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MATERNAL MORTALITY;
ONE YEAR REVIEW AT ALLIED HOSPITAL, FAISALABAD

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ABSTRACT... Objective: To find out maternal mortality ratio (MMR) and to determine major causes of maternal death. **Study design:** A descriptive study. **Setting:** Department of Obstetric and Gynaecology, Allied Hospital, Faisalabad. **Study period:** From 01.01.2008 to 31.12.2008. **Materials and methods:** All cases of maternal death during this study periods were included except accidental deaths. **Results:** There were 58 maternal deaths during this period. Total No. of live births were 5975. MMR was 58/5975 x 100,000 = 970/100,000 live births. The most common cause of maternal death was hemorrhage (34.5%) followed by hypertensive disorders/eclampsia (31%). Most of the patients (75.86%) were referred from primary & secondary care level. **Conclusion:** Maternal mortality is still very high in underdeveloped countries including Pakistan. We must enhance emergency obstetric care (EOC) to achieve the goal of reduction in MMR.

Key words: Maternal mortality ratio (MMR), Safe motherhood, PPH.

INTRODUCTION

Maternal Mortality globally is estimated at 529,000 deaths per year, a ratio of 400 maternal deaths per 100,000 live births[1].

Maternal death is defined by the WHO as "death of a woman while pregnant or within 42 days of termination of pregnancy inspective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental causes"[2].

Safe motherhood has been implemented by the international community for more than 20 years. Since that time, it is estimated that 10 million women have died from pregnancy related events[3].

The global community reaffirmed its commitment by issuing its Millennium Development Goals (MDG). One of which was a reduction of maternal mortality by 75% by 2015[4].

The WHO defines maternal mortality rate as the number of maternal death per 100,000 women of reproductive age and maternal mortality ratio (MMR) as the number of maternal death per 100,000 live birth[5].

Maternal mortality in the United States has declined significantly during the 20th century but there is little progress during the last 20 years.

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The annual MMR plateau to approximately 7.5 maternal death/100,000 live births during 1982-1996[6].

The difference in maternal mortality between rich and poor countries is one of the highest in public health. In Sub-Saharan Africa, the area of greatest mortality, the life time risk of dying as a result of child birth is 1 in 13[7].

The causes of maternal death may be direct or indirect The major causes of direct maternal deaths are eclampsia, haemorrhage, sepsis, thromboembolism while indirect maternal death may be due to cardiac disease, thyroid or psychiatric disorders.

The top five causes of maternal deaths have continued to be haemortage, hypertensive disorders, post abortal sepsis, puerperal sepsis and obstructed labour. This did not change during the 12 year period from 1988 to 2000[8].

It has been suggested that maternal death audit is one way to improve quality of care. A recent WHO publication highlighted the important role of maternal death review in reducing maternal mortality[9].

OBJECTIVES

The objectives of this study were to find out maternal mortality ratio and to determine the major causes of maternal death.

MATERIALS AND METHOD

This study was conducted in department of Obstetrics and Gynaecology, Allied Hospital affiliated with Punjab Medical College (PMC), Faisalabad. Allied Hospital is a tertiary care hospital.

This study was conducted from 01.01.2008 to 31.12.2008. all cases of maternal deaths taking place during this period at this hospital were included in study except those death which were due to co-incidental causes like road traffic accidents, suicide or homicide. These patients were analyzed in detail regarding their history & examination. Risk factors like unbooked status, grand multiparity, previous uterine scar, anemia were analyzed. Relevant investigations including USG & CTG were done to assess the maternal & fetal condition.

