Changing trends of maternal mortality rates in last 26 years at an apex level teaching hospital in Northern Madhya Pradesh

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Summary : There is always an element of risk that a Woman has to face in attaining motherhood. Materna mortality rates still remain high in developing countries, and India has set a goal of reducing MMR to 200 1,00,000 live births by the year 2000A.D.

Majority of maternal deaths in developing countries are due to causes which can be avoided by proper utilizatio of 3 E's i.e essential obstetric care, early detection of complications & efficient emergency services. Review o maternal deaths helps to find out the faults and lacunae at various levels & helps plan out remedial strategies With this objective a detailed survey of maternal deaths occuring in the dept.of Obstetrics & Gynaecology Kamla Raja Hospital, a over last 26 yrs was done & analyzed. Changing trends in the causes of materna deaths have been focussed & analyzed.

Objectives

To study the epidemiology of maternal deaths regarding causes of death, percentage of booked & unbooked cases, residence & socio-economic status of the women who died.

To compare the variability of above factors in last 26 yrs and their changing trends.

To find out faults & lacunae at various levels of prevention.

Methods

A thorough analysis was done of individual records of all cases of maternal deaths occurring in the dept. Of Obstetrics & Gynaecology, Kamla Raja hospital (KRH), Gwalior from Jan 1971 to Dec 1996. MMR for every year was calculated from the number of maternal deaths and number of live births per year. The causes of death were analysed with special attention to determine the avoidable factors in each maternal death.

Observations

Table I shows the yearwise MMR in dept of Obst & Gyn, K.R.H., Gwalior. There is some decline in MMR from 1971 to 1980. But in later years of the 9th decade and the 10th decade MMR remains similar every year.

Table I
Maternal Mortality per year

Year	No.of live births	no.of maternal Deaths	MMR/1,00,000 live births.
1971	2584	54	2089.78
1972	2517	52	2026.22
1973	2908	45	1547.45
1974	3015	48	1592.04
1975	3112	56	1799.48
1976	3108	52	1673.10
1977	2929	56	1911 91
1978	3115	60	1920.16
1979	2831	57	2013.12
1980	2461	61	2478.66
1981	2686	56	2084.88
1982	3835	61	1590.61
1983	4532	59	1301 85
1984	4576	51	1114.51
1985	4243	55	1296.25
1986	4592	63	1415.50
1987	4721	53	1122.64
1988	5247	57	1086.33
1989	5184	59	1138.11
1990	5865	64	1091.21
1991	4903	60	1223 74
1992	5908	99	1675.69
1993	4887	83	1698.38
1994	4941	61	1234.56
1995	4987	58	1163 02
1996	4962	35	705.36
Total	104649	1516	1448.65

Table II

Causes of Maternal deaths in percentage

	Direct Causes										Indirect Causes				Others		
r	Haemo-rrhage	APH	PPH	Toxae-mia, Ecl-ampsia	Septi-caemia	Post abortal	Post puer-peral	Rupture uterus	Ectopic pregna-ncy	Embo-lism	Anae-mia	Jaun-dice	Heart Dis.	DIC	Ence-phalitis	Mala-ria	Trans-fusion
75	15.15	6.06	9.09	18.18	14.19	11.12	3.07	2.02	1.01	1.01	38.38	7.07	1.01	1.01			
0	10.84	6.02	4.82	31.32	12.04	8.43	3.61	2.41	1.20		36.14	2.41					2.41
5	14.28	3.57	10.71	19.64	19.61	12.50	7.14	5.36	1.78		21.43	3.56	1.78	1.78	5.36	1.78	
0	16.38	6.55	9.83	27.87	11.47	6.55	4.92	1.63	1.63	1.63	9.68	4.92	1.63			1.63	1.63
5	20.69	8.62	12.07	32.76	8.62	3.45	5.17	1.72			27.58	3.45	1.72		3.45		
6	25.71	5.71	20.00	22.85	11.42	8.57	2.85	2.85		2.85	20.00	8.57	2.85		2.85		

ble II shows the causes of maternal deaths in rcentage in the last 26 yrs. It is evident that major causes maternal deaths have remained more or less the same rough the years. Direct causes like eclampsia, pticaemia, haemorrhage & indirect causes like anaemia ve been responsible for maximum number of maternal aths every year. Though percentage of deaths due to aemia have reduced over the years because of universal ovision of iron and folic acid prophylaxis, eclampsia haemorrhages still lead.

ble III shows the percentage of booked & unbooked ses in maternal deaths from 1991 to 1996. Even in the t decade of 20th century, 85 to 90% of maternal deaths of unbooked cases.

ble IV shows that more than 60% maternal deaths from 91 to 1996 were from rural areas.

scussion

ble V shows comparative MMR & percentage of ses of death in some institutions in India. MMR is her in our hospital because of large numbers of erred cases and a data collected over 26 yrs. Patients en reach the hospital in terminal & irreversible ditions. Major causes of deaths are similar in all itutions depicted in table V. Eclampsia, septicaemia, morrhage and anemia can be prevented and avoided

Table III

Percentage of booked & unbooked cases in maternal deaths

Year	Total Deaths	Booked cases	unbooked cases
1991	60	4 (6.66%)	56 (93.44%)
1992	99	10(10.10%)	89 (89.90%)
1993	83	5(6.02%)	78 (93.98%)
1994	61	8(13.11%)	53 (86.89%)
1995	58	3 (5.17%)	55 (94.83%)
1996	35	5(14.28%)	30 (85.72%)

