



Two years Retrospective Study of Causes of Maternal Mortality in Our Institution

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ABSTRACT

Over 600000 maternal deaths occur each year worldwide. In India, many women die due to pregnancy-related complications. The present study was undertaken with a view to determine factors causing maternal deaths, to recognize cause of death. A total 65 pregnancy-related deaths occurring during March 2014 to march 2016 were studied and their age ranged from 16 year to 35 years in our study. It was observed that maximum numbers of deaths were recorded in the age group of 21-25 years (50.76%). Preeclampsia & eclampsia remains most common cause of death (27.6%) followed by postpartum haemorrhage (13.8%), anaemia (9.23 %), liver disease(9.23%) ,obstructed labour(4.61%), septicaemia(4.61%),ectopic pregnancy(3.07%) rupture uterus(1.53),uterine inversion (1.53%), dengue fever(1.53%),complicated malaria(1.53%), ante partum haemorrhage(1.07%),abortion(1.07%),

KEYWORDS

Pregnancy, Maternal Mortality

Introduction

Over 600000 maternal deaths occur each year worldwide. [1] In India, many women die due to pregnancy-related complications and those who survive suffer from severe maternal morbidity. [9] Maternal death rate in India was 1000 per 100000 live births in 1959 and it decreased to 301 per 100000 live births in 2003. [3] Albeit, the risk of death from complications of pregnancy has decreased during past few decades, it continues to haunt Obstetricians. Maternal death has been used traditionally as a measure of quality of health care in a community. [10] It is hard to find precise reporting of maternal death because this requires information about deaths among women of reproductive age, pregnancy status at or near the time of death and the medical cause of death. All three components can be difficult to measure accurately, especially in settings where deaths are not comprehensively reported. [5]

The present study was undertaken with a view to determine factors causing maternal deaths, to recognize cause of death.

Material & Methods:

This was a retrospective study conducted from March 2014 to March 2016(2 years) in department of Obs and Gynae and other department of Maharani Laxmi Bai Medical College Jhansi. We here included all cases of deaths resulting from obstetrical causes and medical causes related to pregnancy that occur during pregnancy, at delivery or within 42 days of delivery or termination. During this period, total 65 deaths occurred. The cases were analyzed in respect to maternal age and cause of death.

Results:

A total 65 pregnancy-related deaths occurring during March 2014 to march 2016 (2 years) were identified. Their age ranged from 16 year to 35 year with mean age of 25.5 year. It was observed that maximum numbers of deaths were recorded in the age group of 21-25 years (50.76%) (Table No. 1)

Table No. 2 provides cause of death. Pre eclampsia & eclampsia remains most common cause of death (27.6%) followed by postpartum haemorrhage (13.8%), anaemia(9.23 %), liver disease(9.23%) ,obstructed labour(4.61%), septicaemia(4.61%),ectopic pregnancy(3.07%) rupture uterus(1.53),uterine inversion (1.53%), dengue fever(1.53%),complicated malaria(1.53%),ante partum haemorrhage(1.07%),abortion(1.07%),

Discussion:

Complete and accurate identification of all deaths associated with pregnancy is a critical first step in the prevention of such deaths. Only by having a clear understanding of the changing trends and the magnitude of pregnancy-related mortality can be comprehensive prevention strategies be formulated to prevent these unanticipated deaths among women. [12] The obstetrical practice and the risk profile of pregnant women have changed over the years, particularly in developed world. [2] Thromboembolism remains the leading cause of maternal death in developed countries followed by pregnancy-induced hypertension or pre-eclampsia and eclampsia. [5] The Maryland study reported the cause of maternal deaths as – pre-eclampsia/eclampsia (22.2%), postpartum haemorrhage/obstetric shock (22.2%), pulmonary complications (14%), blood clot &/or amniotic fluid embolism (8.1%) and anaesthesia-related complications (5.2%). [8]In our study, preeclampsia & eclampsia remains the most common cause followed by postpartum haemorrhage, anaemia, liver disease, obstructed labour, septicaemia, ectopic pregnancy, rupture uterus, uterine inversion, dengue fever, complicated malaria, ante partum haemorrhage and abortion.

