

Audit of Maternal Mortality at Aziz Bhatti Shaheed Teaching Hospital, Gujrat

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ABSTRACT

Aim: To identify the different causes of maternal mortality at Aziz Bhatti Shaheed Teaching Hospital (ABSTH) Gujrat and to estimate the maternal mortality rate.

Study design: Descriptive study.

Methods: The study was done in Department of Obstetrics and Gynecology, ABSTH Gujrat. All the data of 3 years, from Jan2014-Dec 2016, was collected from the hospital record and evaluation for causes of maternal deaths was done. All maternal deaths during labor, delivery and puerperium were included in the study. The factors including age, parity, booking status, gestational age and other features of pregnancy were recorded on a Proforma and analyzed by SPSS version 20.

Results: There were 34 maternal deaths out of 7856 deliveries that took place between Jan 2014-Dec 2016. It resulted in maternal mortality rate of 438/100,000 live births. Important causes of maternal mortality were hemorrhage, uterine rupture, eclampsia and sepsis.

Conclusion: Obstetrical hemorrhage and eclampsia are major causes of maternal mortality at our hospital.

Keywords: Maternal mortality, pregnancy, obstetrical hemorrhage.

INTRODUCTION

Maternal death is defined by WHO as “the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of duration and site of pregnancy, from any cause related to or aggravated by pregnancy or its management but not from accidental or incidental causes”¹.

The maternal mortality rate has declined markedly but still it is 830/day¹. According to United Nations Population Fund UNPFA one woman dies every 2 minutes in the world and most of these are due to preventable causes. The causes of maternal deaths are mainly severe hemorrhage, unattended deliveries, uterine rupture, sepsis etc². All such causes of death are having very effective treatment plans which can be implemented to prevent these deaths³. The developed countries have worked over it in last decade quite intensively and this resulted in making their maternal mortality to half. The major bulk of women dying during child birth process are from the underdeveloped countries especially Africa and Southern Asia. The other dilemma is that most of the infants who survive during this process die before reaching their second birthday^{1,3}.

The risk of women dying during child birth process in developing countries is 1:40 which is very high as compared to developed countries where it is

1:3600. Health of women in developing countries like Pakistan is very poor. The major cause of poor health is malnutrition. Iron deficiency anemia is very common resulting in high maternal and infant morbidity and mortality. Due to low reserves of hemoglobin, antepartum and postpartum hemorrhage results in more devastating effects on their health⁴.

All the major causes of maternal deaths can be prevented through understanding of the disease process with timely diagnosis and management of complications. Improvements in primary health care system are must to decrease maternal morbidity and mortality. Training of health care workers to provide services in the community can result in very beneficial effects⁵.

MATERIALS AND METHODS

The study was conducted at Department of Obstetrics and Gynaecology, Aziz Bhatti Shaheed Teaching Hospital, Gujrat from Jan 2014-Dec 2016. Approval was taken from hospital ethical committee before start of the study. All the patients who delivered during the study period and fulfilling the inclusion criteria were included in the study. Total of 7856 patients delivered during the study period. 34 maternal deaths occurred during this period.

Data collection method: Convenient sampling technique was used. Study proforma was designed according to the objectives of the study. Permission was taken from hospital ethical committee. Data was analysed using SPSS version 20 and results were

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formulated. All patients who delivered during the study period and those who died due to causes related to pregnancy and its complication were included in the study. All those patients who died during pregnancy due to accidental causes or those females who died while they were not pregnant were excluded from the study

RESULTS

Total 34 maternal deaths occurred during the study period. Age distribution of the patients is shown in Table 1. Most of the maternal deaths occurred between 20-35 years of age. Parity of the patients who died during the study period is as shown in Table 2. Most of the patients who died were primigravidas. Booking status of the patients who died during the study period is shown in Table 3. This showed that extremely high maternal mortality was seen in unbooked cases as compared to booked ones. Table 4 shows the different causes of maternal deaths seen in our study period. The most important cause of maternal death was hemorrhage before or after delivery due to placenta praevia, placental abruption, uterine atony and ruptured uterus.

