To Study the Incidence & Various Causes of Maternal Mortality in OBGY Dept

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ABSTRACT
Background & Methods: The aim of the study is to study incidence & various causes of maternal mortality in OBGY Dept. All causes of maternal mortality particularly direct causes of maternal mortality for which management usually involves maternity care professional. Convulsion during pregnancy or in the 1st - 10 days postpartum together with at least two of the following features within 24 hrs after convulsion. BP> 170/110 mmHg, proteinuria > 1 + on random dipstick or > 0.3 g in 24 hours, thrombocytopenia <100x109/L increased aspartate aminotransferase > 42 u/I.
Results: 37.32% Maternal Death occurred in Primi Patients out of 418 cases of Maternal Death. 50.25% Maternal Death occurred in direct cases out of 400 cases. We found ANC 84.50% & PNC 15.50%. We found maximum mortality in Toxemia (35.25%), followed by Severe Anemia (13.5%).
Conclusion: Age wise Mortality is more in 21-30 yrs, i.e. 65.5% & teen age 15-20 yrs mortality is 24.75%. 50.25% cases were Direct & 49.75% cases were referred from peripheral areas. Out of all cases 84.50% cases reported with ANC & 15.50% cases PNC. According to my observation cause of deaths are – 35.25% due to eclampsia/ toxemia/PIH, 27.5% cases due to Severe anemia/APH/PPH & remaining due to septicemia, Abruptio/Ectopic/Hepatic coma/Dengue/HIV/Ruptured Uterus etc.

1. Introduction and Background

The death rate for women giving birth plummeted in the 20th century. Every minute a woman dies as a result of pregnancy or childbirth. The loss per annum of 500,000 women is mind boggling. A maternal death is the outcome of a chain of events & disadvantages throughout a woman's life. Every time a woman in the third world becomes pregnant, her risk of dying is 200 times higher than the risk run by a woman in the developed world[1].

The world has come a long way from the times when a woman surviving childbirth was considered to be blessed with a 'second life' to the present when, as the WHO theme for the year 2005 states, "every mother counts"! Maternal mortality figures have plummeted from thousands till a century ago to single digit values in some parts of the modern world. Unfortunately there is a big divide between the developed & developing world on this score of maternal mortality[2].

Maternal deaths, too often solitary & hidden events, go uncounted. This is not because of a lack of clarity in defining a maternal death, but because of an inherent weakness in the health information & recording systems. Estimates based on the systematic reviews of available information indicate a problem of considerable magnitude[3-5].

A majority of maternal deaths occur in Asia (253,000) & Africa (251,000). Thirteen countries account for 67% of all maternal deaths. India has the dubious distinction of having the highest estimated number of maternal deaths in any country (136,000). Developed countries in contrast have a maternal mortality ratio of around 20 per 100,000 live births [6]. Because of the rarity of maternal death in developed countries, "near misses" are incorporated in their audit systems. Near misses are defined as women who nearly died but, with good luck & care, survived. Incorporation of near misses strengthens maternal mortality audits[7].

2. Material & Methods

This is a study performed in Department of Obstetrics & Gynaecology at Dr. Laxminaryan Pandey Medical College, Ratlam, M.P. for 01 Year.

The cases of maternal mortality during this period were studied, causes of these maternal mortalities were evaluated, various socio-demographic factors associated with the maternal death analyzed, & changing trends in maternal mortality analyzed. All causes of maternal mortality particularly direct causes of maternal mortality for which management usually involves maternity care professional.

Types:

a. Primary Hemorrhage: Hemorrhage occurs within 24 hours following birth of a baby. Causes

b. Atonic uterus (80%): Commonest cause of PPH. PPH due to imperfect contraction & retraction of uterus.

c. Traumatic (20%): Trauma to the genital tract usually occurs following operative delivery, even after spontaneous delivery.

d. Secondary hemorrhage : Hemorrhage which occurs after 24 hours of delivery to within 7 days of puerperium

e. Blood coaugulopathy : Least common cause

Sever sepsis (Infection): Sepsis is a systemic response to infection manifested by 2 of more.

- Temperature > 38^0 C or < 36°C (unless of the prolonged caesarian).
- Heart rate> 100 beats / minute.
- Respiratory rate> 20 /minute
- WBC count 17 x 10^9 /L or > 10% immature forms + bacteremia or positive swab culture.
- Sever sepsis is sepsis associated with any organ dysfunction ego acute renal failure.

Eclampsia: Convulsion during pregnancy or in the 1st - 10 days postpartum together with at least two of the following features within 24 hrs after convulsion. BP> 170/110 mmHg, proteinuria > 1 + on random dipstick or > 0.3 g in 24 hours, thrombocytopenia <100x109/L increased aspartate aminotransferase > 42 u/I.