RESULTS

Table-I. Age group

Age	No. Of cases	%age
< 20	02	3.4%
21-30	37	63.9%
31-40	18	31.0%
> 40	01	1.7%

Table-II. Residential area

Residential area	No. Of cases	%age
Rural	34	59%
Urban	324	41%

Table-III. Parity

Parity	No. Of cases	%age
P1	12	20.7%
P2-P5	40	69.0%
>P5	06	10.3%

Table-IV. Referral status

Referred status	No. Of cases	%age
Referred	44	75.86%
Un referred	14	24.14%

Table-V. Causes of maternal mortality		
Cause	**No. Of cases**	**%age**
Hemorrhage	20	34.5%
Hypertensive disorder	18	31.0%
Septicemia	11	19.0%
Thromboembolism	03	5.1%
Cardiac disease	02	3.4%
Anesthetic death	02	3.4%
Transfusion reaction	01	1.8%
Unidentified cause	01	1.8%

Table-VI. Cause of hemorrhage		
Causes	**No. Of cases**	**%age**
PPH	11	55%
APH	03	15%
Rupture uterus	02	10%
Internal hemorrhage	03	15%
Ectopic pregnancy	01	05%

There were total 58 maternal death during the study period. Total no. of live births were 5975 Maternal mortality ratio (MMR) = 58/5975 x 100,000 live births
= 970/100,000 live births.

Most of the death (63.9%) took place in the age group of 21-30 years, which is because of high fertility rate in this age group. 34 patients (59%) were from rural areas & all were unbooked, which is again a contributing factor towards maternal complications while 24 patients (41%) were from Urban areas and only four were booked patients. 44 Patients (75.86%) were referred from primary care centre or secondary care hospitals. While 14 patients (24.14%) came directly to Allied Hospital. The most common cause of maternal death was hemorrhage (34.5%), 2nd was hypertensive disorders (31%) & 3rd was septicemia (19%), which was post abortal sepsis and puerperal sepsis. Two patients died of complication of anesthesia. One patient was referred from private sector with history of difficult and delayed intubation as she was being prepared for caesarean section, while 2nd patient could not recover from anesthesia.

In this study, in one patient cause of death could not be identified because of ambiguous history & no specific positive finding on examination. Hemorrhage is a comprehensive term that includes multiple etiologies. It can occur even with an episiotomy or trauma to the genital tract. It may be APH, PPH, rupture of uterus, internal hemorrhage or rupture of ectopic pregnancy. In our study 11 patients (55%) have PPH while three patients (15%) had APH.

DISCUSSION

Maternal Mortality is high in underdeveloped countries. The world Health Report 2005, shows that MMR in Sub-Saharan Africa ranges between 24 (Mauritius) and 2000 (Sierra Leone) per 100,000 live births[10].

MMR in Pakistan is reported basically from hospitals statistics. In our study MMR is 970/100,000 live births which is less than MMR from Lahore & its peripheries which is 1300/100,000 live birth[11] but greater from MMR at Karachi which is reported 327/100,000 live births[12].

In our study major causes of maternal deaths are hemorrhage, hypertensive disorders / eclampsia, postabortal sepsis and puerperal sepsis, which is similar all over the world[13].

In our study PPH was a major cause of maternal death. In accounts for one quarter of all maternal death world wise (1), while in African woman, infections diseases like HIV/AIDS & malaria are the leading causes of maternal death[14].

In this study, (75.86%) patients were referred from primary or secondary care level but in most of the patients, the referral was too late to save the life of the woman.

CONCLUSION

Maternal mortality in resource poor nations has been attributed to two major delays. One is delay in deciding to seek care of high level. 2nd is delay in reaching care in time. These delays can be overcome by training the traditional birth attendants or LHVs to know their limitations, to identify any complication in time & make arrangement for early referral to tertiary care level.

2nd delay can be over come by availability of transport facilities like ambulance & rescue services.

RECOMMENDATIONS

To achieve the goal of reduction in MMR, the following should be done:

1. Enhancement of emergency obstetric services with adoption of fast referral system
2. Training of LHVs, midwives and traditional birth attendants.
3. Mass media campaign regarding maternal health antenatal and intra partum care to raise public awareness
4. Political commitment & involvement of Health Policy makes to achieve the target of reduction in MMR.
5. Family planning services to avoid unplanned pregnancies & to reduce mortality associated with unsafe abortions.

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