ORIGINAL ARTICLE

AN AUDIT OF MATERNAL DEATHS

Basavana Gowda Patil[1], Jyotsna[2]

ABSTRACT: OBJECTIVES: A study of maternal death conducted to evaluate various factors responsible for maternal deaths. To identify complications in pregnancy, a childbirth which result in maternal death, and to identify opportunities for preventive intervention and understand the events leading to death; so that improving maternal health and reducing maternal mortality rate significantly. To analyze the causes and epidemiological amounts maternal mortality e.g. age parity, socioeconomic status and literacy. In order to reduce maternal mortality and to implement safe motherhood program and complications of pregnancy and to find out safe motherhood program. **METHODS:** The data collected was a retrograde by a proforma containing particulars of the diseased, detailed history and relatives were interviewed for additional information. The data collected was analysed. **RESULTS:** Maternal mortality rate in our own institution is 200/ 100,000 live births. Among 30 maternal deaths, 56% deaths (17) were among low socio-economic status, groups 60% deaths among unbooked 53.5% deaths more along illiterates evidenced by direct and indirect deaths about 25% of deaths were preventable. **CONCLUSION:** Maternal death is a great tragedy in the family life. It is crusade to know not just the medical cause of the death but the circumstances what makes these continued tragic death even more unacceptable is that deaths are largely preventable.

INTRODUCTION: 'What sets the world in motion is the inter play of differences, their attractions and repulsions, life is pleurality, deaths is uniformity' - John Studd.

In all societies, the family is the central nuclear for people for their lives. Their dreams and their health. A women in her role on mother for us the backbone of the family. Yet 500,000 women continue to die every year in the world from pregnancy. Women unpaid work in the family and in reproductions does not feature in national accounting.

AIM OF THE STUDY:
- To evaluate various factors responsible for maternal deaths.
- To identify complications in pregnancy, a childbirth which result in maternal death, and to identify opportunities for preventive intervention and understand the events leading to death; so that improving maternal health and reducing maternal mortality rate significantly.
- To analyze the causes and epidemiological amounts maternal mortality e.g. age parity, socioeconomic status and literacy.
- In order to reduce maternal mortality and to implement safe motherhood program.

METHODS: The baseline study if maternal deaths that have occurred in Chigateri General Hospital, Bapuji Hospital and women and Children's Hospital attached to JJM Medical College, Davangere from January 1998 to December 1999 has been made. The deaths were classified as per FIGOS classification as follows:

ORIGINAL ARTICLE

1. Direct obstetric causes.
2. Indirect obstetric causes.
3. Non related causes.

This study includes 61 maternal deaths due to direct obstetric causes and indirect causes only.

The proforma prepared contained - name, age of patient, IP No, Date of Admission, Date of death, booked or unbooked, presenting complaints and details of antenatal care (if any). Obstetric history including marital status, age at marriage, age at 1st pregnancy primi or multi, history of previous pregnancy and labour, complication during present pregnancy, past and present medical problems.

If additional information was needed the relatives of the deceased were interviewed. Gestational age at delivery or death, whether died without delivery, place and date of delivery, any intervention during delivery, made of delivery, made of delivery and complication of delivery and puerperium.

A thorough analysis of data collected. Information were obtained from case sheets, laboratory investigations and postmortem liver biopsy and postmortem spinal tap.
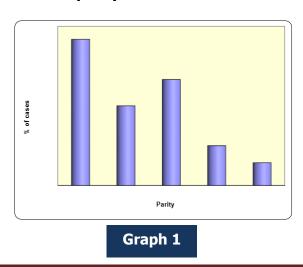
During the present study, total births include live births, still births, and deaths due to abortions were also included, since it is 'one if the important causes of maternal deaths.

DISCUSSION: The study conducted in the period from July 2008 to July 2010. The total number of deaths was 30. Maternal mortality was 4 in the age of less or equal to 20, 12 in the age of 21 to 25, 10 in the age group of 26 to 30 and 4 in the group of 31 to 36 years respectively.

Maternal mortality in Hindus was 24 and in Muslims it was 6. Number of deaths in the women of poor socio-economic status was 17, 13 in women of middle economic status and 0 among women of upper socioeconomic status. Maternal mortality was 12 in the women who were booked and 18 in unbooked cases during antenatal period.

Maternal death was 9 in illiterate women, 16 women studied up to 7th standard, 4 women studied up to 10th standard and 1 women died who finished her PUC. So, educational status of mother plays a major role in prevention of maternal death in the above study.

Maternal mortality in relation to parity:

Graph 1

ORIGINAL ARTICLE

Maternal mortality in primis was 11, para-1 was 6, para-2 was 8, para-3 was 3 and para-4 were 2 respectively. So the above values shows nearly half of all deaths occur in primigravida (46%) thus reflecting vulnerability of first time motherhood. We need to concentrate on primigravida more antenatally and intra natally.

Maternal mortality in I trimester of pregnant women was 1, II trimester was 1 and in III trimester (intrapartum and postpartum) women was 28.

Maternal mortality in relation to mode of delivery:

Mode of deliveries	No. of deaths	%
Undelivered	7	13.0
Vaginal	9	50.0
EM LSCS	8	17.2
Induced abortion	1	3.3
Septic abortion	1	3.3
Reference from other hospitals	4	13.2
Total	**30**	**100.0**
Table 1		

Deaths due to vaginal delivery are 50% and undelivered are 13.3%. Main cause of direct death leading on to hypovolemic shock. Anemia is indirect cause which is leading on to PPH in 23% of the cases. According to our study out of 30 deaths, 50% of them delivered vaginally died due to PPH and indirect cause amniotic fluid embolism.

