ORIGINAL ARTICLE

Maternal Mortality: A Multi-centre Study

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ABSTRACT

Aim: To determine causes, age, parity distribution and risk factors responsible for maternal deaths.
Methods: This multi-centre study was carried out at three hospitals Services Hospital Lahore, Bolan Medical Complex Hospital Quetta and Allama Iqbal Memorial Teaching Hospital Sialkot from 1st January 2015 to 31st December 2015. Twenty eight maternal deaths were recorded. Hospitals data analyzed for patients' demographic record including age, parity, education, socio-economic status, trends toward pregnancy and antenatal care in cases of maternal deaths in year 2015. Causative factors leading to mortality were evaluated.
Results: Major causative factors were hemorrhage, hypertension and eclampsia and septicemia. Age range was between 20 and 37 years with highest in age group 20 to 35 years. Education, antenatal booking, socioeconomic status were poor and handling by untrained health workers remained a worrisome factor.
Conclusion: Reduction in mortality can be achieved by early booking and good ante natal care by trained professionals.
Keywords: Maternal mortality, Causes, Risk factors

INTRODUCTION

Maternal mortality is almost always preventable but a large number of women die each year because of pregnancy related complications.[1] 95% of these come from developing countries. Maternal mortality ratio reported in Pakistan demographic profile (2012) in Pakistan is 260/100,000 live births and life time risk of maternal death 1 in 93 (WHO/UNICEF).[2,3] But the actual figure may be high because of underreporting of many deaths. Important causes are hemorrhage, hypertensive disorder, sepsis unsafe abortions and deliveries by untrained traditional birth attendants.[4] All of these causes are mostly preventable through proper understanding, diagnosis and management of labor complications. To reduce complications during pregnancy and labor it is essential to strengthen primary health care infrastructure.[5]

PATIENTS AND METHODS

This was a multi-centre study which compiled all maternal mortality data over a period of one year from 1st January 2015 to 31st December 2015. Most of the admissions were through emergency. The inclusion criteria were pregnancy complications leading to death. Record of patients' age, parity, education, socio-economic status, antenatal care, level of care and distance from hospital were analyzed. Patients with medical and gynecological causes and those beyond 42 days post partum were excluded from study. The data was collected from patients' records.

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RESULTS

Total 2027 deliveries conducted out of which 217 were IUDs. Live births were 1810. Twenty eight maternal deaths reported. Fifteen women (53.57%) belonging to age group 28-35 years. Twenty three (82.14) having income between 5000-10000 rupees. Most of the females were uneducated i.e. 20 (71.43%), 27 (96.43%) women are housewives and 24 women (85.71) have planned/wanted pregnancies (Table 1). Frequencies and percentages of diagnosis and risk factors are shown in Figures 1-2.

Fig. 1: Frequency of risk factors

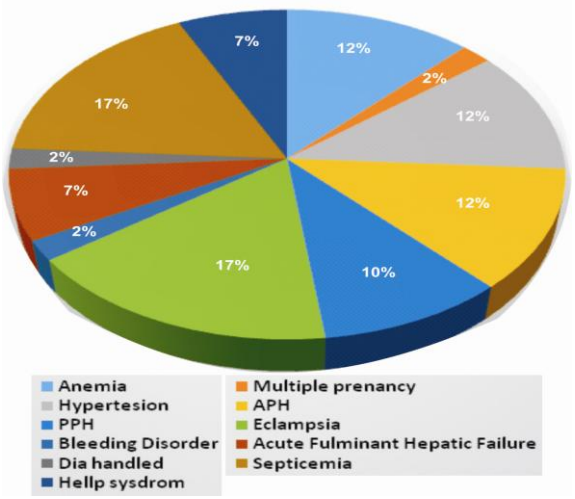
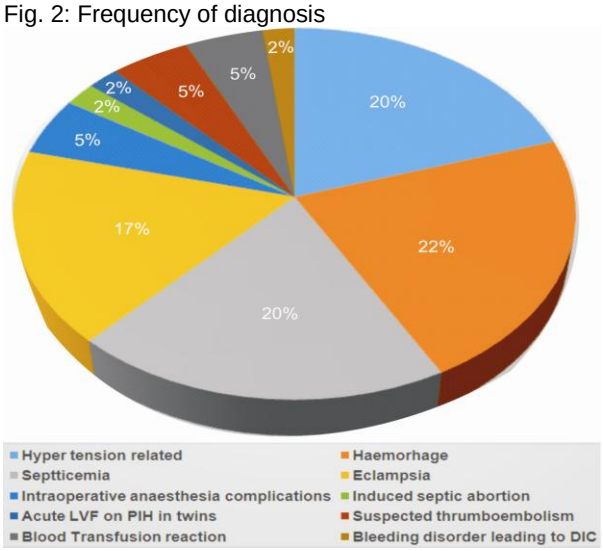


Table 1: Descriptive statistics of the patients

Variable	No.	%
Age (years)		
< 20	-	-
20 – 28	11	3.29
28-35	15	53.57
>35	2	7.14
Socioeconomic status (Rupees)		
<5,000	4	14.29
5000 – 10000	23	82.14
>10,000	1	3.57
Education status		
Uneducated	20	71.43
Primary/Secondary/High	4	14.29
Educated	4	14.29
Profession		
Housewife	27	96.43
Job	-	-
Student	1	3.57
Attitude towards pregnancy		
Planned/wanted	24	85.71
Unplanned/unwanted	4	14.29
Parity		
Primigravida	5	18.0
G2-G4	13	46.0
G5-G7	8	29.0
G8 & above	2	7.0