Hypertensive disorder in pregnancy, especially pre-eclampsia, increases perinatal mortality rate by five folds. [6] Pre-eclampsia is characterized by hypertension, proteinuria and oedema. Eclampsia is the occurrence of generalized convulsions during pregnancy, labour or within seven days of delivery. Pulmonary

disease and cardiac disorders are considered as significant contributor to maternal mortality. In a study conducted by Venkatraman et al and Yadav et al, rheumatic heart disease constitutes the commonest cause of heart disease in pregnancy and accounted for 83% and 95% respectively. [17, 18] During pregnancy, pulmonary tuberculosis is more common as compared to extra-pulmonary tuberculosis. Tuberculosis has important implications for both mother and child. The stress of pregnancy, especially in association with poor nutritional status, immunodeficient state, and co-existent diseases, flares up tuberculosis. [07]

According to WHO, maternal death means "death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes". By understanding the causes of maternal death we can manage maternal mortality more properly. Death records remain an important source of maternal deaths. Using death certificate as sole source suffers from drawback because many times cause of death is not mentioned, especially if death incurred medico-legal autopsy. Often only cardio-respiratory arrest was furnished as a cause of death. In past, studies had shown that physicians completing death records following a maternal death fail to report that the woman J Indian Acad Forensic Med, 32(1) ISSN 0971-0973 17

was pregnant or had recent pregnancy in 50% or more of these cases. [5] Such mistakes may result in misclassification of the underlying cause of death. If such deaths are not identified as maternal deaths then they may not be included in the calculation of maternal mortality rates. Therefore traditional system of collecting data on maternal mortality cannot identify all pregnancy-related deaths. The Maryland study showed that only a small proportion of pregnancy-associated deaths can be identified from death certificate alone and that comprehensive identification of pregnancy-associated death requires collection of data from additional sources, including autopsy records and linkage of death records with birth and fetal death record. [10] Thus the use of multiple data sources substantially enhances pregnancy mortality surveillance.

Conclusion:

Maternal death is a measure of quality of health care in a community. Though, the risk of death from complications of pregnancy has decreased during past few decades in India, it continues to remain higher than developed countries. It was observed that maximum numbers of deaths were recorded in the age group of 21-25 years (50.76%). Preeclampsia & eclampsia re-mains the most common cause of death followed by postpartum haemorrhage , anaemia, liver disease ,obstructed labour, septicaemia ,ectopic pregnancy rupture uterus ,uterine inversion , dengue fever , complicated malaria , ante partum haemorrhage & abortion.

Table No. 1: Distribution of Cases According to Age Group

Age group (years)	No. of cases
16-20	02 (03.07%)
21-25	33 (50.76%)
26-30	26 (40.00%)
31-35	04 (06.15%)

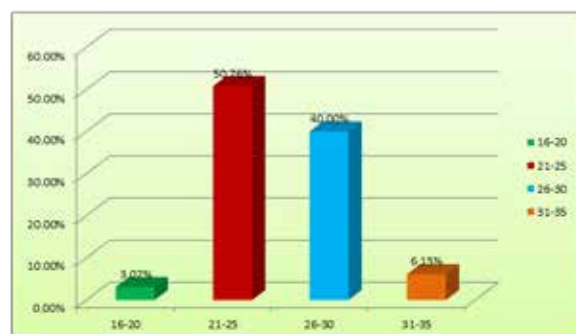
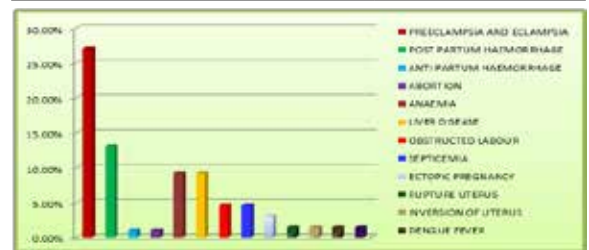


Table No. 2: Cause of Death

Cause of death	No. of cases
PREECLAMPSIA AND ECLAMPSIA	18 (27.06%)
POST PARTUM HAEMORRHAGE	09 (13.08%)
ANTI PARTUM HAEMORRHAGE	07 (01.07%)
ABORTION	07 (01.07%)
ANAEMIA	06 (09.23%)
LIVER DISEASE	06 (09.23%)
OBSTRUCTED LABOUR	03 (04.61%)
SEPTICEMIA	03 (04.61%)
ECTOPIC PREGNANCY	02 (03.07%)
RUPTURE UTERUS	01 (01.53%)
INVERSION OF UTERUS	01 (01.53%)
DENGUE FEVER	01 (01.53%)
COMPLICATED MALARIA	01 (01.53%)



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