Maternal mortality in relation to admission to death interval:

AD – interval	No. of deaths	%
Less than one hour	11	36.7
1 – 12 hours	7	23.3
12 – 24 hours	5	16.7
1 – 3 days	6	20.0
More than 3 days	1	3.3
Total	**30**	**100.0**
Table 2		

As shown in the above table, direct causes were responsible for 23.3% of deaths which are due to haemorrhage, eclampsia septicemia and inversion of uterus. Patient died within 1 hour of admission to the hospital.

Maternal mortality due to PPH was 13, anaemia with complications was 7, due to embolism was 3, due to PE was 5, due to heart disease was 1 and due to endotoxic shock was 1 case.

ORIGINAL ARTICLE

RESULTS: Among 30 maternal deaths during the study period from July 2008 to July 2010 maximum death occurred between 21-25 years (40%) that is during reproductive age group in ICMR[1] task force study 2001 analysed 581 cases, correlates 41.1% during the same period.

Among 30 maternal deaths, number of deaths are more in Hindus i.e. 80% compared to Muslim community i.e. 20% which correlates a maternal mortality in Apex[2] Hospital, Bihar 2002 observed the same.

Among 30 deaths, number of deaths are 56.7% among the poor socioeconomic status. According to the study conducted by maternal mortality in Silchar Medical College Hospital by Sarnishtha Bhattarjee in low socioeconomic status number of maternal deaths were 49.18%.[3]

Among 30 deaths unbooked were 60%, major cause detected are anemia, cardiac diseases, PE and eclampsia, no awareness regarding the ANC care, were leading causes for maternal death. In Silichar Medical College and Hospital 2001 study of maternal deaths 91% were unbooked emergency admissions. Most of these cases are preventable deaths in unbooked cases whereas in booked cases more of a unpreventable deaths.[3]

Educational status of mother plays a major role in prevention of maternal death in the above study, it was noticed that 30% of them were illiterate, 53% of them studied up to 1 to 7th standard. Maternal death drastically low above 10th standard. Study by Dr. Bhattacharyaji in 2001[3] concludes that illiteracy cause 75.4% death in mother.

A study on maternal mortality by Dr. Varma Ashok and Dr. Santhosh[4] at Govt. Medical College, HP concludes that illiteracy leading onto inadequate ANC checkup is a major factor for maternal mortality.

It was noted that out of 30 deaths during the study period major deaths are among the primigravida 36.7%. In study Slichar Medical College and Hospital primgravida deaths were 31.2% in comparison with deaths after para 4 i.e. 25.8% may be due to teenage pregnancy.[3]

In this study maximum deaths occurred in III semester followed by labour complication i.e. 93/4% this emphasis that need of compulsory screening for high risk pregnancy.

In a review literature maternal mortality by Dr. V. Kamala Jayaram[5] at General Hospital, Guntur AP who analysed over a period of 6 years from 1992 to 1997 concluded that intrapartum, postpartum deaths were 54.6%. Post-partum and post abortal sepsis was the number one killer.

Hemorrhage is the most important cause of maternal mortality 39% women died due to PPH similar observations made by Bedi[2] et al reported 34% deaths due to PPH. In our study anemia with complication were 24%. In study Bedi[2] et al 11.5% maternal deaths are due to anemia ICMR study showed pre-existing anemia was found to worsen pregnancy as it advances leading to CCF and death.

CONCLUSION: Clinical study of maternal mortality at hospitals attached to JJM Medical College, Davangere was undertaken during the years June 2008 to Sept 2010 30 maternal deaths occurred during the 2 year study, among 1400 live births and 1178 abortions.

From this study, it is evident that maternal mortality rate in our own institution is 200/100,000 live births.

In the present study more number of deaths occurred in the age group of 2l-25 years, among 30 maternal deaths, 56% deaths (17) were among low socio economic status, groups

ORIGINAL ARTICLE

60% deaths among unbooked 53.3%, deaths more among illiterates evidenced by direct and indirect deaths about 25% of deaths were preventable.

Maternal mortality is a global problem, facing every country in the world. We need to target specific interventions for specific population. Fifth millennium development goal (MDG) is to reduce maternal mortality by 75% by the year 2015, worthwhile investment for every case provider, results that investing on mothers.

BIBLIOGRAPHY:

1. Bedi N. Kambo I, Dhillon BS, Saxena BN, Singh P. Maternal Deaths in India Preventable tragedies (An ICMR task force study). J. Obset Gynecol India 2001 Mar/April: 51(2): 86-92.
2. Shaila Sapre, Vrunda Joshi, (1999) "Changing trends of maternal mortality rates in last 26 years at an apex level teaching hospital in Northern Madhya Pradesh". J of Obstet & Gynaecol India. 49(1): 53-56.
3. Bhattacharjee S. A study on maternal mortality in Silcchar Medical College and Hospital. J Obstet Gynecol India 2001 Jan/Feb; 51(l): 67-70.
4. Ashok V, Santhosh M, Anupa S. A study on maternal mortality. J Obstet Gynecol India 2001 May/June; 58(3): 226-29.
5. Kamala Jayaram V., (1992) "Maternal mortality - 15 years study". J Obstet & Gyneacol India. 42(1): 781-785.

AUTHORS:
1. Basavana Gowda Patil
2. Jyotsna

PARTICULARS OF CONTRIBUTORS:
1. Assistant Professor, Department of Obstetrics & Gynaecology, ESIC Hospital, Hospet.
2. Junior Resident, Department of Obstetrics & Gynaecology, BRIMS, Bidar.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:
Dr. Jyotsna,
8-11-112, K. B. Road,
Himagiri, Sangameshwar Hospital,
Bidar-585401.
E-mail: praveenshetty@gmail.com