Table 1: Age distribution of patients who died

Age in years	n	%age
< 20	6	17.64
20-35	24	70.58
>35	4	11.76

Table 2: Parity of patients who died during study period

Parity	n	%age
Primigravida	16	47.05
2-4	12	35.29
5 or more	6	17.64

Table 3

Booking status	n	%age
Booked	2	5.88
Unbooked	32	94.11

Table 4: Causes of maternal deaths

Cause	n	%age
APH	7	20.58
PPH	10	29.41
Ruptured Uterus	8	23.52
Eclampsia	4	11.76
Sepsis	2	5.88
Pulmonary embolism	1	2.94
Anesthesia complications	1	2.94

DISCUSSION

Pregnancy is a physiological state and most of the deaths occurring during pregnancy are due to preventable causes. Five lac people die every year

due to complications occurring in pregnancy and puerperium⁶. 95% of all maternal deaths are from the developing countries like Pakistan.

In our study, maternal mortality rate is 438/100000 live births which is very high as compared to the maternal mortality rate declared by the government. The cause for this high maternal mortality is that ABSTH is the only tertiary care hospital receiving referrals from whole Gujrat and its surrounding rural areas. Most of the cases received in hospital are already complicated when referred from local hospitals and LHV's. Important causes of maternal deaths in our study are antepartum hemorrhage, postpartum hemorrhage, uterine rupture, eclampsia and sepsis. Most common cause of death in females is hemorrhage because of handling of patients by untrained birth attendants and delay in referral and transport of patients. All these causes can be prevented by timely and proper interventions⁷.

Eclampsia is the second major cause of maternal deaths after hemorrhage in our study. In our study 11.76% of the maternal deaths occurred due to high blood pressure and its complications⁸.

Sepsis is the third most common cause of maternal deaths in our study accounting for 5.88% of the deaths. Mostly it is due to unsterilized environment while conducting deliveries and septic induced abortions at homes by untrained personals. Sepsis is definitely a preventable cause. Proper health education, improvement of hygiene as well as improvement in socioeconomic status of general population is must to avoid sepsis. Literacy rate of the females in Pakistan is one of the worst in the world. This results in ignorance about their basic rights and need for health facilities^{9,10}.

Development of efficient basic health care system, early antenatal booking of patients, identification of high risk cases and their intime referral to tertiary health care centers can result in significant decrease in maternal mortality¹¹.

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Approval from hospital ethical committee: Approval was taken from hospital ethical committee before the start of the study.

REFERENCES

1. 'Health statistics and information systems: Maternal Mortality Ratio(per 100000 live births)". World Health Organization, June 17, 2016.
2. "Maternal Health". United Nations Population Fund, 2017.1.29.
3. Khlait M, Ronsmans C. 2009. "Deaths Attributable to Child bearing in Matlab, Bangladesh: Indirect causes

- of Maternal Mortality Questioned". American Journal of Epidemiology. 151(3):300-306.
4. Shaheen Kauser, Shazia Khalid, Farah Yousaf and Mamoon Akbar. Maternal Mortality In A Tertiary Care Hospital, Lahore-A four year review. Biomedica VOL 22, Jan-Jun, 2006. 5-8/Bio 6.
 5. Saadia Cheema, Saadia Tariq, Tariq Masood Tipu, Farah Yousaf, Madeeha Rashid, Tariq Saeed. Maternal Mortality At Lahore General Hospital. PJMHS Vol 6 No 1 Jan- Mar 2012, 118-121.
 6. Schvitemaker NW, Gramenthorst JB, Van Dongen. Maternal Mortality and its prevention. Em J Obs Gynaecol 1999;42:531-535.
 7. Knipped RA, Hatangadi SB. Acute hypertension related to hemorrhage in obstetric patients. Obs Gynaecol Clinic North Am 1995;22:111-129.
 8. Duley L. Maternal mortality associated with hypertensive disorders of pregnancy. Br J Obst Gynaecol 1992;99:547-553.
 9. Jafery SN. Maternal Mortality In Pakistan-Compilation of available data. J Pak Med Assoc; 2002;52(12):539.
 10. Jabeen M, Gul F, Rehman M. Maternal Mortality ratio and its causes in a district headquarter hospital in NWFP. J Postgrad Med Inst 2005;19:377-81.
 11. Maternal Mortality in 2000. Estimates developed by WHO UNICEF and UNFPA, Geneva, Switzerland. WHO 2004.