Table IV

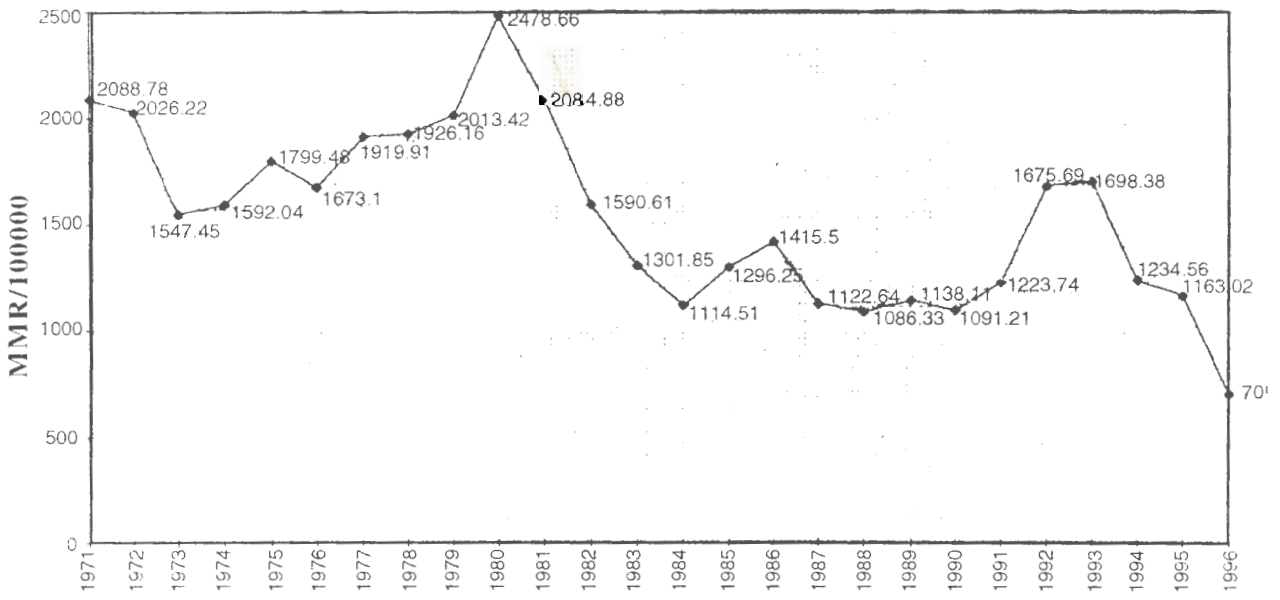
Maternal deaths from urban & rural areas

Year	Total No.of deaths	Urban	Rural
1991	60	14(23.33%)	46(76.67%)
1992	99	39(39.39%)	60(60.61%)
1993	83	37(14.58%)	46(55.42%)
1994	61	24(39.34%)	37(60.66%)
1995	58	28(48.27%)	30(51.72%)
1996	35	10(28.57%)	25(72.43%)

Table V
Comparative MMR at different institutions in India

Institution	Year	MMR	Causes in precentage				
			Hge	Toxaemia	Sepsis	Anaemia	Jaundice
Roy Choudhury et al Safdarjung hospital New. Delhi. 1990	1979-87	638	18.1	12.72	23.2	13.7	16.8
Bara & Sengupta Eden Hospital Medical College. Calcutta 1991	1979-80	1009	23.8	17.9	19.9	15.2	5.9
Ramteke & pajai VNGMC Yavatmal 1995	1992-94	1048.24	29.25	12.93	12.24	12.93	5.4
Present study Joshi & Sapre KRH Gwalior	1971-96	1448.65	17.17	25.44	12.89	28.87	4.99

Maternal Mortality Rate per Year



Year

to a large extent by proper antenatal & intra natal care, early detection of complications and efficient emergency services.

Very high percentage of unbooked patients in maternal deaths highlights the importance of adequate antenatal care in avoiding maternal deaths On the other hand it depicts the inefficiency in utilization of the health care facilities by a majority of our population. The largest proportion of our population resides in remote rural areas. Many maternal deaths occur due to lack of awareness for and unavailability of adequate antenatal care, delayed referral and lack of transport facilities.

Conclusion:

Reviewing maternal deaths over last 26 yrs, it is evident that better hospital care & health care facilities have helped in reducing the MMR from 1970s to 1980s but further reduction requires carrying essential obstetric care to the remote and rural areas. Involving media to increase awareness for maternal health amongst the ignorant & illiterate rural population may go a long way in improving utilization of present health care system. Provision of transport facility is a must to the smallest unit of health service and referral district hospitals must be equipped with blood transfusion facilities anaesthesia, paediatric care along with proper instruments & trained paramedical staff. This will not only reduce burden on apex hospitals but also save precious time & money for the rural unprivileged and complicated mothers.

Widespread propaganda about medicare, increase in numbers of trained personnels at periphery, prompt transportation facilities, improved sanitation adequate blood transfusion facilities and proper utilization of existing MCH services seem to be the cardinal requirements of the day which are not so costly and difficult.

References:

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