ORIGINAL PROF-888

MATERNAL MORTALITY;
A NEGLECTED TRAGEDY

DR. NAZIA MUSSARAT, FCPS
Registrar,
Obstetric & Gynae Deptt,
Allied Hospital, Faisalabad.

DR. ROBINA ALI, FCPS
Assistant Professor,
Obstetric & Gynae Deptt,
Allied Hospital, Faisalabad.

PROF. MAHNAAZ ROOHI, FRCOG
Head of Obst. & Gynae Dept.
P.M.C/Allied Hospital,
Faisalabad.

ABSTRACT ... Objective: More than half a million maternal deaths occurred worldwide each year and 98% of these are in developing world. The objectives of the study were to calculate maternal mortality rate and determine the major causes of maternal mortality. **Design:** A prospective study. **Place & duration of study:** Department of Obstetric & Gynaecology Unit-I, Allied Hospital, Faisalabad from 01.01.2002 to 31.12.2002. **Subjects & Methods:** All maternal deaths during this period were included after taking detailed history and examination. **Results:** There were total 25 maternal deaths and Maternal Mortality Rate (MMR) was 557/100,000 live births. The main causes were hemorrhage, septicemia & eclampsia. **Conclusion:** To achieve the objective of reduction in MMR, we must enhance emergency obstetric care with the adoption of the fast referral system particularly in the far-flung rural areas of Pakistan.

Key words: Maternal Mortality Rate (MMR), Live birth(LB).

INTRODUCTION

Maternal mortality(MM) is best defined as death of woman during pregnancy or within 42 days of termination of pregnancy irrespective of the site and duration of pregnancy from a cause related to or aggravated by pregnancy or its management but not from accidental or incidental causes. There are 600,000 maternal deaths reported worldwide every year, out of which about 98% of deaths occur in developing countries[1]. Medical audits of these deaths revealed that more than 80% of deaths were preventable and it depends strongly upon quality of health care[2].

Maternal mortality is a sensitive indicator of inequality, it acts as a litmus test of woman; of their access to health care and response of health care to their needs. Pakistan, India, Bangladesh, all these South Asian developing countries have a major share in maternal deaths world wide. These countries account for about 28% of total births and 46% of maternal deaths in the

world[1].

At the beginning of new millennium; due to advances in obstetric and their continued efforts, M.M.R from developed world is reported from zero to a maximum of 13/100,000 live births[3]. Pakistan still faces a critical position regarding mothers/maternal health. There is no authentic data regarding MMR in Pakistan. But it is estimated that in Pakistan alone about 30,000 mothers die due to pregnancy related complications annually[4]. MMR of Pakistan has been calculated by UNICEF (1997) as 340/100,000 live birth where as national health survey put figure as 500/100,000 live birth (1998)[5]. This high rate is infect 70% of woman mostly from rural areas do not receive antenatal care and majority of the deliveries take place at home and in only 35% of cases trained personnel are available.

MATERIAL & METHODS

Study was conducted in department of obstetrics and gynaecology of Allied Hospital Faisalabad, affiliated with PMC Faisalabad. Allied Hospital is a tertiary care Government Hospital having large catchments area.

Inclusion Criteria

All the deaths of women while pregnant or within 42 days of termination of pregnancy regardless of site or duration of pregnancy.

Exclusion Criteria

Accidental causes of maternal were excluded (road traffic accident, suicidal and homicidal).

RESULTS

There were total 25 maternal deaths during this study period. Total number of live birth were 4488 during this period.

25/4488 X 100,000 = 557/100,000 live birth. So MMR was 557/100,000 live births during this study period. The most common cause of MM was haemorrhage. 12 maternal deaths (48%) were due to haemorrhage. Out of them, 7 patients had placenta previa, they had massive PPH post-operatively. After failure of medical management, obstetric hysterectomy was done but they could not be survived. Three (25%) patients had placental abruption. All of them died due to severe APH and non-availability of blood in time.

Table I: Distribution according to age (n=25)

Age of patient's in years	No. of cases	%age
<20	1	4.00
21-30	8	32.00
31-40	14	56.00
Above 40	2	8.00

Four (16%) patients died due to septicemia. Out of them, three patients had induced abortion and one patients had septicemia on 2nd post-operative day of LSCS at some private clinic.