3. Result

Table 1: Percentage of Maternal Death age wise

Age Group (Years)	Number of Mortality	% of Total Mortality
15-20	99	24.75%
21-30	262	65.5%
31-40	39	9.75%
41-50	00	0%

We found 65.5% in age group of 21-30, 24.75% in age group of 15-20.

Table 2: Percentage of Maternal Death Parity wise

Parity	Number of Mortality	% of Total Mortality
P_0	138	34.5%
P_1	77	19.25%
P_2	57	14.25%
P_3	35	8.75%
P_4	18	4.50%
P_5	7	1.75%
P_6	5	1.25%
P_{10}	1	0.25%
PNC	62	15.5%

37.32% Maternal Death occurred in Primi Patients out of 418 cases of Maternal Death.

Table 3: Percentage of Maternal Deaths in Referred & Direct Cases

Status	Number of Mortality	% of Total Mortality
Referred	199	49.75%
Direct	201	50.25%
Total	400	-

50.25% Maternal Death occurred in direct cases out of 400 cases.

Table 4: Showing Percentage of Maternal Deaths ANC & PNC Cases.

Status	Number of Mortality	% of Total Mortality
ANC	338	84.50%
PNC	62	15.50%
Total	400	-

We found ANC 84.50% & PNC 15.50%.

Table 5: Cause of Death Percentage

Cause of Death	Number of Mortality	% of Total Mortality
Toxemia	141	35.25%
Severe Anemia	54	13.5%
APH	24	6.0%
PPH	32	8.0%
Rupture Uterus & Ectopic Preg.	25	6.25%
Septicemia	12	3.0%
Abortion & MTP Perforation	25	6.25%
Others	87	21.75%
Total	400	-

We found maximum mortality in Toxemia (35.25%), followed by Severe Anemia (13.5%).

4. Discussion

Overall, we have found the pregnancy-related death rate to be 18.6/10 000 deliveries, with large variation across individual regions[8-11]. The leading causes of death were obstetric haemorrhage (36.0%), hypertensive disorders of pregnancy (20.6%), sepsis (14.1%) and other (26.5%). The majority of deaths across all regions occurred in healthcare facilities (98.1%), after delivery (35.9%) and in women aged 20– 29 years (50.6%). Overall, the implementation of the CRADLE intervention was not associated with any significant change in the rates of pregnancy-related death, but the effect varied across individual sites. We did not identify any significant association between the measured availability of key obstetric resources and pregnancy-related death rates.

In this study, the proportion of deaths from hypertensive disorders of pregnancy was higher than previously cited (20.6% reported compared with 14.0% worldwide and 16.0% in sub-Saharan Africa, where 94.2% of the deaths in our study occurred) [12]. This may relate to improved case acquisition after the introduction of the intervention, resulting in the increased reporting of deaths from hypertensive disorder of pregnancy, or the necessity for the research team to record a single leading cause of death (e.g. hypertensive disorder of pregnancy instead of disseminated intravascular coagulation). This highlights the challenges of recording maternal mortality worldwide, despite guidance from the WHO[13-14].

Our data suggest that the vast majority of deaths occurred in hospital, despite relatively good availability of resources, probably through a combination of women who arrive too unwell to benefit from emergency care, women with complications who could have been treated with timely effective interventions and women who develop serious complications whilst in hospital[15-17]. Deaths from women arriving seriously unwell indicate that delays were experienced in deciding to seek and reach care, suggesting a continued need to focus on health system and community factors, such as referral pathways and transport. Importantly, high-quality care within health facilities is required to reduce all causes of maternal deaths. Evidence from low-income countries suggests that increasing the rate of deliveries that occur in facilities does not necessarily equate to improved maternal or neonatal outcomes, because of the poor quality of care, which is estimated to contribute to half of all maternal deaths[18]. Policymakers must therefore address both coverage and service quality to achieve improvements in maternal health.

5. Conclusion

In India a large no of maternal deaths could be prevented with the help of trained local Dais & female help workers, institutional deliveries for women with bed obstetric history & risk factors. Age wise Mortality is more in 21-30 years, i.e. 65.5% & teen age 15-20 years mortality is 24.75%. 50.25% cases were Direct & 49.75% cases were referred from peripheral areas. Out of all cases 84.50% cases reported with ANC & 15.50% cases PNC. According to my observation cause of deaths are – 35.25% due to eclampsia/ toxemia/PIH, 27.5% cases due to Severe anemia/APH/PPH & remaining due to septicemia, Abruptio/Ectopic/Hepatic coma/Dengue/HIV/Ruptured Uterus etc.

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