there were 46 deaths (75.4%). Similar observations have been made by Swain et al (1994).

Sepsis is still the major cause of death. Septic abortions and puerperal sepsis have been the most important cause of death in spite of legalization of MTP and advent of antibiotics; these facilities do not reach the poor. Of the triad of direct causes, haemorrhage is the

second cause of death (16.3%) and with proper intranatal care, hospital deliveries and blood banking facilities, this can be lowered. Eclampsia was also responsible for 16.3% deaths and here again, it was common amongst the rural population who reach the hospital late, without any antenatal check-up.

Of the indirect causes, anaemia claimed 5 lives (8.19%). Similar reports have been made by Rao (1975) where anaemia claimed 27.6% of lives. Most of mothers, who died of anaemia, were multigravidae who did not attend antenatal clinics and thereby, did not get prophylactic iron and moreover, there was no spacing of births.

Conclusion:

The very high maternal mortality rate can be accounted for by the fact that it is the only tertiary level hospital with family welfare service infrastructure in the Barak Valley. It is hoped that significant reduction in maternal mortality is possible by health education of the masses, provision of efficient MTP services with adoption of proper contraceptive devices and proper blood banking facility. In addition to above, adequate care in the community must be ensured for high risk mothers and all deliveries be attended by trained personnel which will help to lower the high death rate in the remotest corner of the country.

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