Table II: Distribution according to parity (n=25)

Gravidity	No. of cases	%age
Primigravida	5	20.00
2-5	11	44.00
>5	9	36.00

Table III: Distribution according to booking status (n=25)

Booking status	No. of cases	%age
Booked	2	8.00
Unbooked	23	92.00

Two maternal deaths (8%) were due to eclampsia, one patient developed cerebro vascular accident two hour after delivery and one patient died due to pulmonary oedema. Two maternal deaths (8%) were due to cardiac diseases, one patient was diagnosed as a case of mitral stenosis, her LSCS was done due to cephalopelvic disproportion, she died on 4th post-operative day due to congestive cardiac failure.

One maternal death (4%) was due to acute anaphylactic reaction of mismatched blood transfusion on 2nd post-operative day.

One patient died due to rupture of uterus which was due to injudicious use of oxytocins by dai in a multiparous patient. One patient (4%) died due to obstructed labour, one patient had pregnancy with ovarian malignancy, on laparotomy stage IV ovarian malignancy was found. Patient expired two hours post-operatively.

Table IV: Distribution according to social class (n=25)

Social class	No. of cases	%age
Social class 1	0	0.00
Social class 2	0	0.00
Social class 3	2	8.00
Social class 4	8	32.00
Social class 5	15	60.00

Table V: Major causes of maternal mortality (n=25)

Causes	No. of cases	%age
haemorrhage	12	48.00
Septicemia	4	16.00
Eclampsia	2	8.00
Cardiac disease	2	8.00
Anesthetic complications	1	4.00
Blood transfusion reaction	1	4.00
Ruptured uterus	1	4.00
Obstructed labour	1	4.00
Pregnancy with malignant ovarian tumor	1	4.00

This table shows that majority of patients (56%) were between aged 31-40 years. Regarding the parity of patients 11 patients (44%) were multipara. So, the multiparty was the major risk factor in most of patients.

Table VI: Time interval between admission and expiry (n=25)

Time interval	No. of cases	%age
< 1 Hour	4	16.00
2-12 hours	10	40.00
12-24 hours	3	12.00
>-24 hours	8	32.00

Table VII: Distribution according to maternal anemia (n=25)

Hb% age (g/dl)	No. of cases	%age
< 8	18	72.00
8-10	7	28.00
> 10	0	0.00

Table VIII: Distribution according to gestational age (n=25)

Gestational age	No. of cases	%age
< 28 weeks	4	16.00
28-32 weeks	3	12.00
32-42 weeks	18	72.00
> 42 weeks	0	0.00

Table IX: Distribution according to pregnancy outcome (n=25)

Pregnancy outcome	No. of cases	%age
Delivered	19	76.00
Undelivered	4	16.00
Abortion	2	8.00

This table shows, that 92% patients were unbooked, So lack of proper antenatal care was a common cause of maternal mortality.

Table X: Distribution according to blood transfusion given (n=25)		
No. of blood transfusion	**No. of cases**	**%age**
1-2	12	48.00
2-4	9	36.00
5 & above	4	16.00

DISCUSSION

MMR in Pakistan is highest in world following some African countries from where MMR up to 2151/100,000 LB reported. Pakistani estimate regarding MMR are mostly based on hospital statistics. Latest data in this regard is alarmingly high and states the severity of maternal health problems in our country. For the year 2001-2002, MMR is reported as 327-1300/100,000 LB. Latest MMR from Lahore and its peripheries is reported as 1300/100,000 LB[6], while from Balochistan 560/100,000[7] and from Karachi 327/100,000 LB[8].

In our study MMR is 557/100,000 LB. The result are almost similar to the study conducted in Balochistan[7] and a study conducted in rural Gambia (Jan 1993-Dec 1998) according to which MMR was 424/100,000 L.B[9]. The results are in contrast with study conducted in Netherlands where MMR was 7.1/100,000 live birhts[10] and in Canada it was 3-7/100,000 L.B[11].

Major causes of maternal deaths were haemorrhage (48%), septicemia (16%) and eclampsia (8%). Obstetric haemorrhage, puerperal sepsis and eclampsia are commonly reported direct causes of MMR in Pakistan as well as in other parts of globe[12,13,14].

