ORIGINAL ARTICLE

Maternal Mortality: A Challenge for Achieving MDG

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ABSTRACT

Aim: To estimate maternal mortality ratio and to identify the main causes and associated risk factors contributing to maternal death.
Study design: Descriptive Study
Setting: Department Of Obstetrics and Gynaecology (unit I), Jinnah Hospital Lahore, from January 2010 to December 2012.
Methods: The case notes of all patients who died during the study period in Gynae unit I, Jinnah Hospital as a result of conditions associated with pregnancy, labour and puerperium (6weeks after pregnancy) were reviewed. Final decision regarding the cause of death was drawn after consultation within the department as well as with the concerned departments like medicine and anesthesia.
Results: A total of 14,049 births occurred during the study period and there were 52 maternal deaths with maternal mortality ratio of 370/100,000 live births.
Conclusion: Women are not dying because of disease we cannot treat; they are dying because societies have yet to make the decision.
Keywords: Maternal Mortality, Maternal Mortality Ratio, Millennium Development goals.

INTRODUCTION

Every minute of every day, one woman dies somewhere in the world due to preventable complications in pregnancy and childbirth. That's a total of 4000 women dying each day or 356,000 dead each year. Despite an overall decrease in worldwide maternal mortality since 1980, millions of women and girls still face a staggering risk of death or disability during childbirth.[1]Mothers play a vital role in economic health of their families and communities. When a mother dies, her children's survival is threatened. Infants of mothers who do not survive delivery are more likely to die within two years[1].

Maternal death is the death of a women 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[2]. Maternal mortality ratio (MMR) is the number of maternal deaths during a given time period per 100,000 live births during the same period. Maternal Mortality is a very important indicator of the developmental condition of a country. The performance of any health system can be evaluated by studying their maternal mortality statistics[3]. It represents the quality of perinatal and obstetric care as well as the health status of women in the reproductive age. The reduction in maternal mortality is a high priority for the international community, especially in view of the increased attention on MDG[4]. In September 2000,the United Nations agreed at fifth Millennium development goals (MDG). Out of the eight MDG, No 3,4 and 5 have concern about women and children. MDG No 3 encourages gender equality and empowerment of women while MDG No.5 concentrates on improving maternal health and reducing maternal mortality rate by three quarters by 2015 from 1990 level[5].

According to the UNFPA state of world population 2012, Pakistan is the sixth most populous country in the world with population of about 180 millions. MMR of Pakistan is 260 deaths per 100,000 live births with only 45% of births attended by skilled health personnel.[6]Trends in maternal mortality from 1990 to 2010 in Pakistan shows 46% decline in MMR i.e., 490 to 260 per 100,000 live births. A country is considered to be "on track" if annual percentage decline between 1990 and 2010 is 5.5% or more. The average annual percentage decline during this time period in Pakistan is about 2.5 to 3.6%. Pakistan is among those countries which are said to be "making progress"[2]. Many of the specific targets of MDG 5 will not be met in the immediate future and it will be challenging to meet the targets in 2015 unless Herculean efforts are made to do so.

Another big challenge is lack of sufficient resources to improve health care facilities. Expenditure on health has remained around 0.56% of the GDP in year 2008-09 indicating low priority to health sector. Moreover, the major share of this expenditure is consumed by tertiary health facilities with the result that primary health care facilities especially in rural areas remain neglected. While communities and donors can be expected to provide some resources, the governments allocation to the

overall health sector will have to be increased if MDG targets on goal 5 are to be achieved[5].

This study was carried out to evaluate and establish the causes of maternal deaths in Jinnah Hospital, Lahore. Having a sound knowledge in this respect and understanding of maternal care is an important step towards designing and implementing interventions for positive behaviour changes. This study is a step in this direction.

PATIENTS AND METHODS

The study was conducted in Gynaecology Unit –I Jinnah Hospital, Lahore, which is affiliated with Allama Iqbal Medical College, Lahore. This is a tertiary care hospital situated in southern Lahore nearest to motorway and has wide catchment areas of several districts of Punjab. The case notes of all who died during January 2010 to December 2012, as a result of conditions associated with pregnancy, labour and puerperium (6 weeks after pregnancy) were reviewed in an effort to identify the most common causes of maternal deaths. The information recorded included name, age, parity, time of admission, investigations done, treatment given and final diagnosis. The cases were discussed within the department and as well opinion was taken from medical, surgical and anesthesia personnel, before the final diagnosis was made. Postpartum autopsy seldom was possible; consequently the cause of death was based on clinical findings only. When the cause of death could be attributed to more than one factor, the most likely factor was assigned the cause of death. Frequency, ratio and proportions of different causes of maternal mortality were calculated.