Fig. 2: Frequency of diagnosis



DISCUSSION

Pakistan is the sixth most populous country with 180 million people and population density 548.51 sqm[2].[6] In our country, mortality rate is higher by calculating 260 per 100,000 live births.[7] Around 800 females are dying on daily basis because of managable risk factor associated with pregnancy and childbirth. In developing world, 99% of maternal deaths are recorded which are avoidable.[8] Neonates survival is threated after the death of his/her mother and may die within 2 years of birth.[9] Among direct causes of maternal deaths, hemorrhage is recorded as the comonest followed by pregnanc induced hypertension (PIH), rupture of uterine and speticemia.[10] Eclampsia is also considered as the leading cause of maternal mortality followed by hemorrhage and sepsis.[11] Skilled health personnel contribute only 45% to attend antenatal followup.[12] Maternal mortality determinants include poverty as the commonest which leads to nutritional deficiency which may further cause intolerance of hemorrhage.

In our country, rate of literacy among younger age females ranges 15-24 years is significantly lower by estimating 53% as compared to those with literate level of sam aged male gender i.e. 77%.[13] During gestation, females are required antenatal care (ANC) for recognition and proper management of any complications relating to pregnancy. ANC range from 43% (2001) to 74% (2012-2013).[14] As the literature females are more automous for decision making antenatal care is more accessible for females with secondary or higher education levels as compared to those wtih illiterate females.[15] Globally, in the year 2015, approximately 300,000 females were died because of pregnancy related complications[16].

Though, rate of maternal mortality remain increased in various regions, this rate has been reduced by 1.3% annually since 1990 in all over the world while but 3.1% in developed countries.[17] Globally, decline in maternal mortality is attributed to reduction in total fertility rate, elevation in maternal education and access to skilled birth attendants.

Women will a low socioeconomic status have poor access to health care sciences. Financial crisis has affected bionomically unprivileged.[18] Other factors having significant impact are correction of anemia and malnutrition, preventing malaria in pregnancy, providing calcium and micro-nutrients, promotion of delivering in places property equipped will emergency obstetric care, discourage early marriages and provision of effective family planning services to avoid unsafe pregnancy terminations.

CONCLUSION

Reduction in mortality can be achieved by early booking and good ante natal care by trained professionals.

REFERENCES

1. Tinker AG. Improving women's health in Pakistan. Human Development Network Series. The World Bank, Washington, DC, 1998.
2. Jafary SN. Maternal Mortality in Pakistan: an overview. Maternal and Prenatal health 1991. TWEL Publication Karachi: 21-31.
3. National Health Survey of Pakistan. Pakistan medical Research Council, Islamabad, Pakistan 19950.

4. Women's health in Pakistan. Fact sheets prepared for Pakistan National Forum on women's health. WHO November 1997; 14: 3-5.
5. Annual report of health services of Pakistan. Government of Pakistan Ministry of Health, Islamabad Pakistan 1996.
6. Countries of world: An interactive list of countries including their (2012 estimated) populations, as well as land sizes and densities. (on line) cited 2013 September 21).Available from URL: www.worldaltlas. com/aatlas/populations/ctypopls.html
7. Roca T. Human Development Report 2013. The Rise of the south, Human progress in a Diverse World. Afrique Contemporaine. 2013; 246(2): 164-6.
8. Data.Worldband.org. Over 99% of maternal deaths occur in developing countries. [cited 17 June 2015]. Available from: http://data.worldbank.org/news/over-99percent-of-maternal-deaths-occur-in-developing-countries.
9. Global Maternal Mortality Fact Sheet Available at:www.motherdayeveryday.org/doc/MDEI. Factsheets.pdf
10. Rahim R, Shafqat T, Faiz NR. An Analysis of direct causes of maternal mortality. Journal of Postgraduate Medical Institute. 2011; 20(1):86-91.
11. Fawad A. maternal mortality in a tertiary care hospital. Journal of Ayub Medical College Abbottabad.2011;23(1):92-95.
12. UNFPA stat of world report 2012. Available at:www.unfpa.org/publichome/publications/pid/12511.
13. Lynd D. The Education system in Pakistan. Pakistan. UNESCO Islamabad Pakistan; 2012.
14. Pakistan Demographic and Health Survey (Preliminary report). Federal Bureau of Statistics, statistics Division, 2012-13.
15. Mubashir SA, Kiyani T. National Institute of Population study (NIPS) [Pakistan] and ICF International. Pakistan Denograptic and health survey (2012-13). Islamabad, Pakistan and Calverton, Maryland, USA: NIPS and ICF International; 2013.
16. Alkema L, Chou D, Hogan D, et al. Global, regional, and national levels and trends in maternal mortality between 1990 and 2015, with scenario-based projections to 2030: a systemic analysis by the UN Maternal Mortality Estimate Inter-Agency Group. Lancet-2016; 387:462.