



REVIEW OF MATERNAL MORTALITY AT A TERTIARY CENTRE

Obstetrics & Gynaecology

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ABSTRACT

Introduction: World Health Organization (WHO) defines maternal mortality as “the death of women while being pregnant or within 42 days of termination of pregnancy, irrespective of duration and site of pregnancy, from any cause related or aggravated by the pregnancy but not from accidental or incidental cause”. Reduction of Maternal Mortality Rate (MMR) (Ensure healthy lives and promote well-being for all at all ages) is also one of the Sustainable Development Goals adopted by United Nations. Hence, it is very important to study the factors affecting maternal mortality in order to devise a comprehensive strategy for its reduction.

Aim: The study aims to analyze the cause and incidence of maternal mortality in Patna Medical College and Hospital, Patna.

Type Of Study: Retrospective study

Study Period: 1 year (November 2020 to October 2021)

Materials And Methods: This study is conducted in department of Obstetrics and Gynaecology of Patna Medical College and Hospital, Patna. Demographic data and other data are collected from record section, admission registers and ICU Registers.

Result: Out of 6,658 admissions and 5,370 deliveries during the study period, there were 63 maternal deaths. 57 maternal deaths reviewed were due to obstetric causes. Eclampsia was the leading direct cause of death (26.98%).

Conclusion: The study helps in identifying the preventable factors contributing to maternal mortality. The review exercise yielded useful information on factors contributing to preventable causes of maternal mortality in Patna Medical College and Hospital, Patna.

KEYWORDS

Maternal mortality, WHO, MMR

INTRODUCTION

As per WHO's estimate of 2017, worldwide 2,95,000 women died of pregnancy related complications annually. India is carrying 12% of global burden of maternal mortality. Reduction of maternal mortality is one of the indicators under Goal 3- Ensure healthy lives and promote well-being for all at all ages of Sustainable Development Goals. It seeks to reduce global MMR to less than 70 per 1,00,000 live births by 2030.

According to the World Health Organization (WHO), “A Maternal death is defined as death of any woman while being pregnant or within forty-two completed days of termination of pregnancy irrespective of duration or site of pregnancy from any cause related to or aggravated by pregnancy but not from accidental or incidental causes”. Maternal mortality rate is defined as maternal death per 1,00,000 live births.

This study is carried out at Obstetrics and Gynaecology department in Patna Medical College and Hospital, Patna where large numbers of patients are referred from rural parts of Bihar. Objectives of the present study are:

1. To find age characteristics of the women who died in PMCH, Patna.
2. What was the condition of the women at the time of admission (e.g. condition at admission)?
3. What were the primary causes (i.e. obstetric, non-obstetric) of maternal death?
4. What was the duration of hospital stay i.e. from time of admission to the time of death?

MATERIALS AND METHODS

The present study is a retrospective study conducted in department of Obstetrics and Gynaecology, Patna Medical College and Hospital, Patna. It is a tertiary care hospital. A total of 63 cases with maternal mortality were reported during the study period. The case records of the patients were taken from record section, admission register and ICU registers. Information regarding Booked/Un-booked, Age distribution, Gravida, Referral or non-referral, Reason for admission, Duration of hospital stay (Time from admission to death), Number of ante-natal visits, Condition at admission, Pregnancy stage at the time of death and Obstetric/ Non obstetric cause of death were recorded. Data were collected, tabulated, and analyzed.

OBSERVATION AND RESULTS

There were total of 5,370 deliveries conducted during the study period starting from 1st November 2020 to 31st October 2021. 63 maternal deaths were reported during the study. Incidence of Maternal Mortality in the institute is 0.0094%.

Table – 1: Booked/Un-booked (N=63)

Booked/Un-booked	Number	Percentage
Booked	11	17.46
Un-booked	52	82.53

In the present study, 82.53% of the patients were un-booked.

Table – 2: Referral/ Non-referral (N=63)

Referral/ Non-referral	Number	Percentage
Referral	45	71.42
Non-referral	18	28.57

71.42% of the patients were referred.

Table – 3: Age Wise Distribution (N=63)

Age (in years)	Number	Percentage
≤20	5	7.93
21-25	20	31.74
26-30	22	34.92
31-35	14	22.22
36-40	2	3.17

Most of the patients (34.92%) are in the age group of 26-30 years.

Table – 4: Gravida Distribution Of Maternal Mortality (N=63)

Gravida	Number	Percentage
Primigravida	14	22.22
2nd Gravida	17	26.98
Multigravida	32	50.79

Maternal Mortality is higher in multigravida (50.79%) compared to primigravida.

Table – 5: Reason For Admission (N=63)

Reason for Admission	Number	Percentage
Routine Labour	7	11.11
Obstetric Complication and also in labour	17	26.98
Obstetric Complication but not in labour	23	36.5
Postpartum Complication	10	15.87
Non- obstetric complication and in labour	6	9.52

Most of the patients (40) admitted had obstetric complication.

Table - 6: Number Of Ante-natal Visit (N=63)

Number of ante-natal visit	Number	Percentage
Nil	35	55.55
<3	17	26.98
>3	11	17.46

There were only 17.46% patients who had more than 3 ante-natal checkups.

Table - 7: Condition At Admission (N=63)

Condition at admission	Number	Percentage
Conscious and oriented	7	11.11
Conscious and disoriented	12	19.04
Semi-conscious	31	49.20
Unconscious	13	20.63

A total of 44 patients (69.83%) were in semi-conscious or unconscious state.

Table - 8: Pregnancy Stage At Time Of Death (N=63)

Pregnancy stage	Number	Percentage
Antepartum	11	17.46
Intrapartum	9	14.28
Postpartum	39	61.90
Abortion	4	6.34

Most of the patients i.e., 39(61.90%) were in their postpartum period at the time of death.

Table - 9: Duration Of Hospital Stay (time From Admission To Death, In Hours) (N=63)

Duration of hospital stay (Time from admission to death, in hours)	Number	Percentage
0-12	31	49.20
13-24	10	15.87
25-36	6	9.52
37-48	4	6.34
>48	12	19.04

Since most of the patients were referred cases and presented at the hospital in a critical state, their duration of stay was very less 0-12 hrs (49.20%).

Table - 10: Cause Of Death (N=63)

Cause of death	Number	Percentage	
Obstetric	Eclampsia	17	26.98
	Hypertensive Disorder of Pregnancy	4	6.34
	Antepartum Haemorrhage	6	9.52
	Postpartum Haemorrhage	8	12.69
	Severe Anaemia	7	11.11
	Puerperal and Post-abortal Sepsis	6	9.52
	Ruptured Uterus	6	9.52
	Embolism	3	4.76
Non Obstetric	6	9.52	

Obstetric causes of death are due to complications of different events of pregnancy, it's treatments or results of treatments. The non-obstetric causes of death result from pre-existing diseases or the diseases developed during pregnancy and aggravated due to physiological process of pregnancy, labour and puerperium.

Eclampsia is the leading cause of death with 26.98% in the present study.

CONCLUSION

The study helps in identifying the preventable factors contributing to maternal mortality. The review exercise yielded useful information on factors contributing to preventable causes of maternal mortality in Patna Medical College and Hospital, Patna. It has been found out in the study that 82.53% of the maternal mortality was of the patients with less than 3 ante-natal visits.

This highlights the need for easy access to basic ante-natal, intra-natal and post-natal care for every mother. Referral system should be strong, quick and functioning. Proper communication, road and transport facilities are essential. Regular health education program involving the society, community and NGOs is required.

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