It has been documented through the available tertiary care data that most of these deaths were either preventable or treatable if managed in time. A combination of economic, social and cultural factors play a significant role in these maternal deaths[15].

In fact 70% of women, mostly from rural areas do not receive antenatal care and majority of these deliveries take place at home and in only 35% of cases trained personnel are available.

In our study, 92% patients were admitted in emergency with no antenatal visit, so high levels of poverty and illiteracy prevail despite of our so called fights against these ills for last more than fifty years. A poor woman is 20 times more likely to die during child birth as malnutrition and anemia are also common in our society[14].

CONCLUSION

MMR in our country is unacceptably high, we are still continuing to lose mothers in their younger years of life. To achieve the objective of reduction in MMR we must enhance emergency obstetric care with adoption of a fast referral system particularly in far-flung rural areas of Pakistan. We need to strengthen the community health care system by training the lady health workers and availability of trained personnel especially TBAs must be ensured in under privileged communities and regular antenatal booking in every part of country.

Referral services, laboratory and blood bank services are also essential to deal with emergencies in obstetric cases. These efforts combined with measures aimed at reducing fertility rates and poverty coupled with improvement in the socio-economic and educational status especially for women will definitely help in reduction of MM. Mass media campaigns regarding maternal health and antenatal checking during pregnancies would be worth while. Finally all the efforts of the public and private health care providers should be combined with support from the government to meet the most important objective of reducing maternal mortality and improving mother's health in Pakistan.

REFERENCES

1. Abou Zahr C, Roycton E. **Maternal mortality: A fact book.** Geneva WHO 1991; 3014.

2. Bhat RV. **Professional responsibility in maternity care: Role of medical audit.** Int. J Gynaecol Obstet 1989; 30: 47-50.

3. Bouvier Colle MH, Peruignot F, Jouglae. **Maternal**

mortality in France: frequency, trends and causes. J Gynaecol Obstet Biol reprod (Paris) 2001; 30: 768-75.

4. Najmi SR. **Maternal mortality: a hospital based study.** J Coll physicians Surg Pak 1995; 5: 67-70.

5. Mahmud G, Nakasa T, Haq A, Khan S. **Comprehensive maternal health data of Islamabad capital territory.** Gynaecologist 2000; 34.

6. Wasim T, Majrooh A, Siddiq S. **Maternal mortality: One year review at Lahore General Hospital.** Pakistan postgraduates Med. 2001; 12: 113-8.

7. Sami S, Baloch Sn. **Maternal mortality in Balochistan.** J Coll Physicians Surg Pakistan 2002; 12: 468-71.

8. Qureshi RN, Jaleel S, Hamid R Lakha SF. **Maternal deaths in a developing country. A study from the Aga Khan University Hospital Karachi, Pakistan** 1998-1999; JPMA 2001, 51: 109-111.

9. Walraven G, Talfer M, Rowley J, Ronsman SC. **Maternal mortality in rural Gambia; Levels, Causes and contributing factors** Bull world Health Organ 2000; 78(5): 603-13.

10. S Chaitemaker N, Vanroosmalen J, Dekker G, Van Dongen P, Van Geijanlt, Graven horst JB. **Under reporting of maternal mortality in Netherland.** Obstet Gynaecol 1997 Jul; 19(1): 78.

11. Turner, Cry M, Kinch RA, Listion R, Kramer MS, Fair M, Heaman M. **Under reporting of maternal mortality in Canada.** Chronic Dis can 2002; 23(1): 22-30.

12. Akbar N, Shami N, Asif S. **Maternal mortality in a tertiary care teaching hospital.** Coll Physicians Surg Pak 2002 12: 429-431.

13. Fikree FF, Gray RH, Berendes HW Karim MS. **A community based nested case control study of maternal mortality.** Int. J Gynaecol Obstet 1994; 47: 247-55.

14. Jafary Sn, Korejo R. **Mothers brought dead: an enquiry into causes of delay.** Soc Sci Med 1993; 36: 371-2.

Failures are like skinned knees - painful but superficial.

Ross Perot