RESULTS

A total of 14,049 births occurred during the study period and there were 52 maternal deaths with maternal mortality rate of 370/100,000 live births. Ages ranged from 19 to 41 years. Peak age group in which maximum deaths occurred was 20 to 29 year (55.8%), followed by 30 to 39 years and lowest maternal deaths occurred in 40 and above age group (Table I). The highest maternal mortality was found in P_2 –P_5 (Table 2). 96% of patients were unbooked with no regular antenatal checkups

The common causes of maternal mortality were obstetric haemorrhage in 19(36.5%), hypertensive disorders in 16(30.7%), sepsis in 5(10%) and unsafe abortions were responsible for 4 deaths. Thee commonest indirect cause of maternal death was acute liver failure (7.7%).

Risk factors associated with maternal death at first level were lack of antenatal health care, inability to judge the graveness of situation, and delay in seeking care. After initial care there was a delay in referral by the primary care provider and after being referred they are unsure where to go along with cost and transport issues. Once they reach the tertiary health facility they are usually in very serious and critical conditions. Delay in getting blood and blood products, reports of investigations, non-availability of theatre table and ventilatory support were the common causes of third delay.

Table I: Maternal Mortality according to age group (n=52)

Age group (Yrs)	n	%age
<20	6	11.5
21-29	29	55.8
30-39	16	30.8
40 and above	1	1.9

Table 2: Distribution of maternal death according to parity (n=52)

Parity	n	%age
Primigravida	12	23
Multigravida	32	61.5
Grand multipara	8	15.5

Table-3: Causes of maternal mortality (n=52)

Cause of death	n	%age
Haemorrhage	19	36.5
Hypertensive disorders	16	30.7
Sepsis	5	10
Acute liver failure	4	7.6
Unsafe abortions	4	7.6
Cardiac cause	3	5.7
Amniotic fluid embolism	1	1.9

DISCUSSION

Maternal Mortality is an important measure of women's health and pinpoints towards the performance of health care systems.[7]There is now a large agreement that maternal mortality cannot be reduced in the absence of increased utilization of high-quality health care services. Where MMR is high, it can be concluded that health care is ineffective, either in the form of lack of access of women to healthcare facilitates or quality of care provided to them or it may be a combination of both factors[8]. Maternal deaths are difficult to identify precisely because this requires information about deaths among women of reproductive age, pregnancy status at the time of death and maternal cause of death[9].

There were 52 maternal deaths during the study period of three years, the MMR is 370/100,000 live births, which is within the range of MMR according to WHO, and UNICEF estimates of 1990-2010 i.e.,150-

500/100.000 live births[2.] . However demographic and health survey of Pakistan in 2006-2007 conducted under USAID/Pakistan showed MMR in Pakistan for the 3 year before survey as such in Punjab MMR 227/100000, NWFP 275/100000, Sindh 314/100000 L.B, Balochistan 785/10000018. MMR is significantly higher in rural areas as compared to urban area. In spite of all efforts to achieve MDG, trends for maternal mortality seems to be static or increasing if we compare it with other local and national studies.

Maternal deaths are more tragic because these women are not only very young, 60-70% is less than 30 years of age, but they also have young children to take care of. Maternal death has long-term implications on the life of surviving children.

The major cause of mortality was haemorrhage (36.5%) in present study. It is almost the same in similar circumstances in Pakistan[10]. Haemorrhage followed by hypertensive disorders and infections were the chief causes of death reported in good number of studies conducted in Pakistan[9, 10, 11]. Haemorrhage both antepartum and postpartum stays one of the most important killers of child-bearing women all over the world. The deaths due to haemorrhage are preventable, if they would reach in time to hospital and provided immediate and effective resuscitative measures[12].

The condition on arrival to the hospital is very important. Women whom health is already compromised by poor nutrition and disease are more likely to die during an obstetric emergency. Biggest challenge faced in managing patients presenting with life threatening emergencies is inadequate facilities available at tertiary care. Non availability of blood and blood products, delay in surgery due to non availability of theatre table and non availability of ventilators support are the commonest problems faced.

CONCLUSION

There is no magic bullet to reduce maternal mortality, but by developing effective Antenatal care system, availability of emergency obstetrical care round the clock at all the three levels of health system, training of LHV, TBA &CMW (community midwife), quick referral system with introduction of flying squads and equipped ambulance for obstetrical emergencies, audit of every maternal death and annual audit of maternal deaths at all hospitals, can help us to attain our goal i.e., reduce MMR by 70% by the year 2015.

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